
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM 20-F

(Mark One)

REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2018

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

for the transition period from _____ to

OR

SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of event requiring this shell company report

Commission file number: 001-38252

Spark Networks SE

(Exact name of Registrant as specified in its charter)

Not Applicable

(Translation of Registrant's name into English)

Germany
(Jurisdiction of incorporation)

Kohlfurter Straße 41/43
Berlin 10999
Germany
(Address of principal executive offices)

Robert W. O'Hare, Tel: (+49) 30 868 000 102 Kohlfurter Straße 41/43 Berlin 10999 Germany
(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered, pursuant to Section 12(b) of the Act

Title of each class	Name of each exchange on which registered
American Depositary Shares each representing one-tenth of an ordinary share	New York Stock Exchange
Ordinary shares, €1.00 nominal value per share*	New York Stock Exchange

* Not for trading purposes, but only in connection with the registration of American Depositary Shares pursuant to the requirements of the Securities and Exchange Commission.

Securities registered or to be registered pursuant to Section 12(g) of the Act.

None
(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act

None
(Title of Class)

Indicate the number of outstanding shares of each of the issuer's classes of capital stock or common stock as of the close of business covered by the annual report. 1,298,797 ordinary shares.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer Non-accelerated filer Emerging growth company

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards[†] provided pursuant to Section 13(a) of the Exchange Act.

[†]The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP International Financial Reporting Standards as issued by the International Accounting Standards Board Other

If "Other" has been checked in response to the previous question indicate by check mark which financial statement item the registrant has elected to follow. Item 17 Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

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TERMS

As used herein, and unless the context suggests otherwise, the terms “the Company,” “Group,” “Spark Networks,” “we,” “us” or “our” refer to Spark Networks SE and its consolidated subsidiaries.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This annual report contains statements that constitute “forward-looking statements” within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact are forward-looking statements. These forward-looking statements involve known and unknown risks, uncertainties, and other factors that may cause Spark Networks’ performance or achievements to be materially different from those of any expected future results, performance, or achievements. Forward-looking statements speak only as of the date they are made, and Spark Networks does not assume any duty to update forward-looking statements. Readers are cautioned that a number of important factors could cause actual results to differ materially from those expressed in, or implied or projected by, such forward-looking statements. Words and expressions reflecting optimism, satisfaction, or disappointment with current prospects, as well as words such as “believes,” “hopes,” “intends,” “estimates,” “expects,” “projects,” “plans,” “anticipates,” and variations thereof, or the use of future tense, identify forward-looking statements, but their absence does not mean that a statement is not forward-looking. Forward-looking statements include, but are not limited to, statements about operating a diverse global platform of premium online dating sites, statements about providing exceptional user experience and driving stockholder value, statements about projected financial results, statements about the company’s plans, objectives, expectations and intentions and other statements that are not historical facts. Such forward-looking statements are not guarantees of performance and actual results could differ materially from those contained in such statements. Factors that could cause or contribute to such differences include, but are not limited to: risks related to the degree of competition in the markets in which Spark Networks operates; the ability of Spark Networks to retain and hire key personnel; Spark Networks’ ability to continue to control costs and operating expenses; Spark Networks’ ability to achieve its intended cost savings; Spark Networks’ ability to generate cash from operations, lower-than-expected revenue, credit quality deterioration or a reduction in net earnings; Spark Networks’ ability to raise outside capital and to repay debt as it comes due; Spark Networks’ ability to introduce new competitive products and the degree of market acceptance of such new products; the timing and market acceptance of new products introduced by Spark Networks’ competitors; Spark Networks’ ability to identify potential acquisitions; Spark Networks’ ability to successfully integrate acquired businesses and the ability of acquired businesses to perform as expected; Spark Networks’ ability to maintain strong relationships with branded channel partners; changes in Spark Networks’ stock price due to broader stock market movements and the performance of peer group companies; Spark Networks’ ability to enforce intellectual property rights and protect their respective intellectual property; general competition and price measures in the market place; general economic conditions; and the other factors identified in Item 3.D “Risk Factors.”

Although Spark Networks believes the assumptions upon which these forward-looking statements are based are reasonable, any of these assumptions could prove to be inaccurate and the forward-looking statements based on these assumptions could be incorrect. The underlying expected actions or Spark Networks’ results of operations involve risks and uncertainties, many of which are outside the company’s control, and any one of which, or a combination of which, could materially affect Spark Networks’ results of operations and whether the forward-looking statements ultimately prove to be correct. In light of the significant uncertainties inherent in the forward-looking statements, readers should not place undue reliance on forward-looking statements.

These forward-looking statements speak only as of the date on which the statements were made and Spark Networks does not undertake any obligation to update or revise any forward-looking statements made in this annual report or elsewhere as a result of new information, future events, or otherwise, except as required by law.

In addition to other factors and matters contained or incorporated in this document, the factors discussed under “Risk Factors” could cause actual results to differ materially from those discussed in the forward-looking statements.

Many of the factors that will determine Spark Networks’ future results are beyond Spark Networks’ ability to control or predict. Spark Networks cannot guarantee any future results, levels of activity, performance, or achievements.

Additional information about these factors and about the material factors or assumptions underlying such forward-looking statements may be found elsewhere in this annual report.

Spark Networks cautions further that, as it is not possible to predict or identify all relevant factors that may impact forward-looking statements, the foregoing list should not be considered a complete statement of all potential risks and uncertainties.

Readers should carefully consider the cautionary statements contained or referred to in this section in connection with any subsequent forward-looking statements that may be issued by Spark Networks or persons acting on behalf of Spark Networks.

Note regarding trademarks

The trademarks, trade names or service marks appearing in this annual report are the property of the Company. Solely for convenience, trademarks and trade names referred to in this annual report may appear without the ® or TM symbol.

PART I

Item 1. Identity of Directors, Senior Management and Advisers

Not applicable.

Item 2. Offer Statistics and Expected Timetable

Not applicable.

Item 3. Key Information

A. Selected financial data.

The selected financial data set forth in the table below for 2018, 2017, and 2016 has been derived from our audited consolidated financial statements as of December 31, 2018, 2017 and 2016 and for the years then ended. This selected financial data should be read in conjunction with the consolidated financial statements and accompanying notes included herein.

Statement of Comprehensive Loss/Income Data:

	Years Ended December 31,			
	2018	2017	2016	2018
	(in € thousands)			(in \$ thousands) ⁽¹⁾
Continuing operations				
Revenue	104,551	85,637	73,491	123,475
Cost of revenue	(69,490)	(58,776)	(51,202)	(82,068)
Gross profit	35,061	26,861	22,289	41,407
Other income	240	54	126	283
Other operating expenses	(36,299)	(32,030)	(19,742)	(42,869)
Sales and marketing expenses	(4,938)	(5,540)	(3,919)	(5,832)
Customer service expenses	(4,626)	(3,971)	(2,791)	(5,463)
Technical operations and development expenses	(7,195)	(6,428)	(3,305)	(8,497)
General and administrative expenses	(19,540)	(16,091)	(9,727)	(23,077)
Operating (loss)/profit	(998)	(5,115)	2,673	(1,179)
Interest income and similar income	478	239	157	565
Interest expense and similar charges	(1,436)	(782)	(425)	(1,696)
Net finance expenses	(958)	(543)	(268)	(1,131)
(Loss)/income before taxes	(1,956)	(5,658)	2,405	(2,310)
Income tax benefit (expense)	(1,147)	84	(1,082)	(1,355)
(Loss)/income from continuing operations	(3,103)	(5,574)	1,323	(3,665)
Discontinued operations				
Loss from discontinued operations, net of tax	—	—	(632)	—
Net (loss)/income	(3,103)	(5,574)	691	(3,665)
Other comprehensive (loss)/income	1,617	(883)	—	1,910
Total comprehensive (loss)/income	(1,486)	(6,457)	691	(1,755)
Earnings per share				
Basic earnings/(loss) per share	€ (2.39)	€ (24.23)	€ 27.64	\$ (2.82)
Diluted earnings/(loss) per share	€ (2.39)	€ (24.23)	€ 27.64	\$ (2.82)
Earnings per share - continuing operations				
Basic earnings/(loss) per share	€ (2.39)	€ (24.23)	€ 52.92	\$ (2.82)
Diluted earnings/(loss) per share	€ (2.39)	€ (24.23)	€ 52.92	\$ (2.82)

(1) Amounts in this column are not audited and have been converted from euros to U.S. dollars solely for the convenience of the reader. Balance sheet positions and income statement positions are converted at the exchange rate on December 31, 2018 of \$1.1450 per euro and the average exchange rate from January 1 until December 31, 2018 of \$1.1810 per euro, respectively.

Key Performance Indicators:

	<u># of Registrations⁽¹⁾</u>	<u>Average Paying Subscribers⁽²⁾</u>		<u>Monthly ARPU⁽³⁾</u>		<u>Adjusted EBITDA (in thousands)</u>
2018	10,144,173	483,413	€	18.02	€	10,952
2017	8,451,633	379,403	€	18.81	€	6,605
2016	6,897,649	317,276	€	19.30	€	5,869

(1) Total registrations are defined as the total number of new members registering to the platforms with their email address. Those include members who enter into premium subscriptions and free memberships.

(2) Paying subscribers are defined as individuals who have paid a monthly fee for access to premium services, which include, among others, unlimited communication with other registered users, access to user profile pictures and enhanced search functionality. Average paying subscribers for each month are calculated as the sum of the paying subscribers at the beginning and the end of the month, divided by two. Average paying subscribers for periods longer than one month are calculated as the sum of the average paying subscribers for each month, divided by the number of months in such period.

(3) Monthly Average Revenue Per User (ARPU) represents the total net subscriber revenue for the period divided by the number of average paying subscribers for the period, divided by the number of months in the period.

The following table presents certain selected information and Adjusted EBITDA⁽²⁾ for the periods presented:

	Years Ended December 31,			
	2018	2017	2016	2018
	(in € thousands)			(in \$ thousands)⁽¹⁾
Net (loss)/income	(3,103)	(5,574)	691	(3,665)
Discontinued operations	—	—	632	—
Net finance expenses	958	543	268	1,131
Income tax (benefit) expense	1,147	(84)	1,082	1,355
Depreciation and amortization	3,565	3,084	1,278	4,210
Impairment of intangible assets and goodwill	3,324	25	—	3,926
Share-based compensation expense	4,091	488	991	4,831
Non-recurring costs	970	8,123	927	1,145
Adjusted EBITDA ⁽²⁾	10,952	6,605	5,869	12,933

	Years Ended December 31,			
	2018	2017	2016	2018
	(in € thousands)			(in \$ thousands)⁽¹⁾
Summary of non-recurring costs				
Contract liabilities write-offs	289	603	—	341
Restructuring expenses	—	—	642	—
Transaction and advisory fees	264	3,995	162	312
Merger integration costs	101	2,042	—	119
Other employee payments	—	1,053	—	—
Severance costs	316	430	123	373
Total adjustments	970	8,123	927	1,145

(1) Amounts in this column are not audited and have been converted from euros to U.S. dollars solely for the convenience of the reader. Balance sheet positions and income statement positions are converted at the

exchange rate on December 31, 2018 of \$1.1450 per euro and the average exchange rate from January 1 until December 31, 2018 of \$1.1810 per euro, respectively.

(2) Adjusted EBITDA is not a measure defined by International Financial Reporting Standards ("IFRS"). The most directly comparable IFRS measure for Adjusted EBITDA is our net (loss)/profit for the relevant period. This measure is one of the primary metrics by which we evaluate the performance of our businesses, budget, forecast and compensate management. We believe this measure provides management and investors with a consistent view, period to period, of the core earnings generated from ongoing operations and excludes the impact of items that we do not consider representative of our ongoing operating performance, including: (i) non-cash items such as share-based compensation, asset impairments, net finance expenses and (ii) one-time items that have not occurred in the past two years and are not expected to recur in the next two years including severance, transaction advisory fees, and merger integration costs, and (iii) discontinued operations. Adjusted EBITDA has inherent limitations in evaluating the performance of the Company, including, but not limited to the following:

- Adjusted EBITDA does not reflect the cash capital expenditures during the measurement period,
- Adjusted EBITDA does not reflect any changes in working capital requirements during the measurement period,
- Adjusted EBITDA does not reflect the cash tax payments during the measurement period, and
- Adjusted EBITDA may be calculated differently by other companies in our industry, thus limiting its value as a comparative measure.

Adjusted EBITDA should not be construed as a substitute for net (loss) / profit (as determined in accordance with IFRS) for the purpose of analyzing our operating performance or financial position, as Adjusted EBITDA is not defined by IFRS.

Statement of Financial Position Data:

	Years Ended December 31,		
	2018	2017	2018
	(in € thousands)		(in \$ thousands) ⁽¹⁾
Cash and cash equivalents	11,095	8,214	12,704
Current trade and other receivables	7,004	13,820	8,020
Intangible assets and goodwill	33,015	35,136	37,802
Total Assets	62,862	69,182	71,977
Total Liabilities	43,453	49,705	49,754
Total Shareholders' Equity	19,409	19,477	22,223

(1) Amounts in this column are not audited and have been converted from euros to U.S. dollars solely for the convenience of the reader. Balance sheet positions and income statement positions are converted at the exchange rate on December 31, 2018 of \$1.1450 per euro and the average exchange rate from January 1 until December 31, 2018 of \$1.1810 per euro, respectively.

Exchange Rate Information:

We publish our financial statements in euros. Fluctuations in the exchange rate between the euro and the U.S. dollar will affect the U.S. dollar amounts received by owners of our American Depositary Shares ("ADSs") on conversion of dividends, if any, paid in euro on the ADSs. The following table presents information on the exchange rates between the euro and the U.S. dollar for the periods indicated.

	High	Low	Average	Year End
Year Ended December 31, 2018	1.2493	1.1261	1.1810	1.1450
Year Ended December 31, 2017	1.2060	1.0385	1.1297	1.1993
Year Ended December 31, 2016	1.1569	1.0364	1.1069	1.0541

Months ended	High	Low	Average	Month End
January 2018	1.2457	1.1932	1.2200	1.2457
February 2018	1.2493	1.2214	1.2348	1.2214
March 2018	1.2421	1.2171	1.2336	1.2321
April 2018	1.2388	1.2070	1.2276	1.2079
May 2018	1.2007	1.1558	1.1812	1.1699
June 2018	1.1836	1.1534	1.1678	1.1658
July 2018	1.1789	1.1588	1.1686	1.1736
August 2018	1.1710	1.1321	1.1549	1.1651
September 2018	1.1777	1.1562	1.1659	1.1576
October 2018	1.1606	1.1318	1.1484	1.1318
November 2018	1.1487	1.1261	1.1367	1.1359
December 2018	1.1454	1.1285	1.1384	1.1450

B. Capitalization and Indebtedness.

Not applicable.

C. Reasons for Offer and Use of Proceeds.

Not applicable.

D. Risk Factors.

Our business faces significant risks. You should carefully consider all of the information set forth in this annual report and in our other filings with the United States Securities and Exchange Commission, or the SEC, including the following risks that we face and that are faced by our industry. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. This report also contains forward-looking statements that involve risks and uncertainties. Our results could materially differ from those anticipated in these forward-looking statements as a result of certain factors including the risks described below and elsewhere in this report and our other SEC filings. See “Cautionary statement regarding forward-looking statements” above.

Risks Related to Our Business

Spark Networks’ business depends on establishing and maintaining strong brands, and if Spark Networks is not able to maintain and enhance its brands, it may be unable to expand or maintain its member and paying subscriber bases.

Spark Networks believes that establishing and maintaining its brands is essential to its efforts to attract and expand its member and paying subscriber bases. It believes that the importance of brand recognition will continue to increase, given the growing number of online dating sites and applications, or “apps,” and the low barriers to entry for companies offering online dating and other types of personals services. As of December 31, 2018, Spark Networks’ services were available in 29 countries. To attract and retain members and paying subscribers, and to promote and maintain its brands in response to competitive pressures, Spark Networks may have to substantially increase its financial commitment to creating and maintaining its distinct brand. If visitors, members and paying subscribers to its products do not perceive its existing services to be of higher quality, or if it introduces new services or enters into new business ventures that are not favorably received by such parties, the value of its brands could be diluted, thereby decreasing the attractiveness of its websites to such parties. As a result, its results of operations may be adversely affected by decreased brand recognition or negative brand perception.

If Spark Networks' efforts to attract new members, convert members into paying subscribers and retain its paying subscribers are not successful, its revenue and operating results will suffer.

Since it was launched in 2008, Spark Networks and its predecessor companies has had nearly 60 million users register with its dating platforms. A registration is deemed complete once a user has inserted an email/password combination, accepted the terms of service and clicked the registration button in order to create a profile with the respective site (such user, a "registered user"). For the twelve months ended December 31, 2018, Spark Networks had an average of approximately 483,000 paying members across all of its platforms. Spark Networks' future growth depends on its ability to attract new members that fit within its target audience, convert members into paying subscribers and retain its paying subscribers. This in turn depends on its ability to deliver a relevant, high-quality online personals experience to these members and its ability to remain attractive to its existing and potential paying customers. As a result, it must continue to invest significant resources in order to enhance its existing products and services and introduce new high-quality products and services that people will use. If Spark Networks is unable to predict user preferences or industry changes, or if it is unable to modify its products and services on a timely basis, it may lose existing members and paying subscribers and may fail to attract new members and paying subscribers. For example, one of Spark Networks' strategies is to target single people with high socio-economic status who are looking for a serious and long-term relationship. If its user preferences change, or the market for this niche otherwise decreases, or this strategy is otherwise unsuccessful, Spark Networks could lose users, including paying subscribers, and its market share and revenue could decrease. Spark Networks' revenue and expenses will also be adversely affected if its innovations are not responsive to the needs of its members and paying subscribers or are not brought to market in an effective or timely manner.

Spark Networks revenue could be adversely affected if subscriptions cannot be automatically renewed.

Spark Networks generally provides its premium memberships pursuant to 1-month, 3-month, 6-month, 12-month and 24-month subscriptions, which are generally automatically renewed unless canceled by the subscriber. In each of the years ended December 31, 2018, 2017 and 2016, subscription revenue accounted for over 99% of Spark Networks' total revenue. Although Spark Networks has historically experienced a high percentage of subscribers that choose an auto-renewal payment option, a significant portion of Spark Networks' members may choose not to do so in the future or Spark Networks may encounter difficulties during the technical processing of the renewal of credit card processing due to, for instance, the expiration or blocking of the applicable credit card. Spark Networks has successfully taken steps to increase renewal rates by, for example, improving the auto-renewal success, but there can be no assurance that these efforts will remain successful in maintaining, and even increasing renewal rates in the future.

The EU has introduced the EU Consumer Rights Directive (the "Directive"), enforced in EU member states since June 2014, that restricts the use of auto-renewals, and Spark Networks has implemented a membership subscription model which is compliant with the Directive. Numerous U.S. states also have laws regulating auto-renewal clauses in contracts, and proposals to restrict auto-renewals are also under consideration in the United States. To the extent that Spark Networks must reduce or eliminate the use of auto-renewals in these or other markets, renewal rates may fall, potentially reducing the number of membership subscription users. Consequently, the growth of subscription revenue will depend significantly on attracting new subscription users, and this dependence could increase due to regulations concerning auto-renewal that are outside of Spark Networks' control. Any failure to maintain or improve the renewal rates of membership subscription users or to attract new subscription users could have a material adverse effect on results of operations.

Moreover, some credit card processors have announced the application of more stringent rules for credit card processing in the EU, which will likely require users to take additional steps when paying online. This may have an adverse effect on the authorization levels of Spark Networks' users.

Spark Networks' growth strategy includes acquisitions that entail significant execution, integration and operational risks.

Spark Networks pursues a growth strategy based in part on acquisitions, with the objective of creating a combined company that Spark Networks believes can achieve increased cost savings and operating efficiencies through economies of scale, especially in the integration of administrative services. Spark Networks will seek to make additional acquisitions in the future to increase its scale and profitability. For instance, on September 30, 2016, Spark Networks consummated the acquisition of Samadhi, an unrelated third party and owner of the Attractive World platform, and on November 2, 2017, Spark Networks consummated the merger of Spark Networks Services GmbH (f/k/a Affinitas GmbH), a German limited company ("Affinitas") and Spark Networks, Inc., a Delaware corporation ("Spark"). This growth strategy involves significant risks. Spark Networks exposes itself to operational and financial risks in connection with historical and future acquisitions if it is unable to:

- properly value prospective acquisitions, especially those with limited operating histories;
- successfully integrate the operations, as well as the accounting, financial controls, management information, technology, human resources and other administrative systems of acquired businesses with its existing operations and systems;
- successfully identify and realize potential synergies among acquired and existing businesses;
- retain or hire senior management and other key personnel at acquired businesses; and
- successfully manage acquisition-related strain on its management, operations and financial resources and those of the various brands in its portfolio.

Furthermore, Spark Networks may not be successful in addressing other challenges encountered in connection with its acquisitions. The anticipated benefits of one or more of its acquisitions may not be realized or the value of goodwill and other intangible assets acquired could be impacted by one or more continuing unfavorable events or trends, which could result in significant impairment charges. The occurrence of any these events could have an adverse effect on its business, financial condition and results of operations. While Spark Networks has successfully integrated acquisitions in the past, such as in the Affinitas / Spark Merger, no assurance can be provided that Spark Networks will experience similar success with future acquisitions.

Acquisitions also involve operational risks and uncertainties, such as unknown or contingent liabilities with no available manner of recourse, exposure to unexpected problems, the retention of key employees and customers, and other issues that could negatively affect our business. Any such liabilities, individually or in the aggregate, could have a material adverse effect on our business.

Spark Networks faces significant competition for acquisition opportunities.

There is significant competition for acquisition targets in the markets within which Spark Networks operates.

Consequently, Spark Networks may not be able to identify suitable acquisitions or may have difficulty finding attractive businesses for acquisition at reasonable prices. If Spark Networks is unable to identify future acquisition opportunities, reach agreement with such third parties or obtain the financing necessary to make such acquisitions, Spark Networks could lose scale relative to competitors who are able to make such acquisitions. This loss of relative scale in the industry could negatively impact Spark Networks' capacity to compete and reduce future growth potential.

In addition, current and potential competitors are making, and are expected to continue to make, strategic acquisitions, or establishing cooperatives and in some cases, establishing exclusive relationships with significant companies or competitors to expand their businesses or to offer more comprehensive products and services. To the extent these competitors or potential competitors establish exclusive relationships with major portals, search engines and Internet Service Providers ("ISPs"), our ability to reach potential members through online advertising may be restricted. Any of these competitors could cause difficulty in attracting and retaining members and converting members into paying subscribers.

Spark Networks may fail to adequately protect its intellectual property rights or may be accused of infringing the intellectual property rights of third parties.

Spark Networks relies heavily upon its trademarks and related domain names and logos to market its brands and to build and maintain brand loyalty and recognition, as well as upon trade secrets.

In addition, Spark Networks relies on a combination of laws, and contractual restrictions with employees, customers, suppliers, affiliates and others, to establish and protect its various intellectual property rights. For example, Spark Networks has generally registered, and continues to apply to register and renew, or secure by contract where appropriate, trademarks and service marks as they are developed and used, and reserve, register and renew domain names as it deems appropriate. Effective trademark protection may not be available or may not be sought in every country in which Spark Networks' products are made available, and contractual disputes may affect the use of marks governed by private contract. Similarly, not every variation of a domain name may be available or be registered, even if available.

Despite these measures, Spark Networks' intellectual property rights may still not be protected in a meaningful manner, challenges to contractual rights could arise or third parties could copy or otherwise obtain and use its intellectual property without authorization. In addition, litigation may be necessary in the future to enforce its intellectual property rights, protect its trade secrets or to determine the validity and scope of proprietary rights claimed by others. Any litigation of this nature, regardless of outcome or merit, could result in substantial costs and diversion of management and technical resources.

For instance, Spark Networks is currently in a dispute with a competitor related to its registered figurative trademark for EliteSingles and country specific related trademarks in BeneLux, Finland, Hungary, Ireland, Sweden and the UK. Although Spark Networks believes it will ultimately prevail and intends to prosecute and defend its interest vigorously, if Spark Networks were to lose these disputes, it may be required to rebrand EliteSingles and the country specific brands in the given countries, which may have an adverse effect on the performance of the respective EliteSingles brands. For the twelve months ended December 31, 2018, the affected EliteSingles brands' average paying members constituted approximately 15.4% of Spark Networks' overall average paying member count.

The occurrence of any of these events could result in the erosion of Spark Networks' brands and limit its ability to market its brands using its various domain names, as well as impede its ability to effectively compete against competitors with similar technologies, any of which could adversely affect its business, financial condition and results of operations.

If Spark Networks fails to keep pace with rapid technological change, its competitive position will suffer.

Spark Networks operates in a market characterized by rapidly changing technologies, evolving industry standards, frequent new product and service announcements, enhancements and changing customer demands. Accordingly, its performance depends on its ability to adapt to rapidly changing technologies and industry standards, and the ability to continually improve the speed, performance, features, ease of use and reliability of services in response to both evolving demands of the marketplace and competitive service and product offerings. Spark Networks' industry has been subject to constant innovation and competition. When one competitor introduces new features perceived as attractive to users, other competitors replicate such new features. Over the last few years, such new feature introductions in the industry have included instant messaging, message boards, e-cards, personality profiles, the delivery of content through cell phones and linking of profiles to social media accounts. There have also been subsequent enhancements on new features such as the ability to send videos and photos through instant messaging or customize user experience based on machine learning and artificial intelligence. Integration of new technologies into systems involves numerous technical challenges, substantial amounts of capital and personnel resources, and often takes many months to complete. Spark Networks intends to continue to devote efforts and funds toward the development of additional technologies and services so that it can both innovate and stay competitive in the competitive landscape in which it operates. For example, in 2018, 2017 and 2016, Spark Networks introduced a number of new features such as an open search functionality and a new personality test, and it anticipates the introduction of additional features in 2019 and beyond. Spark Networks may not be able to effectively integrate new technologies into its websites on a timely basis or at all, which may degrade the responsiveness and speed of its websites. Such technologies, even if integrated, may not function as expected.

Spark Networks needs to maintain or increase its number of paying subscribers to maintain or increase its current level of revenue.

The vast majority of Spark Networks' revenue is generated by users that pay it a subscription fee. Internet and app users in general, and users of online personals services specifically, freely navigate and use the services offered by a variety of providers. Spark Networks cannot assure that it will be able to grow or even maintain the current size of its subscriber base. If it does not constantly attract new paying subscribers at a faster rate than subscription terminations, it will not be able to maintain or increase its current level of revenue.

Spark Networks' growth and profitability rely, in part, on its ability to attract and retain users through cost-effective marketing efforts. Any failure in these efforts could adversely affect its business, financial condition and results of operations.

Costs for Spark Networks to acquire paying subscribers are dependent, in part, upon its ability to purchase advertising at a reasonable cost. Its advertising costs vary over time depending upon a number of factors, many of which are beyond its control. Historically, Spark Networks has used online and offline advertising as the primary means of marketing its services. During 2018, cost of revenue substantially increased compared to the prior year based on direct marketing investment in SilverSingles following its December 2017 launch. During both 2017 and 2016, cost of revenue substantially increased compared to the prior year primarily as a result of growing Spark Networks' newly established North American business under the brand EliteSingles, which was launched in May 2015.

Evolving consumer behavior can affect the availability of profitable marketing opportunities. For example, as traditional television viewership declines and as consumers spend more time on mobile devices rather than desktop computers, the reach of many traditional advertising channels is contracting. To continue to reach potential users and grow its businesses, Spark Networks must identify and devote more of its overall marketing expenditures to newer advertising channels, such as mobile and online video platforms, as well as targeted campaigns in which it communicates directly with potential, former and current users via new virtual means. Positive user experiences can provide gratuitous promotional opportunities for Spark Networks, as satisfied subscribers can encourage others to join; Spark Networks can also capitalize on such success stories in its marketing. Many of its competitors have also engaged in live marketing efforts such as organized social events for its members, an area that Spark Networks has not yet tried at scale. Generally, the opportunities in and sophistication of newer advertising channels are relatively undeveloped and unproven, and there can be no assurance that Spark Networks will be able to continue to appropriately manage and fine-tune its marketing efforts in response to these and other trends in the advertising industry. Any failure to do so could adversely affect its business, financial condition and results of operations.

In addition, the cost of online and/or offline advertising has historically increased over time. If Spark Networks is not able to reduce its other operating costs, increase its paying subscriber base or increase revenue per paying subscriber to offset increased marketing costs, its profitability will be adversely affected.

Communicating with Spark Networks' users is critical to its success, and any erosion in Spark Networks' ability to communicate with its users could adversely affect its business, financial condition and results of operations.

To be successful, Spark Networks must communicate with its subscribers and other users to, among other things, update them on their profile and related activity and to introduce them to new products and services. As a result, Spark Networks must ensure that its methodology for communication with its subscribers and other users evolves in step with the communication habits of its consumers. For instance, most of Spark Networks' communications currently take the form of email and push notifications.

Any failure to effectively communicate with current users or develop or take advantage of new means of communication could have an adverse effect on its business, financial condition and results of operations.

Spark Networks' success depends, in part, on the integrity of its systems and infrastructure and on its ability to enhance, expand and adapt these systems and infrastructure in a timely and cost-effective manner.

In order for Spark Networks to succeed, its systems and infrastructure must perform well on a consistent basis. From time to time, it may experience system interruptions that make some or all of its systems or data unavailable and prevent its products from functioning properly for its users; any such interruption could arise for any number of reasons, including human errors. Further, its systems and infrastructure are vulnerable to damage from fire, power loss, hardware and operating software errors, telecommunications failures and similar events. While it has backup systems in place for

certain aspects of its operations, its systems and infrastructure are not fully redundant, disaster recovery planning is not sufficient for all eventualities and its property and business interruption insurance coverage may not be adequate to compensate it fully for any losses that it may suffer. Any interruptions or outages, regardless of the cause, could negatively impact its users' experiences with its products, tarnish its brands' reputation and decrease demand for its products, any or all of which could adversely affect its business, financial condition and results of operations. Moreover, even if detected, the resolution of such interruptions may take a long time, during which customers will not be able to access, or will have limited access to, the service.

Spark Networks also continually works to expand and enhance the efficiency and scalability of its technology and network systems to improve the experience of its users, accommodate substantial increases in the volume of traffic to its various dating products, ensure acceptable page load times or general accessibility for its dating products and keep up with changes in technology and user preferences. Any failure to do so in a timely and cost-effective manner could adversely affect its users' experience with its various products and thereby negatively impact the demand for its products, and could increase its costs, either of which could adversely affect its business, financial condition and results of operations.

Spark Networks' services are highly technical and may contain undetected bugs or errors, which could manifest in ways that could seriously harm its reputation and its business.

Spark Networks' services are highly technical and complex, and any services Spark Networks may introduce in the future may contain undetected bugs, errors, and other vulnerabilities. These bugs and errors can manifest in any number of ways in its services, including through diminished performance, security vulnerabilities, malfunctions, or even permanently disabled services. Spark Networks has a practice of rapidly updating its services, but some errors in its services may be discovered only after its service is used by users, and may in some cases be detected only under certain circumstances or after extended use. Any such defects discovered in Spark Networks' services after commercial release could result in a loss of sales and users, which could seriously harm its business. Any errors, bugs, or vulnerabilities discovered in its code after release could damage its reputation, drive away users, lower revenue, and expose us to damages claims, any of which could seriously harm its business.

Spark Networks may not be able to protect its systems and infrastructure from cyberattacks and may be adversely affected by cyberattacks experienced by third parties.

Like any other business, there is a risk that Spark Networks will experience cyberattacks, computer viruses, worms, hacking, phishing, bot attacks or other destructive or disruptive software, distributed denial of service attacks, and attempts to misappropriate customer information. While Spark Networks has invested (and continues to invest) heavily in the protection of its systems and infrastructure and in related training, there can be no assurance that its efforts will prevent significant breaches in its systems or other such events from occurring. Any cyber or similar attack it is unable to protect itself against could damage its systems and infrastructure, prevent it from providing its products and services, erode its reputation and brands, result in the disclosure of confidential information of its users and/or be costly to remedy, as well as subject it to investigations by regulatory authorities and/or litigation that could result in liability to third parties. In light of the nature of its business, the unintended disclosure of personal information, whether as a result of a cyber attack or not, would be particularly damaging to Spark Networks' reputation.

Similarly, online scammers and other similar groups may use Spark Networks' services and products to engage in illegal activities and it is likely that as more people use Spark Networks' services, these groups will increasingly seek to misuse Spark Networks' products. Although Spark Networks invests resources to combat these activities, including by suspending or terminating accounts it believes violate its guidelines, Spark Networks believes these groups will continue to seek ways to act inappropriately and illegally on its services. Combating these groups requires Spark Networks' engineering and customer service teams to divert significant time and focus from improving its services.

Further, the impact of cyber security events experienced by third parties with whom Spark Networks does business (or upon whom it otherwise relies in connection with its day-to-day operations such as credit card processors) could have a similar effect on Spark Networks. If breaches, scamming and other similar activities increase at third-parties with whom Spark Networks does business, Spark Networks' reputation, business and results of operations could be materially adversely affected.

Spark Networks relies on a number of third party providers and their failure or unwillingness to continue to perform could harm us.

Spark Networks relies on third parties to provide important services and technologies to it, including third parties that manage and monitor its offsite data center, ISPs, search engine marketing providers and credit card processors, among others. In addition, it licenses technologies from third parties to facilitate its ability to provide its services. Any failure on its part to comply with the terms of these licenses could result in the loss of its rights to continue using the licensed technology, and it could experience difficulties obtaining licenses for alternative technologies. Furthermore, any failure of these third parties to provide these and other services, or errors, failures, interruptions or delays associated with licensed technologies, could significantly harm its business. Any financial or other difficulties its providers face may have negative effects on its business, the nature and extent of which it cannot predict. Except to the extent of the terms of its contracts with such third party providers, Spark Networks exercises little or no control over them, which increases its vulnerability to problems with the services and technologies they provide and license to it. In addition, if any fees charged by third party providers were to substantially increase, Spark Networks could incur significant additional losses.

Spark Networks depends, in part, upon arrangements with third parties to drive traffic to its various websites.

Spark Networks engages in a variety of activities designed to attract traffic to its various websites and convert visitors into members and paying subscribers. How successful it is in these efforts depends, in part, upon its continued ability to enter into arrangements with third parties to drive traffic to its various websites and its oversight of such third parties to ensure that they are appropriately communicating with online users. Pursuant to these arrangements, third parties generally promote Spark Networks' services on their websites or through email campaigns and it pays them based upon a variety of arrangements (cost per registration, cost per one thousand impressions, a percentage of sales, etc.). Depending on how a third party communicates with online users via email, third party email service providers could treat such email campaign as spam, and ultimately limit Spark Networks' ability to communicate with its members and paying subscribers via email.

These arrangements are generally not exclusive, are short-term in nature and are generally terminable by either party given notice. If existing arrangements with third parties are terminated (or are not renewed upon their expiration) and Spark Networks fails to replace this traffic and related revenue, or if it is unable to enter into new arrangements with existing and/or new third parties in response to industry trends, or if such third parties improperly manage email campaigns, its business, financial condition and results of operations could be adversely affected.

Distribution and use of Spark Networks' dating products depends, in significant part, on a variety of third party publishers, platforms and mobile app stores. If these third parties limit, prohibit or otherwise interfere with the distribution or use of Spark Networks' dating products in any material way, it could adversely affect its business, financial condition and results of operations.

Spark Networks markets and distributes its dating products (including related mobile applications) through a variety of third party publishers and distribution channels. Its ability to market its brands on any given property or channel is subject to the policies of the relevant third party. Certain publishers and channels have, from time to time, limited or prohibited advertisements for dating products for a variety of reasons, including as a result of poor behavior by other industry participants. There is no assurance that Spark Networks will not be limited or prohibited from using certain current or prospective marketing channels in the future. If this were to happen in the case of a significant marketing channel and/or for a significant period of time, Spark Networks' business, financial condition and results of operations could be adversely affected.

Additionally, Spark Networks' mobile applications are accessed through the Apple App Store and the Google Play Store, among other platforms. Both Apple and Google have broad discretion to change their respective terms and conditions applicable to the distribution of Spark Networks' applications as well as to the pricing of Spark Networks' services, and to interpret their respective terms and conditions in ways that may limit, eliminate or otherwise interfere with Spark Networks' ability to distribute its applications through their stores. There is no assurance that Apple or Google will not limit or eliminate or otherwise interfere with the distribution of our applications. If either or both entities were to do so, Spark Networks' business, financial condition and results of operations could be adversely affected.

As the distribution of Spark Networks' dating products through app stores increases, Spark Networks will need to offset increasing app store fees.

As Spark Networks' user base continues to shift to mobile solutions, it increasingly relies on the Apple App Store and the Google Play Store to distribute its mobile applications and related in-app products. While its mobile applications are generally free to download from these stores, it offers its users the opportunity to purchase paid memberships through these applications. Spark Networks determines the prices at which these memberships and features are sold and, in exchange for facilitating the purchase of these memberships and features through these applications to users who download its applications from these stores, it pays Apple and Google, as applicable, a share (generally 30%) of the revenue it receives from these transactions. As the distribution of its dating products through app stores increases, Spark Networks will need to offset these increased app store fees by decreasing traditional marketing costs, or by engaging in other efforts to increase revenue or decrease costs generally, or its business, financial condition and results of operations could be adversely affected.

Increases in credit card processing fees and high chargeback costs could increase operating expenses and adversely affect results of operations, and an adverse change in, or the termination of, Spark Networks' relationship with any major credit card company would have a severe, negative impact on our business.

A significant portion of Spark Networks' customers purchase its products using credit or debit cards. The major credit card companies or the issuing banks may increase the fees that they charge for transactions using their cards. An increase in those fees would require Spark Networks to either increase the prices it charges for its products, or suffer a negative impact on its profitability, either of which could adversely affect its business, financial condition and results of operations.

In addition, Spark Networks has potential liability for chargebacks associated with the transactions processed on its behalf. If a customer claims that a subscription to one of Spark Networks' products was purchased fraudulently, the subscription price is "charged back" to Spark Networks or its bank, as applicable. If Spark Networks or its sponsoring banks are unable to collect the chargeback from the persons processing transactions on its behalf, or, if the credit card processor refuses or is financially unable to reimburse for the chargeback, Spark Networks bears the loss for the amount of the refund paid.

Spark Networks is vulnerable to credit card fraud. Card fraud occurs when a customer uses a stolen card (or a stolen card number in a card-not-present-transaction) to purchase merchandise or services. In a traditional card-present transaction, if the merchant swipes the card, receives authorization for the transaction from the card issuing bank and verifies the signature on the back of the card against the paper receipt signed by the customer, the card issuing bank remains liable for any loss. In a fraudulent card-not-present transaction, even if the processor receives authorization for the transaction, the Spark Networks or the card processor are liable for any loss arising from the transaction. Because all of Spark Networks' sales via credit card are card-not-present transactions, Spark Networks is more vulnerable to customer fraud.

If the security of personal and confidential user information that Spark Networks maintains and stores is breached or otherwise accessed by unauthorized persons, it may be costly to mitigate the impact of such an event and Spark Networks' reputation could be harmed.

Spark Networks receives, processes, stores and transmits a significant amount of personal user and other confidential information, including credit card information, and enables its users to share their personal information with each other. In some cases, it retains third party vendors to store this information. Spark Networks continuously develops and maintains systems to protect the security, integrity and confidentiality of this information, but cannot guarantee that inadvertent or unauthorized, including as a result of cyber attacks, use or disclosure will not occur or that third parties will not gain unauthorized access to this information despite its efforts. Some advertisers and partners may store information that Spark Networks shares with them. If these third parties fail to implement adequate data-security practices or fail to comply with Spark Networks' terms and policies, its users' data may be improperly accessed or disclosed. Even if these third parties take all these steps, their networks may still suffer a breach, which could compromise Spark Networks' users' data. In addition, third parties may attempt to fraudulently induce employees or users to disclose information to gain access to Spark Networks' data or its users' data. If any such event were to occur, it may not be able to remedy the event, and it may have to expend significant capital and resources to mitigate the impact of such an event, and to develop and implement protections to prevent future events of this nature from occurring again. If a breach of its security (or the security of its vendors and partners) occurs, the perception of the effectiveness of its security measures and its reputation may be harmed, it could lose current and potential users and the recognition of its various brands and their competitive positions could be diminished, any or all of which could adversely affect its business, financial condition and results of operations. In addition, affected users or government authorities could initiate legal or regulatory action against Spark Networks over those incidents, which could cause us to incur significant expense and liability or result in orders or consent decrees forcing us to modify our business practices.

Unauthorized access of personal data could give rise to liabilities as a result of governmental regulation, conflicting legal requirements or differing views of personal privacy rights.

Security breaches or other unauthorized access to, or the use or transmission of, personal user information could result in a variety of claims against Spark Networks, including privacy-related claims.

In 2016, the European Commission adopted the General Data Protection Act, a comprehensive European Union privacy and data protection reform that became effective in May 2018 in all countries of the European Union. Pursuant to Sec. 3 of the European Data Protection Directive and Sec. 3 of the German Telecommunication and Media Act, Spark Networks has to comply with the European and German data protection laws regarding all countries in the European Union and with the laws of countries outside of the European Union where Spark Networks operates. These rules include rules related to the storage, sharing, use, processing, disclosure and protection of personal data.

In addition, legislation concerning data protection has been enacted or is pending enactment in many other jurisdictions, including the United States and Russia. It is possible that these laws may conflict with Spark Networks' data practices. If so, in addition to the possibility of fines, this could result in an order requiring that Spark Networks change its data practices, which could have an adverse effect on its business. Complying with these laws as they evolve could cause it to incur substantial costs or require it to change its business practices in a manner adverse to its business. These laws and regulations are constantly changing, may in some instances be inconsistent with or conflict with each other, and can be subject to differing interpretations.

While Spark Networks believes that it complies with industry standards and applicable laws and industry codes of conduct relating to privacy and data protection in all material respects, there is no assurance that it will not be subject to claims that it has violated applicable laws or codes of conduct, that it will be able to successfully defend against such claims or that it will not be subject to significant fines and penalties in the event of non-compliance.

If Spark Networks or its affiliates are found to be in violation of these laws and regulations, it may become subject to administrative fines or litigation or be required to change its data practices, which could materially increase its expenses, adversely affect its results of operations and cause the value of Spark Networks' ADSs to decline.

Any failure or perceived failure by Spark Networks (or the third parties with whom it has contracted to store such information) to comply with applicable privacy and security laws, policies or related contractual obligations, or any compromise of security that results in unauthorized access to personal information, may result in governmental enforcement actions, significant fines and litigation. In the case of such an event, Spark Networks' reputation may be harmed, it could lose current and potential users and the competitive positions of its various brands could be diminished, any or all of which could adversely affect its business, financial condition and results of operations.

Spark Networks is subject to a number of risks related to credit card payments, including data security breaches and fraud that it or third parties experience or additional regulation, any of which could adversely affect its business, financial condition and results of operations.

Spark Networks accepts payment from its users primarily through credit card transactions and online payment service providers. While Spark Networks uses third-parties to handle and process credit card transactions, it still faces risks related to security breaches involving these third party providers. For instance, a large breach at a third party credit card processor could cause people to cancel their credit cards, which could affect Spark Networks' ability to process auto-renewals. In addition, breaches at third party processors could affect consumer confidence in Spark Networks because consumers may not distinguish between Spark Networks and the third party when informed of the breach. The occurrence of this or similar events could have a material adverse effect on Spark Networks' business, results of operations, and financial conditions.

Inappropriate actions by certain of Spark Networks' users could be attributed to Spark Networks and damage our brands' reputations, which in turn could adversely affect our business.

The reputation of Spark Networks' brands may be adversely affected by the actions of its users that are deemed to be hostile, offensive, defamatory, inappropriate or unlawful. While Spark Networks monitors and reviews the appropriateness of the content accessible through its dating products and has adopted policies and technical solutions to address and prevent illegal, offensive or inappropriate use of its dating services, its users could nonetheless engage in activities that violate its policies or circumvent the solutions. These safeguards may not be sufficient to avoid harm to Spark Networks' reputation and brands, especially if such hostile, offensive or inappropriate use is well-publicized.

In addition, it is possible that a user of Spark Networks' services could be physically, financially, emotionally or otherwise harmed by an individual that such user met through the use of one of Spark Networks' services. While Spark Networks checks every new profile, and certain of its services only allow new members who are peer-approved, it is not certain that every harm posed by other individuals can be eliminated. If one or more of Spark Networks' users suffers or alleges to have suffered any such harm, it could experience negative publicity or legal action that could damage its reputation and its brands. Similar events affecting users of Spark Networks' competitors' dating services could result in negative publicity for the dating industry, which could in turn negatively affect Spark Networks' business. Concerns about such harms and the use of dating services and social networking platforms for illegal conduct, such as romance scams and financial fraud, could produce future legislation or other governmental action that could require changes to Spark Networks' dating services, restrict or impose additional costs upon the conduct of its business generally, subject it to liability for user conduct or cause users to abandon its dating services.

Spark Networks may be liable as a result of information retrieved from or transmitted over the internet.

Spark Networks may be sued for defamation, civil rights infringement, negligence, copyright or trademark infringement, invasion of privacy, personal injury, product liability or under other legal theories relating to information that is published or made available on its websites and the other sites linked to it. These types of claims have been brought, sometimes successfully, against online services in the past. Spark Networks could incur significant costs in investigating and defending such claims, even if it ultimately is not held liable. If any of these events occurs, its revenue could be materially adversely affected or it could incur significant additional expense.

Spark Networks operates in various international markets, including certain markets in which it has limited experience. As a result, it faces additional risks in connection with certain of its international operations.

Spark Networks' brands are available in 29 countries. Operating internationally exposes it to a number of additional risks, including:

- operational and compliance challenges caused by distance, language and cultural differences;
- difficulties in staffing and managing international operations;
- differing levels of social and technological acceptance of its dating services or lack of acceptance of them generally;
- foreign currency fluctuations;
- restrictions on the transfer of funds among countries and costs associated with repatriating funds;
- differing and potentially adverse tax laws;
- multiple, conflicting and changing laws, rules and regulations, and difficulties understanding and ensuring compliance with those laws by both Spark Networks' employees and its business partners, over whom it exerts no control;
- compliance challenges due to different laws and regulatory environments, particularly in the case of privacy and data security;
- competitive environments that favor local businesses;
- limitations on the level of intellectual property protection; and
- trade sanctions, political unrest, terrorism, war and epidemics or the threat of any of these events.

While Spark Networks employs people from 49 nationalities that help to build and maintain knowledge about the geographies, countries and cultures the company operates in, the occurrence of any or all of the events described above could adversely affect Spark Networks' international operations, which could in turn adversely affect its business, financial condition and results of operations.

Spark Networks is subject to litigation and adverse outcomes in such litigation could have an adverse effect on its financial condition.

Spark Networks is, and from time to time may become, subject to litigation and various legal proceedings, including litigation and proceedings related to intellectual property matters, privacy and consumer protection laws and other matters that involve claims for substantial amounts of money or for other relief or that might necessitate changes to its business or operations. In addition, Spark Networks might be subject to potential class action suits in the United States, Canada, the United Kingdom or Australia for possible violations of the consumer protections laws. The defense of these actions may be both time consuming and expensive. Spark Networks evaluates litigation claims and legal proceedings to assess the likelihood of unfavorable outcomes and to estimate, if possible, the amount of potential losses. Based on these assessments and estimates, it may establish reserves and/or disclose the relevant litigation claims or legal proceedings, as and when required or appropriate. These assessments and estimates are based on information available to management at the time of such assessment or estimation and involve a significant amount of judgment. As a result, actual outcomes or losses could differ materially from those envisioned by Spark Networks' current assessments and estimates. Spark Networks' failure to successfully defend or settle any such legal proceedings could result in liability that, to the extent not covered by applicable insurance, could have an adverse effect on its business, financial condition and results of operations.

Spark Networks' business depends, in part, on the growth and maintenance of the internet, and its ability to provide services to its members and paying subscribers may be limited by outages, interruptions and diminished capacity of the internet, as well as by new laws and regulations governing the internet.

Spark Networks' performance will depend, in part, on the continued growth and maintenance of the internet. This includes maintenance of a reliable network backbone with the necessary speed, data capacity and security for providing reliable internet services. Internet infrastructure may be unable to support the demands placed on it if the number of internet users continues to increase or if existing or future internet users access the internet more often or increase their bandwidth requirements. In addition, viruses, worms and similar programs may harm the performance of the internet. Spark Networks has no control over the third party telecommunications, cable or other providers of access services to the internet that its members and paying subscribers rely upon. There have been instances where regional and national telecommunications outages have caused it to experience service interruptions during which its members and paying subscribers could not access its services. Any additional interruptions, delays or capacity problems experienced with any points of access between the internet and its members could adversely affect its ability to provide services reliably to its members and paying subscribers. The temporary or permanent loss of all, or a portion, of its services on the internet, the internet infrastructure generally, or its members' and paying subscribers' ability to access the internet could disrupt its business activities, harm its business reputation and result in a loss of revenue. Additionally, the internet, electronic communications and telecommunications industries are subject to federal, state and foreign governmental regulation, including those related to privacy, rights of publicity, data protection, content regulation, intellectual property, health and safety, competition, protection of minors, consumer protection, employment, and taxation. New laws and regulations governing such matters could be enacted or amendments may be made to existing regulations at any time that could adversely impact Spark Networks' services. Any such new laws, regulations or amendments to existing regulations could disrupt or adversely affect the profitability of its business.

Loss or material modification of Spark Networks' credit card acceptance privileges would have a material adverse effect on its business and operating results.

A significant percentage of Spark Networks' users pay for its services by credit card. The loss of credit card acceptance privileges would significantly limit Spark Networks' ability to renew paying subscribers or secure new paying subscribers.

Most of Spark Networks' users purchase a membership, for which payment is made at the beginning of the term. In addition, almost all membership renewals are paid by auto-renewal, charging the renewal fee to the client's credit card. There is a risk that, if Spark Networks fails to fully perform its obligations under the terms of service or the client objects to the auto-renewal payment made by credit card, the credit card companies could be obligated to reimburse these clients for all or a portion of the membership fee. Spark Networks might be obligated to pay all such amounts under its agreements under which it has obtained its credit card acceptance privileges. As a result of this risk, credit card companies may require Spark Networks to set aside additional cash reserves, may not renew acceptance privileges or may increase the transaction fees they charge for these privileges.

The card networks, such as Visa, MasterCard, and American Express, have adopted rules and regulations that apply to all merchants who process and accept credit cards and include the Payment Card Industry Data Security Standards ("PCI DSS"). Under the PCI DSS, Spark Networks is required to adopt and implement internal controls over the use, storage and security of card data to help prevent credit card fraud. Spark Networks assesses its compliance with the PCI DSS on a periodic basis and makes necessary improvements to its internal controls. If Spark Networks fails to comply with the rules and regulations adopted by the card networks, including the PCI DSS, it would be in breach of its contractual obligations to payment processors and merchant banks. Such failure to comply may subject it to fines, penalties, damages and civil liability and could eventually prevent it from processing or accepting credit cards. Further, there is no guarantee that, even if it complies with the rules and regulations adopted by the card networks, it will be able to maintain its compliance. It also cannot guarantee that such compliance will prevent illegal or improper use of its payments systems or the theft, loss or misuse of the credit card data of customers or participants.

The loss of, or the significant modification of, the terms under which Spark Networks obtains credit card acceptance privileges would have a material adverse effect on its business, revenue and operating results.

Risks Relating to an Investment in Spark Networks

The dating industry is competitive, with low barriers to entry, low switching costs and new products and entrants constantly entering the market.

The dating industry is competitive, with new products and entrants constantly being developed and released. Some of Spark Networks' competitors may enjoy better competitive positions in certain geographical regions or user demographics that Spark Networks will currently serve or may serve in the future. These advantages could enable these competitors to offer products that are more appealing to users and potential users than Spark Networks' products, or to respond more quickly and/or cost-effectively than Spark Networks to new or changing opportunities. The attractiveness of these products could also allow these companies to sell their products at higher prices and with higher margins.

Spark Networks competes with traditional personals services, as well as newspapers, magazines and other traditional media companies that provide personals services. It also competes with a number of large and small companies, including internet portals and specialty-focused media companies that provide online and offline products and services to the markets served. Principal online personals services competitors include Match Group (which operates the Match.com, OkCupid, Plenty of Fish, and Tinder properties), Parship Elite Group (which operates the eHarmony, Parship and ElitePartner properties) and Zoosk. In addition, we face competition from new entrants that have recently offered free and freemium mobile applications such as Bumble, as well as social networking sites such as Facebook. Many of Spark Networks' current and potential competitors have longer operating histories, significantly greater financial, technical, marketing and other resources and larger customer bases than Spark currently has. These factors may allow competitors to respond more quickly to new or emerging technologies and changes in customer preferences. These competitors may engage in more extensive research and development efforts, undertake more far-reaching marketing campaigns and adopt more aggressive pricing policies that may allow them to build larger member and paying subscriber bases. Spark Networks' competitors may develop products or services that are equal or superior to its products and services or that achieve greater market acceptance than its products and services. These activities could attract members and paying subscribers away from its websites and reduce its market share. Customers may utilize multiple dating services simultaneously, and cease using a particular service that comparatively lags behind or is duplicative of another service.

In addition, Spark Networks currently competes with other companies that direct all or portions of their websites toward each of their respective targeted and actual subscribers. For example, Spark Networks currently competes with generalist personals services platforms, some of which have substantially greater resources and brand recognition than they do, which, unlike more targeted or segmented personal services platforms, permit customers access to a broad array of people with a wide variety of backgrounds and interests, as well as personal services platforms focused specifically on the type of clients serviced by them, which tend to be highly educated and desirous of finding a longer term relationship.

In addition, within the dating industry generally, costs to develop new products are comparatively low and costs for consumers to switch between products are low as well, resulting in significant customer churn and low brand loyalty. As a result, new products, entrants and business models are likely to continue to emerge. It is possible that a new product could gain rapid scale at the expense of existing brands through harnessing a new technology or distribution channel, creating a new approach to connecting people or some other means. If Spark Networks is not able to compete effectively against its current or future competitors, whether or not such competitors operate traditional or non-traditional platforms, the size and level of engagement of its user base may decrease, which could have an adverse effect on its business, financial condition and results of operations.

Spark Networks believes that its ability to compete depends upon many factors both within and beyond its control, including the following:

- brand strength in the marketplace relative to competitors;
- attractiveness to target niches;
- the size and diversity of member and paying subscriber bases;
- efficacy in user acquisition and marketing optimization;
- the timing and market acceptance of its products and services, including developments and
- enhancements to products and services relative to those offered by its competitors; and
- customer service and support efforts.

Spark Networks has no present intention to pay dividends on its ordinary shares in the foreseeable future and, consequently, your only opportunity to achieve a return on your investment during that time is if the price of Spark Networks' ADSs appreciates.

Spark Networks has no present intention to pay dividends on Spark Networks ADSs in the foreseeable future. Any recommendation by the Administrative Board to pay dividends will depend on many factors, including financial condition, results of operations, legal requirements and other factors. Accordingly, if the price of Spark Networks ADSs declines in the foreseeable future, you will incur a loss on your investment, without the likelihood that this loss will be offset in part or at all by potential future cash dividends.

You may experience dilution of your ownership interests because of the future issuance of additional ordinary shares, preferred stock or other securities that are convertible into or exercisable for such securities.

In the future, Spark Networks may issue authorized but previously unissued equity securities, resulting in the dilution of the ownership interests of direct or indirect holders of Spark Networks ordinary shares, including Spark Networks ADSs. Spark Networks may issue additional Spark Networks ordinary shares or other securities that are convertible into or exercisable for Spark Networks ordinary shares in connection with hiring or retaining employees, future acquisitions, future sales of securities for capital raising purposes, or for other business purposes. The future issuance of any such additional Spark Networks ordinary shares may create downward pressure on the trading price of the Spark Networks ADSs. Spark Networks may need to raise additional capital in the near future to meet working capital needs, and there can be no assurance that Spark Networks will not be required to issue additional Spark Networks ordinary shares in the future in conjunction with these capital raising efforts. While stockholder approval will be needed to issue additional Spark Networks ordinary shares beyond those currently authorized, the approval does not have to authorize a specific use of the shares and management will have broad discretion in determining how, when and for what purpose the shares should be issued.

Spark Networks will depend on its key personnel.

Spark Networks' future success will depend upon its continued ability to identify, hire, develop, motivate and retain highly skilled individuals, with the continued contributions of its senior management being especially critical to its success. In particular, the loss of Jeronimo Folgueira, Robert O'Hare, and Michael Schrezenmaier, current managing directors of Spark Networks, and Benjamin Hoskins, the current Chief Technology Officer of Spark Networks, could materially and adversely affect Spark Networks. For a discussion of Spark Networks' senior management, see "Directors and senior management." Its continued ability to compete effectively depends, in part, upon its ability to attract new employees. While it has established programs to provide incentives to retain existing employees, particularly its senior management, it cannot assure you that it will be able to attract new employees or retain the services of its senior management or any other key employees in the future. Effective succession planning is also important to Spark Networks' future success. If Spark Networks fails to ensure the effective transfer of senior management knowledge and smooth transitions involving senior management across its various businesses, its ability to execute short and long term strategic, financial and operating goals, as well as its business, financial condition and results of operations generally, could be adversely affected.

Changes in tax treatment of companies engaged in e-commerce could materially adversely affect the commercial use of Spark Networks' platforms and its business, financial condition and operating results.

Due to the global nature of the internet, it is possible that various countries and local jurisdictions might attempt to impose additional or new regulation on Spark Networks' business or levy additional or new sales, income or other taxes relating to its activities. Tax authorities at the national and local levels are currently reviewing the appropriate treatment of companies engaged in e-commerce. New or revised tax regulations may subject Spark Networks or its customers to additional sales, income and other taxes. For example, certain jurisdictions have considered various approaches to legislation that would require companies engaged in e-commerce to collect sales tax on internet revenue. In January 2015, new regulations entered into effect in the European Union with respect to the collection of value-added tax (a form of sales tax). In June 2018, the U.S. Supreme Court decided the *South Dakota v. Wayfair, Inc.* sales tax nexus case. As a result of the Supreme Court ruling, states now have the ability to adopt laws requiring taxpayers to collect and remit sales tax on a basis of economic nexus, even in states in which the taxpayer has no presence. Spark Networks cannot predict the effect of current attempts to impose sales, income or other taxes on e-commerce. New or revised taxes and, in particular, sales taxes, value-added taxes and similar taxes would likely increase the cost of doing business online and decrease the attractiveness of our services. New taxes could also create significant increases in internal costs necessary

to capture data and collect and remit taxes. Any of these events could have an adverse effect on our business and results of operations.

Adverse capital and credit market conditions could limit Spark Networks' access to capital and increase its cost of capital, which may significantly affect its ability to meet liquidity needs.

The capital and credit markets have been experiencing extreme volatility over the last few years. In some cases, the markets have exerted downward pressure on availability of liquidity and credit capacity for certain issuers.

While on December 31, 2018, Spark Networks had cash and cash equivalents of €11.1 million, and Spark Networks expects to have positive operating cash flow, Spark Networks may in the future be in need of liquidity to implement its growth strategy, including to raise capital to finance acquisitions. In such a scenario, Spark Networks may be forced to curtail certain operations and may be unable to operate its business as Spark Networks deems appropriate. Disruptions, uncertainty or volatility in the capital and credit markets may also limit Spark Networks' access to capital required to operate its business. Such market conditions may limit its ability to replace, in a timely manner, maturing liabilities and access the capital necessary to operate and grow its business. As such, Spark Networks may be forced to delay raising capital or bear an unattractive cost of capital which could decrease its profitability and significantly reduce our financial flexibility. Spark Networks' results of operations, financial condition, cash flows and capital position could be materially adversely affected by disruptions in the financial markets.

Goodwill, intangible assets and other long-lived assets are subject to impairment risk.

Spark Networks had €20.8 million of goodwill, €4.9 million of brands and trademarks and €7.3 million of other intangible assets as of December 31, 2018. Spark Networks reviews the potential impairment of goodwill and indefinite-lived intangible assets at least annually, or more frequently if events or changes in circumstances indicate that the carrying value may not be recoverable and test property, plant and equipment and other intangible assets for impairment whenever changes in circumstances indicate that the carrying amount of an asset may not be recoverable.

Indicators that may signal that an asset has become impaired include a significant decline in actual or projected revenue, a significant decline in the market value of the Spark Networks ADSs, a significant decline in performance of certain acquired companies relative to its original projections, an excess of its net book value over its market value, a significant decline in its operating results relative to its operating forecasts, a significant change in the manner of its use of acquired assets or the strategy for its overall business, a significant decrease in the fair value of an asset, a shift in technology demands and development, or a significant turnover in key management or other personnel.

The assessment for potential impairment of goodwill, intangible assets or other long-term assets requires management to make judgments on a number of significant estimates and assumptions, including projected cash flows, discount rates, projected long-term growth rates and terminal values. Spark Networks may be required to record a significant charge in its consolidated financial statements during the period in which any impairment of its goodwill, intangible assets or other long-term assets is identified and this could negatively impact its financial condition and results of operations. Changes in management estimates and assumptions as they relate to valuation of goodwill, intangible assets or other long-lived assets could affect its financial condition or results of operations in the future.

Failure to comply with the U.S. Foreign Corrupt Practices Act or other applicable anti-corruption legislation could result in fines, criminal penalties and an adverse effect on Spark Networks' business.

Spark Networks operates in a number of countries throughout the world, including countries known to have a reputation for corruption. Spark Networks is committed to doing business in accordance with applicable anti-corruption laws. Spark Networks is subject, however, to the risk that its officers, board members, employees, agents and collaborators may take action determined to be in violation of such anti-corruption laws, including the U.S. Foreign Corrupt Practices Act of 1977, the U.K. Bribery Act 2010 and the European Union Anti-Corruption Act, as well as trade sanctions administered by the Office of Foreign Assets Control and the U.S. Department of Commerce. Any such violation could result in substantial fines, sanctions, civil and/or criminal penalties or curtailment of operations in certain jurisdictions, and might adversely affect results of operations. In addition, actual or alleged violations could damage its reputation and ability to do business.

Failure to comply with U.S. federal securities laws and regulations applicable to public companies could result in an adverse effect on Spark Networks' business.

As a U.S. reporting company, Spark Networks incurs significant legal, accounting and other expenses. Compliance with reporting and corporate governance obligations from which foreign private issuers and emerging growth companies (“EGCs”) are not exempt may require members of Spark Networks’ management and finance and accounting staff to divert time and resources from other responsibilities to ensure these regulatory requirements are fulfilled and may increase legal, insurance and financial compliance costs. Spark Networks cannot predict or estimate the amount of additional costs Spark Networks may incur or the timing of such costs. In addition, if Spark Networks fails to comply with any significant rule or requirement associated with being a public company, such failure could result in the loss of investor confidence and could harm Spark Networks’ reputation and cause the market price of the Spark Networks ADSs to decline.

As a “foreign private issuer” under the rules and regulations of the SEC, Spark Networks is permitted to, and will, file less information with the SEC than a U.S. issuer.

Spark Networks is considered a “foreign private issuer” under the Exchange Act and therefore exempt from certain rules under the Exchange Act, including the proxy rules, which impose disclosure and procedural requirements for proxy solicitations for U.S. and other issuers. Moreover, Spark Networks will not be required to file periodic reports and financial statements with the SEC as frequently or within the same time frames as U.S. companies with securities registered under the Exchange Act and will be permitted to cease filing quarterly reports. Spark Networks currently prepares financial statements in accordance with IFRS and will not be required to file financial statements prepared in accordance with or reconciled to U.S. GAAP so long as its financial statements are prepared in accordance with IFRS as issued by the International Accounting Standards Board. Spark Networks is not required to comply with Regulation FD, which imposes restrictions on the selective disclosure of material information to stockholders. In addition, officers, board members and principal stockholders are exempt from the reporting and short-swing profit recovery provisions of Section 16 of the Exchange Act and the rules under the Exchange Act with respect to their purchases and sales of Spark Networks ordinary shares or ADSs.

In addition, as a “foreign private issuer” whose ADSs are listed on the NYSE American, Spark Networks is permitted to follow certain home country corporate governance practices in lieu of certain NYSE American requirements. Such German home country practices may afford less protection to holders of the Spark Networks ADSs. A foreign private issuer listed on the NYSE American must disclose in its Annual Reports filed with the SEC or on its website significant ways in which its corporate governance practices differ from those followed by domestic companies pursuant to the NYSE American’s standards. Spark Networks intends to comply with NYSE American requirements applicable to U.S. issuers. However, as a foreign private issuer incorporated in Germany and listed on the NYSE American, in the future, it may choose to follow home country corporate governance practices in lieu of certain NYSE American requirements.

Spark Networks could lose its status as a “foreign private issuer” under current SEC rules and regulations if more than 50% of its outstanding voting securities become directly or indirectly held of record by U.S. holders and one of the following is true: (i) the majority of board members or executive officers are U.S. citizens or residents; (ii) more than 50% of assets are located in the United States; or (iii) its business is administered principally in the United States. If Spark Networks loses its status as a foreign private issuer in the future, it will no longer be exempt from the rules described above and, among other things, will be required to file periodic reports and annual and quarterly financial statements as if it were a company incorporated in the United States, and such financial statements will need to be prepared in accordance with U.S. GAAP. If this were to happen, Spark Networks would likely incur substantial costs in fulfilling these additional regulatory requirements, and members of management would likely have to divert time and resources from other responsibilities to ensure these additional regulatory requirements are fulfilled. Spark Networks currently expects to lose its status as a foreign private issuer in 2020, following the closing of its previously announced transaction with Zoosk, Inc. because Spark Networks will no longer meet all of the above requirements for foreign private issuer status.

Spark Networks is an EGC within the meaning of the Securities Act, and Spark Networks intends to take advantage of certain exemptions from disclosure requirements available to EGCs, which may make it more difficult to compare Spark Networks' performance with other public companies.

Spark Networks is an EGC within the meaning of the Securities Act, as modified by the JOBS Act, and Spark Networks intends to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not EGCs, including, but not limited to, not being required to include in SEC filings detailed information with respect to executive compensation or to comply with the auditor attestation requirements of SOX 404. As a result, holders of Spark Networks ADSs may not have access to certain information they may deem important. Spark Networks could be an EGC for up to five years, although circumstances could cause Spark Networks to lose that status earlier, including if Spark Networks is deemed to be a large accelerated filer (as defined in Rule 12b-2 under the Exchange Act), in which case Spark Networks would no longer be an EGC as of the following December 31. Spark Networks cannot predict whether investors will find the Spark Networks ADSs less attractive because Spark Networks will rely on these exemptions. If some investors find the Spark Networks ADSs less attractive as a result of Spark Networks' reliance on these exemptions, the trading prices of the Spark Networks ADSs may be lower than they otherwise would be, there may be a less active trading market for its securities, including the Spark Networks ADSs, and the trading prices of Spark Networks' securities, including the Spark Networks ADSs, may be more volatile.

Foreign currency exchange rate fluctuations could adversely affect Spark Networks' results of operations.

Spark Networks operates in various international markets, primarily in various jurisdictions within the EU, and as a result, is exposed to foreign exchange risk for the euro, U.S. dollar, Great British Pound ("GBP"), and Israeli New Shekel ("ILS"). Spark Networks will translate international revenue into euro-denominated operating results, so during periods of a strengthening euro, Spark Networks' international revenue will be reduced when translated into euro. In addition, as foreign currency exchange rates fluctuate, the translation of international revenue into euro-denominated operating results affects the period-over-period comparability of such results. Spark Networks faces similar risks as a result of revenue earned in other currencies.

Spark Networks reports in euros. Spark Networks' primary exposure to foreign currency exchange risk relates to investments in non-EU subsidiaries that transact business in a functional currency other than the euro, primarily the U.S. dollar. To the extent that the U.S. dollar weakens relative to the euro, the translation of international revenue into euro will reduce Spark Networks' euro-denominated operating results and will affect period-over-period comparability.

Fluctuating foreign exchange rates can also result in foreign currency exchange gains and losses. Spark Networks does not intend to hedge any foreign currency exposures. See "Item 11. Quantitative and Qualitative Disclosures About Market Risk." The continued growth and expansion of international operations into new countries increases its exposure to foreign exchange rate fluctuations. Significant foreign exchange rate fluctuations, in the case of one currency or collectively with other currencies, could adversely affect future results of operations.

U.S. investors may have difficulty enforcing civil liabilities against Spark Networks or members of its Administrative Board.

Certain of the members of the Administrative Board are non-residents of the United States, and all or a substantial portion of the assets of such persons are located outside the United States. As a result, it may not be possible, or may be very difficult, to serve process on such persons or Spark Networks in the United States or to enforce judgments obtained in U.S. courts against them or Spark Networks based on civil liability provisions of the securities laws of the United States. In addition, awards of punitive damages in actions brought in the United States or elsewhere may be unenforceable in Germany. An award for monetary damages under the U.S. securities laws would be considered punitive if it does not seek to compensate the claimant for loss or damage suffered and is intended to punish the defendant. The enforceability of any judgment in Germany will depend on the particular facts of the case as well as the laws and treaties in effect at the time. Litigation in Germany is also subject to rules of procedure that differ from the U.S. rules, including with respect to the taking and admissibility of evidence, the conduct of the proceedings and the allocation of costs. Proceedings in Germany would have to be conducted in the German language, and all documents submitted to the court would, in principle, have to be translated into German. For these reasons, it may be difficult for a U.S. investor to bring an original action in a German court predicated upon the civil liability provisions of the U.S. federal securities laws against Spark Networks and the members of its Administrative Board. The United States and Germany do not currently have a treaty providing for recognition and enforcement of judgments (other than arbitration awards) in civil and commercial matters, though recognition and enforcement of foreign judgments in Germany is possible in accordance with applicable German laws.

If Spark Networks fails to maintain an effective system of internal control over financial reporting in the future, it may not be able to accurately report its financial condition, results of operations or cash flows, which may adversely affect investor confidence.

The Sarbanes-Oxley Act requires, among other things, that Spark Networks maintain effective internal control over financial reporting and disclosure controls and procedures. Spark Networks is required, under SOX 404, to perform system and process evaluations and testing of internal controls over financial reporting to allow management to report annually on the effectiveness of internal control over financial reporting. This assessment requires disclosure of any material weaknesses in Spark Networks' internal control over financial reporting identified by management. SOX 404 also generally requires an attestation from Spark Networks' independent registered public accounting firm on the effectiveness of internal control over financial reporting. However, for as long as Spark Networks remains an EGC, it intends to take advantage of the exemption permitting it not to comply with the independent registered public accounting firm attestation requirement. At the time when Spark Networks is no longer an EGC, its independent registered public accounting firm may issue a report that is adverse in the event it is not satisfied with the level at which Spark Networks' controls are documented, designed or operating. Remediation efforts may not enable Spark Networks to avoid a material weakness in the future.

Compliance with SOX 404 requires the incurrence of substantial accounting expense and consumes significant management efforts. Spark Networks may not be able to complete evaluation, testing and any required remediation in a timely fashion. During the evaluation and testing process, if Spark Networks identifies one or more material weaknesses in internal control over financial reporting, it will be unable to assert that its internal control over financial reporting is effective. Spark Networks cannot assure you that there will not be material weaknesses or significant deficiencies in its internal control over financial reporting in the future. Any failure to maintain internal control over financial reporting could severely inhibit its ability to accurately report financial condition, results of operations or cash flows. If Spark Networks is unable to conclude that internal control over financial reporting is effective, or if its independent registered public accounting firm determines Spark Networks has a material weakness or significant deficiency in internal control over financial reporting, it could lose investor confidence in the accuracy and completeness of its financial reports, the market price of the Spark Networks ADSs could decline, and Spark Networks could be subject to sanctions or investigations by the NYSE American, the SEC or other regulatory authorities. Failure to remedy any material weakness in internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict future access to the capital markets.

U.S. investors could suffer adverse tax consequences if Spark Networks is characterized as a passive foreign investment company ("PFIC") for U.S. federal income tax purposes.

Generally, if, for any taxable year, at least 75% of Spark Networks' gross income is passive income, or at least 50% of the gross average quarterly value of Spark Networks' assets is attributable to assets that produce passive income or are held for the production of passive income, Spark Networks would be characterized as a PFIC for U.S. federal income tax

purposes. If Spark Networks is characterized as a PFIC, U.S. holders of Spark Networks ordinary shares or ADSs may suffer adverse tax consequences, including having gains realized on the sale of Spark Networks ordinary shares or ADSs treated as ordinary income, rather than capital gain, the loss of the preferential rate applicable to dividends paid by Spark Networks to individuals who are U.S. holders, and having interest charges apply to distributions by Spark Networks and the proceeds of sales of Spark Networks ADSs or shares.

Risks Relating to the Spark Networks ADSs

There may be limited trading volume for Spark Networks' ADSs, which could reduce liquidity for the holders of Spark Networks ADSs and may cause the price of Spark Networks ADSs to be volatile, all of which may lead to losses by investors.

There may be limited trading volume for Spark Networks ADSs on the NYSE American, such that trading does not reach the level that enables holders of Spark Networks ADSs to freely sell their Spark Networks ADSs in substantial quantities on an ongoing basis and thereby readily achieve liquidity for their investment. In addition, if there is limited trading volume, the Spark Networks ADSs may experience significant market price and volume fluctuations in the future, in response to factors such as announcements of developments related to Spark Networks and its subsidiaries, announcements by competitors of Spark Networks and its subsidiaries, fluctuations in financial results and general conditions in the dating services industry.

Future sales of Spark Networks ADSs or Spark Networks ordinary shares or securities convertible or exchangeable for Spark Networks ADSs or Spark Networks ordinary shares, or the perception that such sales might occur, may cause the price of Spark Networks ADSs to decline and may dilute your voting power and your ownership interest in Spark Networks.

If existing stockholders or option holders sell, or indicate an intention to sell, substantial amounts of Spark Networks ADSs (or Spark Networks ordinary shares that can be deposited with the Spark Networks ADS Depository in exchange for Spark Networks ADSs) in the public market, the price of Spark Networks ADSs could decline. The perception in the market that these sales may occur could also cause the price of Spark Networks ADSs to decline.

The price of Spark Networks ADSs may fluctuate significantly.

The stock market generally has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of listed companies. Broad market and industry factors may negatively affect the market price of Spark Networks ADSs, regardless of Spark Networks' actual operating performance. The market price and liquidity of the market for Spark Networks ADSs may fluctuate and may be significantly affected by numerous factors, some of which are beyond Spark Networks' control.

These factors include:

- significant volatility in the market price and trading volume of securities of companies in the sector within which Spark Networks operates, which is not necessarily related to the operating performance of these companies;
- the mix of services that Spark Networks provides, during any period; delays between its expenditures to develop and market new services and the generation of sales from those services and the related risk of obsolete services;
- changes in the amount that Spark Networks spends to develop, acquire or license new services, technologies or businesses;
- changes in Spark Networks' expenditures to promote its services;
- success or failure of research and development projects of Spark Networks or its competitors;
- announcements of acquisitions by Spark Networks or one of its competitors;
- the general tendency towards volatility in the market prices of shares of companies that rely on technology and innovation;
- changes in regulatory policies or tax guidelines;
- changes or perceived changes in earnings or variations in operating results;
- any shortfall in revenue or net income from levels expected by investors or securities analysts; and
- general economic trends and other factors.

Your rights as a holder of ADSs representing ordinary shares of a German company organized as a European stock corporation may differ from your rights as a stockholder in a U.S. corporation.

Spark Networks is organized as a European stock corporation (Societas Europaea, SE) under the laws of Germany. You should be aware that the rights of stockholders under German law differ in important respects from those of stockholders in a U.S. corporation. These differences include, in particular:

- Under German law, certain important resolutions, including, for example, capital decreases, measures under the German Transformation Act (Umwandlungsgesetz), such as mergers, conversions and spin-offs, the issuance of convertible bonds or bonds with warrants attached and the dissolution of the German stock corporation apart from insolvency and certain other proceedings, require the vote of a 75% majority of the capital present or represented at the relevant stockholders' meeting. Therefore, the holder or holders of a blocking minority of 25% or, depending on the attendance level at the stockholders' meeting, the holder or holders of a smaller percentage of the shares in a German stock corporation may be able to block any such votes, possibly to Spark Networks' detriment or the detriment of other stockholders.
- As a general rule under German law, in the case of a one-tier European stock corporation a stockholder has no direct recourse against the members of the administrative board and managing directors, in the event that it is alleged that they have breached their duty of loyalty or duty of care to the corporation. Apart from insolvency or other special circumstances, only the European stock corporation itself has the right to claim damages from members of the board and executive officers. A European stock corporation may waive or settle these damages claims only if at least three years have passed and the stockholders approve the waiver or settlement at the stockholders' meeting with a simple majority of the votes cast, provided that a minority holding, in the aggregate, 10% or more of the European stock corporation's share capital does not have its opposition formally noted in the minutes maintained by a German civil law notary. For more information, Spark Networks has provided summaries of relevant German corporation law and of its articles of association, which are available on the Company's website.

Holders of Spark Networks ADSs will not have the same voting rights as Spark Networks stockholders, which may affect the value of Spark Networks ADSs.

Holders of Spark Networks ADSs will not be able to directly vote underlying Spark Networks ordinary shares. Holders of Spark Networks ADSs may instruct the Spark Networks ADS Depository how to vote the Spark Networks ordinary shares underlying their ADSs. If Spark Networks asks it to, the Spark Networks ADS Depository will send out information about stockholder meetings and solicit voting instructions and will try to carry out voting instructions it receives. However, Spark Networks is not required to instruct the Spark Networks ADS Depository to take action with respect to stockholder meetings. If it does not do so, holders of Spark Networks ADSs can still send voting instructions to the Spark Networks ADS Depository, and the Spark Networks ADS Depository may try to carry out those instructions, but it is not required to do so. However, holders of Spark Networks ADSs may not become aware of stockholder meetings if the Spark Networks ADS Depository does not send out information. Even if the Spark Networks ADS Depository does solicit voting instructions, holders of Spark Networks ADSs may not receive the information in time. Because of these factors, holders of Spark Networks ADSs may not be able to effectively exercise voting rights that they would have if they held Spark Networks ordinary shares directly.

The principal stockholders and management of Spark Networks own a significant percentage of Spark Networks Ordinary Shares and will be able to exert significant influence over matters subject to stockholder approval.

Members of the Administrative Board and holders of 5% or more of Spark Networks ordinary shares beneficially own a majority of Spark Networks ordinary shares (including Spark Networks ordinary shares represented by Spark Networks ADSs). Currently, the principal stockholders (those stockholders owning at least 5% of Spark Networks ordinary shares) and management of Spark Networks hold approximately 66% (excluding any shares underlying options) of the Spark Networks ordinary shares (which may be held in the form of Spark Networks ADSs). These stockholders have significant influence over the outcome of all matters requiring stockholder approval. For example, these stockholders may be able to influence the outcome of elections of members of Administrative Board, amendments of Spark Networks' organizational documents, or approval of any merger, sale of assets, or other major corporate transactions. This may prevent or discourage unsolicited acquisition proposals or offers for Spark Networks ADSs that you may feel are in your best interest as a holder of Spark Networks ADSs. The interests of this group of stockholders may not always coincide with your interests or the interests of other stockholders, and they may act in a manner that advances their best interests and not necessarily those of other stockholders, including seeking a premium value for their Spark Networks ordinary shares, which might affect the prevailing market price for Spark Networks ADSs.

You might not receive distributions on Spark Networks ordinary shares represented by the Spark Networks ADSs or any value for them.

Under the terms of the Spark Networks Deposit Agreement, the Spark Networks ADS Depository has agreed to pay to you the cash dividends or other distributions it or the custodian receives on the Spark Networks ordinary shares after deducting fees and expenses. You will receive these distributions in proportion to the number of Spark Networks ordinary shares represented by your Spark Networks ADSs. However, in accordance with the limitations set forth in the Spark Networks Deposit Agreement, the Spark Networks ADS Depository is not required to make a distribution if it decides it may be unlawful or impractical to make a distribution available to holders of Spark Networks ADSs.

Certain or all of the holders of Spark Networks ADSs may be unable to claim tax credits with respect to, or tax refunds to reduce German withholding tax applicable to the payment of dividends, or a dividend may be effectively taxed twice.

Spark Networks does not anticipate paying dividends on its Spark Networks ADSs for the foreseeable future. As a German tax resident company, however, if Spark Networks pays dividends, such dividends will be subject to German withholding tax. Currently, the applicable German withholding tax rate is 26.375% of the gross dividend. This German tax can be reduced to the applicable U.S.-Germany income tax treaty (“Treaty”) rate, which is generally 15%, if the applicable taxpayer is eligible for such Treaty rate and files an application containing a specific German tax certificate with the German Federal Central Tax Office (Bundeszentralamt für Steuern). If such a tax certificate cannot be delivered to the Spark Networks ADS holder due to applicable settlement mechanics or lack of information regarding the Spark Networks ADS holder, holders of the New Spark ADSs may be unable to benefit from the double tax treaty relief (including “Eligible U.S. Holders” as defined under the Treaty) and may be unable to file for a credit of such withholding tax in its jurisdiction of residence. Further, the payment made to the Spark Networks ADS holder equal to the net dividend may, under the tax law applicable to the Spark Networks ADS holder, qualify as taxable income that is in turn subject to withholding, which could mean that a dividend is effectively taxed twice. There can be no guarantee that the information delivery requirement can be satisfied in all cases, which could result in adverse tax consequences for affected Spark Networks ADS holders. Spark Networks ADS holders should note that the applicable interpretation circular (Besteuerung von American Depositary Receipts (ADR) auf inländische Aktien) issued by the German Federal Ministry of Finance (Bundesministerium der Finanzen), dated May 24, 2013 (reference number IV C 1-S2204/12/10003) (the “ADR Tax Circular”), is not binding on German courts, and there is no certainty as to whether a German tax court will follow the ADR Tax Circular in determining the German tax treatment of the Spark Networks ADSs. In addition, the ADR Tax Circular does not include details on how an ADR program should be designed. If the Spark Networks ADSs are determined not to fall within the scope of application of the ADR Tax Circular, or a German tax court does not follow the ADR Tax Circular, and profit distributions made with respect to the Spark Networks ADSs were not treated as a dividend for German tax purposes, the Spark Networks ADS holder would not be entitled to a refund of any taxes withheld on the dividends under German tax law and profit distributions made with respect to the Spark Networks ADSs may be effectively taxed twice.

You may have less access to information about Spark Networks and less opportunity to exercise your rights as a security holder if you hold Spark Networks ADSs instead of Spark Networks ordinary shares.

The rights and terms of the Spark Networks ADSs are designed to replicate, to the extent reasonably practicable, the rights attendant to Spark Networks ordinary shares, for which there is no active trading market in the United States. However, because of aspects of German law, Spark Networks’ Articles of Association and the terms of the Spark Networks Deposit Agreement under which the Spark Networks ADSs are issued, your rights as a holder of Spark Networks ADSs will differ in various ways from a stockholder’s rights, and you may be affected in other ways, including:

- you may not be able to participate in rights offerings or dividend alternatives;
- the Spark Networks Deposit Agreement may be amended by Spark Networks and the Spark Networks ADS Depository, or may be terminated by Spark Networks or the Spark Networks ADS Depository, without your consent in a manner that could prejudice your rights; and
- the Spark Networks Deposit Agreement limits Spark Networks’ obligations and liabilities and those of the Spark Networks ADS Depository.

Item 4. Information on the Company

A. History and development of the company.

Spark Networks SE was incorporated as a European stock corporation (Societas Europaea, SE) with the legal name Blitz 17-655 SE under the laws of Germany and the European Union, with entry into the German commercial register on April 5, 2017, by its stockholders, Blitzstart Beteiligungs Ltd. and Blitz Beteiligungs GmbH. It was acquired by Affinitas GmbH on April 12, 2017, for the purpose of becoming the ultimate holding company of Spark Networks, Inc., a Delaware corporation (“Spark”), Spark Networks Services GmbH (f/k/a Affinitas GmbH), a German limited company (“Affinitas”) following the completion of the merger between Spark and Affinitas (the “Affinitas / Spark Merger”). On August 29, 2017, Spark Networks SE changed its name from Blitz 17-655 SE to Spark Networks SE. Spark Networks SE is registered with the commercial register (*Handelsregister*) of the local court (*Amtsgericht*) of Munich, Germany, under the registration number HRB 232591 under the legal name Spark Networks SE. Spark Networks SE currently does not use a commercial name different from its legal name. Spark Networks SE has been formed for an unlimited duration.

On November 2, 2017, Spark Networks SE completed the Affinitas / Spark Merger pursuant to the Agreement and Plan of Merger dated May 2, 2017, entered into by Spark Networks SE, Affinitas, Spark and Chardonnay Merger Sub, Inc.

The registered offices of Spark Networks SE are located at Kohlfurter Straße 41/43, Berlin 10999, Germany and its telephone number at that address is (+49) 30 868 000 102. Our website is www.spark.net. As a European stock corporation incorporated in Germany, Spark Networks SE is subject to the laws of Germany and the European Union. Spark Networks SE’s fiscal year is the calendar year.

Our SEC filings are available to you on the SEC’s website at <http://www.sec.gov>. This site contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

B. Business overview.

Our Business

Spark Networks SE is a leading global operator of premium online dating sites and mobile applications. Its focus is on catering to professionals and highly educated singles with serious relationship intentions in North America and other international markets. Since its inception, Spark Networks has had nearly 60 million users register with its dating platforms (which includes inactive accounts). Spark Networks currently operates one or more of its brands in 29 countries. Information regarding the geographical source of our revenue and data on our reportable segments can be found in *Note 4.1 Operating Segments* to our Consolidated Financial Statements included in this annual report.

Spark Networks’ vision is to be the world’s leading premium dating company and encompasses the following four pillars:

- “We focus on quality over quantity to provide the world’s best dating community; active, committed and sophisticated.
- We excel in customer safety, privacy and care.
- We create engaging brands and innovative products to help our customers find true love.
- We build a profitable business that benefits all our stakeholders: customers, employees, shareholders and society.”

Spark Networks offers its services both via websites and mobile applications and utilizes a “subscription” business model, where certain basic functionalities are provided free of charge, while providing premium features (such as interacting with other community members via messages) only to paying subscribers.

Subscription revenue is Spark Networks’ primary source of income, with membership subscriptions accounting for the majority of its revenue for the years ended December 31, 2018, 2017, and 2016, respectively. Subscription length ranges from 1-month to 24-months, with most subscriptions renewing automatically unless the member opts to terminate the subscription.

Like many other internet-based communities and marketplaces, Spark Networks has become a predominately mobile-based company. Spark Networks has created innovative and tailored mobile applications for all of its platforms to

address the proliferation of mobile devices and the continuing shift of “online” activity to mobile devices. Spark Networks will continue to invest resources to improve the features, functionality and engagement of its mobile websites and applications.

The ADSs of Spark Networks SE are traded on the NYSE American.

Our Industry

Our primary businesses are in the online personals industry, which we believe fulfills significant needs for single adults looking to meet a companion. Traditional methods such as printed personals advertisements, offline dating services and public gathering places often do not meet the needs of single people. Printed personals advertisements offer individuals limited personal information and interaction before meeting. Offline dating services are time-consuming, expensive and offer a smaller number of potential partners. Public gathering places such as restaurants, bars and other social venues provide a limited opportunity to learn about others prior to an in-person meeting. In contrast, online personals services facilitate interaction between singles by allowing them to screen and communicate with a large number of potential companions before they meet in-person. With features such as detailed personal profiles, email, mobile chat and instant messaging, this medium allows users to communicate with other singles at their convenience and affords them the ability to meet multiple people in an anonymous, convenient and secure setting.

The global online personals industry has experienced significant growth in recent years. Industry research from Statista estimates that in 2018, revenue within the global online personals industry exceeded \$5 billion.

The United States is currently the largest geographic market, representing approximately \$3 billion in revenue, according to IBISWorld. In recent years, Spark has increased its market share in the United States through the launch of EliteSingles and SilverSingles in conjunction with the 2017 acquisition of the largely North American brands; Jdate, Christian Mingle, and Jswipe.

According to a Pew Research study released in early 2016, the percentage of the U.S. population using online personals websites or mobile applications grew approximately 40% from 11% in 2013 to 15% in 2015. Members of the millennial generation (individuals under 36 years old) tend to have the highest usage of online or mobile personals sites. However, members of older age groups represent approximately 60% of total paying users.

Our Competitive Strengths

Diverse global platform.

Spark Networks operates a diverse global platform of premium online dating sites in 29 countries and 16 different languages. This diversified suite of dating sites allows Spark Networks to implement best practices from each of the Spark and Affinitas businesses across its geographic footprint and will also enable rapid and effective roll-out of new brands and products.

Portfolio of strong brands.

Spark Networks owns a portfolio consisting of some of the most well-known and highest quality dating brands. Spark Networks’ brands are largely tailored for and attract users with a high socio-economic status. As education and profession are key criteria for singles when looking for a long-term relationship, Spark Networks’ brands serve an important need for this attractive user segment.

Operational and financial scale.

Spark Networks is one of the largest online dating companies worldwide by revenue. This allows for the operational and financial scale required for significant investments into new technologies and products, while also providing a better platform to attract and retain customers.

Efficient user acquisition.

Spark Networks has a deep understanding of how to use online and offline marketing to drive traffic to its websites, and it leverages proprietary technology to analyze the efficiency of all its marketing campaigns. This ensures an efficient and effective marketing budget allocation that ultimately translates into superior margins.

Potential to share a significantly larger pool of users.

Spark Networks has the potential to build shared user pools for all its brands in each of its markets and use matchmaking algorithms to provide best possible matches to its users upon integration of all of its dating technology onto a single platform. Combining the user pools of the combined company's portfolio of brands will add value to users of all of Spark Networks' platforms, and it will allow Spark Networks to quickly and efficiently launch new products and services.

Industry consolidator role.

Spark Networks is one of the few companies in the dating industry to be publicly listed. This enables Spark Networks to issue public equity as consideration for acquisitions as it pursues further consolidation in the online dating industry.

Low-cost operating base in Berlin.

Spark Networks has assembled highly skilled teams with deep domain expertise across marketing, technology, and product within our headquarters in Berlin. Today, Berlin has a lower cost of living, and in turn, lower salaries than other major cities in Europe or North America. As a result, we require less capital to recruit and retain key employees. This cost advantage has allowed the Company to allocate significant capital to growth investments like direct marketing while also maintaining and scaling profitably.

Our strategy

Grow in North America.

Spark Networks will focus on continuing to expand its presence in North America. In recent years, we have grown our North American market share through (i) the introduction of established European brands such as EliteSingles, (ii) the launch of new brands such as SilverSingles, and (iii) acquiring established North American brands such as Jdate, Christian Mingle, and JSwipe. Going forward, we expect to continue to allocate significant marketing capital towards North America as we look to drive both the organic growth of our existing brand portfolio and expansion through the launch of new or acquired brands.

Create a global platform.

Spark Networks is developing lovOS, a new, scalable and unified technology platform that will support the Company's future growth. Our new platform will be architected and built with a particular emphasis on supporting the mobile applications that many of our members utilize to access our products. With a single, shared platform to power our sites, we expect to match subscribers across brands, reduce the time and resources required to launch new brands or integrate potential acquisitions, and quickly adopt new features, trends and consumer preferences.

Consolidate the online dating industry.

Spark Networks expects to continue to participate in the consolidation of the global online dating industry.

Markets and Geographical Presence of Spark Networks

Spark Networks will continue to generally focus on premium online dating services catering to singles with a high socio-economic status. This strategy will include a focus on developing new and maintaining existing products and services tailored for mobile phones.

Spark Networks currently operates at least one brand in 29 countries. While Spark Networks expects that it will expand into new geographies in the future, Spark Networks' primary focus will be to expand its presence in North America, which it considers the most attractive market for further growth based on the relative size of the U.S. and Canadian markets and the high potential for Spark Networks to garner additional market share. Spark Networks will also consider launching existing brands in markets where the Company already has a geographic presence to complement the Company's service offering and create a broader offering in these markets.

Sales and Marketing

We engage in a variety of marketing activities intended to drive consumer traffic to our websites and allow us the opportunity to introduce our products and services to prospective visitors, members and subscribers. Our marketing efforts are focused online and offline. Our online marketing approach employs a combination of banner and other display advertising. We also rely on search engine marketing and direct email campaigns to attract potential members and paying subscribers, and use a network of online affiliates, through which we acquire traffic.

We supplement our online marketing by employing a variety of offline marketing and business development activities. These include print, television, public relations, event sponsorship and promotional alliances. We believe a more consistent, targeted marketing message, delivered through an array of available marketing channels, will improve consumer awareness of our brands, drive more traffic to our websites, and therefore increase the number of visitors, members and paying subscribers.

Customer Service

Our multi-lingual call centers and email support teams monitor our sites for fraudulent activity, assist members with billing questions, help members complete personal profiles and answer technical questions. Customer service representatives receive ongoing training in an effort to better personalize the experience for members and paying subscribers who call or email us and to capitalize on upselling opportunities.

Technology

Our internal product teams are focused on the development and maintenance of products in addition to building and managing our software and hardware infrastructure. We intend to continue investing in the development of new products, such as mobile applications, and enhancing the efficiency and functionality of our existing products and infrastructure.

Our network infrastructure and operations are designed to deliver high levels of availability, performance, security and scalability in a cost-effective manner.

Intellectual Property

We rely on a combination of patent, trademark, copyright and trade secret laws in the United States, Europe and other jurisdictions, as well as confidentiality procedures and contractual provisions to protect our proprietary technology and our brands. We also enter into confidentiality and invention assignment agreements with our employees and consultants and confidentiality agreements with other third parties.

Spark Networks, Spark, Jdate, Christian Mingle, SilverSingles and BlackSingles.com are registered trademarks in the United States. Spark Networks, Jdate and Christian Mingle are registered trademarks in the EU. Jdate and Christian Mingle are registered trademarks in Australia. Jdate is also a registered trademark in Norway, Russia, Ukraine, Israel and Canada. Our rights to these registered trademarks are perpetual as long as we use them and renew them periodically. We also have a number of other registered and unregistered trademarks. We hold two United States patents for our Click! technology, the first of which expired on January 24, 2017, and the second of which expires on November 3, 2020, that pertain to an automated process for confidentially determining whether people feel mutual attraction or have mutual interests. Click! is important to our business in that it is a method and apparatus for detection of reciprocal interests or feelings and subsequent notification of such results. The patents describe the method and apparatus for the identification of a person's level of attraction and the subsequent notification when the feeling or attraction is mutual.

EliteSingles is a registered trademark in numerous countries such as the United States, the United Kingdom, South Africa, Poland, New Zealand, Ireland, Denmark, and Canada. We are currently waiting for the EliteSingles trademark to be registered in additional countries including the Russian Federation, Iceland, Peru and Czech Republic. Furthermore, there are numerous registered country specific trademarks related to the EliteSingles brand such as Elit Singlar in Sweden, Elittars in Hungary, Eliitti Kumppani in Finland, Elite Solteros in Chile, Elite Solteros in the United States, Elitame Randki in Poland, Partner med Niveau in Denmark and Elite Rencontre in France. We hold a WIPO (World Intellectual Property Organization) and DPMA (Deutsche Patent - und Markenamt / German Trademark and Patent Office) design trademark for the "heart and arrow" design which is associated with the EliteSingles brand for Australia, the European Union, New Zealand, Norway, Singapore, South Africa, the United States and Germany.

SilverSingles is a registered trademark in the EU and New Zealand. We are currently waiting for the SilverSingles trademark to be registered in Australia, Canada and South Africa. Furthermore, there exists a specific trademark related to the SilverSingles brand, No Belles Annees, in the EU.

eDarling is a registered trademark in Germany, Mexico and is also a WIPO word trademark (for Belarus, Switzerland, China (partially), EU, Croatia, Norway, Serbia, Turkey, Ukraine (partially), USA (partially) and Russia). We hold country specific trademarks for Slovakia named Partner na Urovni associated with the Elite Singles and the eDarling brands.

We hold trademarks for Attractive World in France, Australia, Canada, the European Union (EUIPO), Germany, the United Kingdom, Switzerland, New Zealand, Norway, the Russian Federation and the United States.

We also have a number of other registered and unregistered trademarks.

Competition

We operate in a highly competitive environment with minimal barriers to entry. We believe the primary competitive factors in creating a community on the internet are functionality, brand recognition, reputation, critical mass of members, member affinity and loyalty, ease-of-use, quality of service and reliability. We compete with a number of large and small companies, including vertically integrated internet portals and specialty-focused media companies that provide online and offline products and services to the markets we serve. Our principal online personals services competitors include Match Group (which operates the Match.com, OkCupid, Plenty of Fish, and Tinder properties), Parship Elite Group (which operates the eHarmony, Parship and ElitePartner properties) and Zoosk. In addition, we face competition from new entrants that have recently offered free and freemium mobile applications such as Bumble, as well as social networking sites such as Facebook.

Government Regulation

Our business is regulated by diverse and evolving laws and governmental authorities in North America and other countries in which we operate. We are subject to laws and regulations related to internet communications, privacy, consumer protection, security and data protection, intellectual property rights, commerce, taxation, entertainment, recruiting and advertising. These laws and regulations are becoming more prevalent, and new laws and regulations are under consideration by the United States Congress, state legislatures and foreign governments. Any failure by us to comply with existing laws and regulations may subject us to liabilities. New laws and regulations governing such matters could be enacted or amendments may be made to existing regulations at any time that could adversely impact our services. Plus, legal uncertainties surrounding domestic and foreign government regulations could increase our costs of doing business, require us to revise our services, prevent us from delivering our services over the internet or slow the growth of the internet, any of which could materially adversely affect our business, financial condition and results of operations.

C. Organizational structure.

As of December 31, 2018, we directly held the percentage indicated of the outstanding capital stock of the following subsidiaries:

Company	Jurisdiction of Incorporation	Percentage Ownership
Spark Networks Services GmbH	Germany	100%
Samadhi SAS	France	100%
EliteSingles LLC	United States	100%
Spark Networks, Inc.	United States	100%
Spark Networks Limited	United Kingdom	100%
LOV USA, LLC	United States	100%
Spark Networks USA, LLC	United States	100%
Spark Networks (Israel) Limited	Israel	100%
JDate Limited	United Kingdom	100%
HurryDate, LLC	United States	100%
MingleMatch, Inc.	United States	100%
Kizmeet, Inc.	United States	100%
Reseaux Spark Canada Ltd.	Canada	100%
SocialNet, Inc.	United States	100%
SN Events, Inc.	United States	100%
SN Holdco, LLC	United States	100%
Smooch Labs, Inc.	United States	100%
SilverSingles LLC	United States	100%

D. Property, plant and equipment.

Our principal administrative activities are located in our approximately 2,620 square meter leased facility in Berlin, Germany. We also lease office space in New York and Utah in the United States. We believe that our facilities are adequate for our current needs and suitable additional or substitute space will be available in the future to replace our existing facilities, if necessary, or accommodate expansion of our operations. The leases for our facilities vary in dates and terms, with the main facility's lease expiring on January 31, 2022.

Item 4A. Unresolved Staff Comments

Not applicable.

Item 5. Operating and Financial Review and Prospects

The information contained in this section should be read in conjunction with our consolidated financial statements for the year ended December 31, 2018 and the related notes that are included in this annual report. Our financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB"). This discussion contains forward-looking statements that are subject to known and unknown risks and uncertainties. As a result of many factors, such as those set forth under Item 3.D "Risk Factors" and "Cautionary Note Regarding Forward-Looking Statements," our actual results may differ materially from those anticipated in these forward-looking statements.

A. Operating results.

Overview

The ADSs of Spark Networks SE are traded on the NYSE American under the ticker symbol "LOV." We are a leading global operator of premium online dating sites and mobile applications. Our focus is on catering to professionals and highly educated singles with serious relationship intentions in North America and other international markets. Since

our inception, we have had nearly 60 million users register with our dating platforms (which includes inactive accounts). We currently operate one or more of our brands in 29 countries.

Our ability to compete effectively will depend upon our ability to address the needs of our members and paying subscribers, on the timely introduction and performance of innovative features and services associated with our brands, and our ability to respond to services and features introduced by competitors. We must also achieve these objectives within the parameters of our consolidated and operating segment profitability targets. We are focused on enhancing and augmenting our portfolio of services while also continuing to improve the efficiency and effectiveness of our operations. We believe we have sufficient cash resources on hand to accomplish the enhancements currently contemplated.

On September 30, 2016, we completed the acquisition of Samadhi SAS, an unrelated third party and owner of the Attractive World platform ("Samadhi"), whereby Affinitas acquired all of the outstanding shares of Samadhi (the "Samadhi Acquisition"). As of the date of the Samadhi Acquisition, Samadhi became a wholly owned subsidiary of Affinitas.

On November 2, 2017, we completed the Affinitas / Spark Merger in a stock-for-stock transaction. We believe that this combination created one of the world's premier online dating platforms, leveraging our leading, complementary brands. Our portfolio of strong brands and improved financial strength positions us to deliver a superior user experience to our customers and drive long-term value to shareholders.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with IFRS. The preparation of these financial statements requires us to make certain estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates, including those related to revenue recognition, cost of revenue, website and software development costs, goodwill, intangible and other long-lived assets, accounting for business combinations, legal contingencies, income taxes and stock-based compensation. We base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We believe the following critical accounting policies reflect the more significant judgments and estimates we used in the preparation of our consolidated financial statements:

Revenue Recognition and Contract Liabilities

Spark Networks derives the vast majority of its revenue from subscription fees. The Group recognizes revenue in accordance with IFRS 15. The Group accounts for a contract when it has approval and commitment from all parties, the rights of the parties and payment terms are identified, the contract has commercial substance and collectability of consideration is probable. Revenue is recognized when control of the promised services is transferred to our customers, and in an amount that reflects the consideration the Group is contractually due in exchange for those services. The Company's revenue is primarily derived directly from users in the form of recurring subscriptions. Subscription revenue is presented net of refunds and credit card chargebacks. Subscribers pay in advance, primarily by credit card or through mobile app stores, and subject to certain conditions identified in our terms and conditions. Revenue is initially deferred and is recognized using the straight-line method over the terms of the applicable subscription period, which primarily range from one to twelve months.

For revenue earned through certain mobile applications, including iOS and Android, the Group recognizes subscription revenue gross of the application processing fees primarily because the Group is the primary obligor and it has the contractual right to determine the price paid by the subscriber. The Group records the related application processing fees as cost of revenue in the period incurred.

The Group also earns a small amount of revenue from advertising revenue. The Group records advertising revenue as it is earned and includes advertising revenue in the total revenue of each segment that generates advertising revenue.

Cost of Revenue

Cost of revenue consists primarily of direct marketing costs, compensation and other employee-related costs for personnel dedicated to maintaining Spark Networks' data centers, data center expenses, credit card fees and mobile application processing fees. Spark Networks incurs substantial advertising expenses in order to generate traffic to our websites. These advertising costs consist of offline marketing, particularly television and out-of-home advertising, as well as online advertising and are directly attributable to the revenue Spark Networks receives from our subscribers.

Intangible Assets and Goodwill

Goodwill arising on the acquisition of subsidiaries and intangible assets with infinite useful lives are measured at acquisition date fair value less accumulated impairment losses.

Intangible assets with finite useful lives are amortized using the straight-line method over their estimated useful lives. In addition to the recoverability assessment, we routinely review the remaining estimated useful lives of our amortizable intangible assets. If Spark Networks reduces its estimate of the useful life assumption for any asset, the remaining unamortized balance would be amortized over the revised estimated useful life. We also routinely review whether events and circumstances continue to support an infinite useful life for intangible assets that are not being amortized.

Development expenditures such as internally generated software are capitalized only if the expenditure can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and Spark Networks intends to and has sufficient resources to complete development and to use or sell the asset. Otherwise, it is recognized in the Consolidated Statements of Operations and Comprehensive Loss/Income as incurred. Costs incurred in the planning and post-implementation stages of a project are expensed as incurred while direct and indirect costs associated with the development phase are capitalized and amortized on a straight-line basis over the estimated useful lives after completion. Costs associated with minor enhancements and maintenance are included in expenses in the accompanying Consolidated Statements of Operations and Comprehensive Loss/Income. Subsequent to initial recognition, development expenditure is measured at cost less accumulated amortization and any accumulated impairment losses.

Subsequent expenditure is capitalized only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure, including expenditure on internally generated goodwill and brands, is recognized in the Consolidated Statements of Operations and Comprehensive Loss/Income as incurred.

Valuation of Goodwill and Identified Intangibles Assets

Spark Networks assesses the potential impairment of assets, which include intangible assets, whenever changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Events and circumstances that may indicate that an asset is impaired may include significant decreases in the market value of an asset, a significant decline in actual or projected revenue, a change in the extent or manner in which an asset is used, shifts in technology, loss of key management or personnel, changes in Spark Networks' operating model or strategy and competitive forces, as well as other factors. In addition, intangible assets with infinite useful lives including goodwill are tested annually for impairment.

For impairment testing, assets are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or cash-generating units ("CGUs"). Goodwill arising from a business combination is allocated to CGUs or groups of CGUs that are expected to benefit from the synergies of the combination.

If events and circumstances indicate that the carrying amount of an asset may not be recoverable and the expected discounted future cash flows attributable to the asset or CGU are less than the carrying amount of the asset or CGU, an impairment loss equal to the excess of the asset's carrying value over its estimated recoverable amount is recorded. The recoverable amount is determined based on the present value of estimated expected future cash flows using a discount rate commensurate with the risk involved, and quoted market prices or appraised values, depending on the nature of the assets. Fair value measurements utilized for assets under nonrecurring measurements were measured with Level 3 unobservable inputs.

Spark Networks performed its annual impairment test for goodwill as of October 31, 2018. The existing goodwill of €20,804 thousand as of December 31, 2018 is allocated to the following CGUs:

(in € thousands)	As of December 31, 2018
Samadhi	—
Christian Networks	7,865
Jdate USA	4,023
Jdate Israel	111
JSwipe	8,631
Other Networks	174
Total Goodwill	20,804

The fair value less cost of disposal was determined based on the discounted cash flow method. The free cash flows (FCF) were derived based on the financial forecast for each CGU for the next five years. The cash flow plans are based on experience as well as on expected market trends in the future. For the CGU Samadhi, a finite life until financial year 2038 with a long-term growth rate of -10.0% was assumed. For the all other CGUs, a terminal value was assumed with growth rates of 3.0% for Christian Networks, 2.0% for Jdate USA, 1.5% for Jdate Israel, 1.5% for JSwipe, and 0.5% for Other Networks.

For discounting the future cash flows, a post-tax weighted average cost of capital (WACC) was applied for each CGU. A WACC of 10.0% for Samadhi, 9.4% for Christian Networks, 9.4% for Jdate USA, 10.6% for Jdate Israel, 9.4% for JSwipe, and 9.4% for Other Networks was assumed.

An impairment according to IAS 36 is required if the carrying amount exceeds the recoverable amount. The recoverable amount is the higher of the CGU's fair value less cost of disposal or value in use. For Samadhi, as the recoverable amount was lower than the carrying amount, the annual impairment test resulted in an impairment loss of €3,324 thousand as of December 31, 2018. For all other CGUs, as the recoverable amount of each CGU was significantly higher than the carrying amount, the annual impairment test did not result in any impairment loss.

Accounting for Business Combinations

From time to time, Spark Networks acquires the stock or specific assets of companies in transactions that may be considered to be business acquisitions under IFRS 3. Under the acquisition method of accounting, Spark Networks allocates the fair value of purchase consideration to the tangible assets acquired, liabilities assumed, and intangible assets acquired based on their estimated fair values. The excess of the purchase consideration over the fair values of these identifiable assets and liabilities is recorded as goodwill. Such valuations require Spark Networks' management to make significant estimates and assumptions, especially with respect to estimating the fair value and expected useful life assigned to each class of assets and liabilities acquired. Different classes of assets will have varying useful lives. For example, the useful life of a member database, which was two years in the acquisition of Samadhi, is not the same as the useful life of a paying subscriber list, which is typically two to six months, or a domain name, which is was 20 years for Samadhi. Consequently, to the extent a longer-lived asset is ascribed greater value under the purchase method than a shorter-lived asset, there may be less amortization recorded in a given period or no amortization for indefinite lived intangibles.

Spark Networks' management's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates. During the measurement period, which can be up to one year from the acquisition date, Spark Networks may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Upon the conclusion of the measurement period, any subsequent adjustments are recorded in net financial result in the consolidated statement of comprehensive income/loss.

Legal Contingencies

Spark Networks is currently involved in certain legal proceedings, as discussed in the notes to the consolidated financial statements and under *Item 8 – Legal Proceedings*. To the extent that a loss related to a contingency is reasonably estimable and probable, Spark Networks accrues an estimate of that loss. Because of the uncertainties related to both the amount and range of loss on certain pending litigation, Spark Networks may be unable to make a

reasonable estimate of the liability that could result from an unfavorable outcome of such litigation. As additional information becomes available, Spark Networks will assess the potential liability related to such pending litigation and make, or if necessary, revise its estimates. Such revisions in Spark Networks' estimates of the potential liability could materially impact its consolidated results of operations and consolidated financial position.

Accounting for Income Taxes

Income tax expense comprises current and deferred tax. It is recognized in profit or loss except to the extent that it relates to a business combination, or items recognized directly in equity or in other comprehensive income or loss.

Current tax comprises the expected tax payable or receivable on the taxable income or loss for the year and any adjustment to the tax payable or receivable in respect of previous years. The amount of current tax payable or receivable is the best estimate of the tax amount expected to be paid or received that reflects uncertainty related to income taxes, if any. It is measured using tax rates enacted or substantively enacted at the reporting date.

Deferred tax is recognized in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognized for:

- temporary differences related to the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit or loss;
- temporary differences related to investments in subsidiaries, associates and joint arrangements to the extent that Spark Networks is able to control the timing of the reversal of the temporary differences and it is probable that such differences will not be reversed in the foreseeable future; and
- taxable temporary differences arising upon the initial recognition of goodwill.

Deferred tax assets are recognized for unused tax losses, unused tax credits and deductible temporary differences to the extent that it is probable that future taxable profits will be available against which they can be used. Future taxable profits are determined based on business plans for Spark Networks and each of its subsidiaries and the reversal of temporary differences. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realized; such reductions are reversed when the probability of future taxable profits improves.

Unrecognized deferred tax assets are reassessed at each reporting date and recognized to the extent that it has become probable that future taxable profits will be available against which such tax assets can be used. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they are reversed, using tax rates enacted or substantively enacted at the reporting date. The measurement of deferred tax reflects the tax consequences that would follow from the manner in which Spark Networks expects, at the reporting date, to recover or settle the carrying amount of its assets and liabilities. Deferred tax assets and liabilities are offset only if certain criteria are met.

Accordingly, deferred income tax assets and liabilities are recognized for the future tax consequences attributable to differences between financial statement carrying amounts of existing assets and liabilities and their respective tax basis. Deferred tax assets and liabilities are measured using tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled.

In assessing the potential realization of deferred tax assets, Spark Networks' management considers whether it is probable that some portion or all of the deferred tax assets will be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which Spark Networks' tax loss carryforwards remain deductible.

In Germany, the Group has tax loss carryforwards for corporate taxes amounting to €42,175 thousand as of December 31, 2018 (December 31, 2017: €39,002 thousand) and €41,463 thousand for trade taxes (December 31, 2017: €38,629 thousand). Of these tax loss carryforwards, €14,841 thousand were unused.

In general, the net operating loss carry-forwards in Germany do not expire. They are subject to review and possible adjustment by the German tax authorities. Furthermore, under current German tax laws, certain substantial changes in the Group's ownership and business may further limit the amount of net operating loss carry forwards, which could be utilized annually to offset future taxable income.

In March 2017, the Federal Constitutional Court released a court order to declare that forfeiture of tax losses due to certain substantial changes in a company's ownership are unconstitutional.

The restrictions on the utilization of tax losses were mitigated through Economic Growth Acceleration Act ("*Wachstumsbeschleunigungsgesetz*"). According to the provisions of this act, unused tax losses of a corporation are preserved to the extent they are compensated by an excess of the fair value of equity for tax purposes above its carrying amount of the Group.

At December 31, 2018, Spark has gross net operating loss carry-forwards for U.S. income tax purposes of approximately €16,056 thousand and €14,660 thousand available to reduce future federal and state taxable income, respectively, which expire beginning in the years 2025 for federal purposes and in 2019 for state purposes. Under Section 382 of the U.S. Internal Revenue Code, the utilization of the net operating loss carry-forwards may be limited based on changes in the percentage ownership of the Group. Of these unused tax losses, there was no deferred tax asset recognized.

At December 31, 2018, Spark has U.S. federal income tax carry-forwards for income tax purposes of approximately €314 thousand (December 31, 2017: €295 thousand), which if not previously utilized, are allowable as refundable credits under the Tax Cuts and Job Act through 2022. However, the refundability of the credit will be determined through additional guidance to properly interpret the interaction between Internal Revenue Code Section 383 with the Tax Cuts and Jobs Act.

In addition, as of December 31, 2018, the Group had tax losses carryforward in France of €176 thousand (December 31, 2017: €1,084 thousand), for which deferred tax assets were recognized. There was also approximately €8,860 thousand in net operating loss carryforwards for Israeli tax purposes at December 31, 2018 (December 31, 2017: €8,688 thousand), which do not expire, and for which no deferred tax asset was recognized.

Spark Networks capitalizes deferred tax assets on loss carry-forwards to the extent that it is probable that those can be used to reduce future taxable income. Following Spark Networks' evaluation, deferred tax assets of €10,434 thousand and €10,845 thousand were capitalized as of December 31, 2018 and December 31, 2017, respectively.

No deferred taxes on the aggregate amount of temporary differences associated with investments in subsidiaries of €2,690 thousand as of December 31, 2018 (December 31, 2017: €0 thousand) were recognized.

Spark Networks operates in multiple taxing jurisdictions, both within and outside of Germany and the United States. Spark Networks has filed tax returns with positions that may be challenged by the tax authorities. These positions relate to the deductibility of certain expenses and intercompany transactions as well as other matters. Although the outcome of tax audits is uncertain, Spark Networks regularly assesses its tax position for such matters and, in its management's opinion, adequate provisions for income taxes have been made for potential liabilities resulting from such matters. To the extent reserves are recorded, they will be utilized or reversed once the statute of limitations has expired and/or at the conclusion of the tax examination. Spark Networks believes that the ultimate outcome of these matters will not have a material impact on its financial position or liquidity.

The U.S. Tax Act was signed into law on December 22, 2017. The U.S. Tax Act significantly revised the U.S. corporate income tax by, among other things, lowering the statutory corporate tax rate from 35% to 21%, eliminating certain deductions, imposing a mandatory one-time tax on accumulated earnings of foreign subsidiaries, introducing new tax regimes, adding additional limitations on the deductibility of interest expense, and changing how foreign earnings are subject to U.S. tax. The U.S. Tax Act also enhanced and extended the option to claim accelerated depreciation deductions by allowing full expensing of qualified property, primarily equipment, through 2022. These new provisions did not have a material effect on the financial statements.

Share-Based Compensation

Share-based compensation expense reflected in the Company's consolidated financial statements consists of expense related to the Affinitas virtual employee share option plan (the "Affinitas VESOP"), the Spark 2007 Omnibus Incentive Plan ("Spark 2007 Plan"), the Spark Networks 2017 virtual stock option plan (the "Spark Networks 2017 VSOP") and the Spark Networks 2018 virtual stock option plan (the "Spark Networks 2018 VSOP"). The Affinitas VESOP was independently established by Affinitas in 2013 and the Spark 2007 Plan was independently established by Spark in 2007, in each case prior to the Affinitas / Spark Merger. In connection with the Affinitas / Spark Merger, the Affinitas VESOP was terminated and replaced by the Spark Networks 2017 VSOP. The Spark Networks 2017 VSOP was subsequently replaced by the Spark Networks 2018 VSOP in 2018. Share-based compensation expense incurred in periods prior to the close of the Affinitas / Spark Merger resulted solely from share-based compensation granted by Affinitas.

The grant-date fair value of equity-settled share-based payment arrangements granted to employees is generally recognized as an expense, with a corresponding increase in shareholders' equity over the vesting period of the awards. The amount recognized as an expense is adjusted to reflect the number of awards for which the related service and non-market performance conditions are expected to be met, such that the amount ultimately recognized is based on the number of awards that meet the related service and non-market performance conditions at the vesting date.

Under the Affinitas VESOP, Spark Networks had a choice of settlement whereby the cash amount or equal value in shares to be received by the beneficiaries for a single vested option shall equal the price or proceeds per common share in case of a change in control event ("Share Sale") or an Initial Public Offering ("IPO") of Affinitas' shares minus the exercise price. In connection with the Affinitas / Spark Merger, shareholders of Affinitas elected to settle all the options outstanding at the merger date at a fixed valuation of €3,839 thousand, which was equivalent to a total equity value of €90 million for Affinitas. This equity value of Affinitas was determined based on the Spark share price and the exchange ratio that Affinitas and Spark agreed on in relation to the Affinitas / Spark Merger.

In connection with the Affinitas / Spark Merger, Spark established the Chardonnay Trust, with the purpose of holding such number of shares of Spark Networks SE ADSs as shall be necessary to satisfy the obligations under all unexercised Spark stock options awarded under the Spark 2007 Plan. Following the completion of the Affinitas / Spark Merger, Spark no longer has any rights to revoke or amend the Chardonnay Trust in a manner that is detrimental to Spark 2007 Plan participants.

In connection with the Affinitas / Spark Merger, each Spark stock option was converted into an award to acquire ADSs from the Chardonnay Trust, on the same terms and conditions as were applicable under the Spark stock option, and subject to adjustment based on the exchange ratio stipulated in the merger agreement. The shares underlying the ADSs held in the Chardonnay Trust are recognized as treasury stock within the Consolidated Statement of Shareholders' Equity. Only nonqualified stock options were outstanding as of the merger date, which are vested and exercisable as of December 31, 2018.

During the year ended December 31, 2017, Spark Networks established the Spark Networks 2017 VSOP for selected executives and employees of Spark Networks and its subsidiaries, which entitles Spark Networks to a choice of settlement whereby the cash amount or equal value in ADSs to be received by the beneficiaries for a single vested option shall equal the market price per Spark Networks ADS minus the exercise price. Spark Networks' policy is to avoid cash payments to participants if possible, which means that settlement of the outstanding options is expected to be made in Spark Networks ADSs. Based on this stated policy, the arrangement is classified as equity-settled unless settlement in cash is most probable.

During the year ended December 31, 2018, Spark Networks replaced the Spark Networks 2017 VSOP by establishing the Spark Networks 2018 VSOP for selected executives and employees of Spark Networks and its subsidiaries if and to the extent that the plan participants under the Spark Networks 2017 VSOP have agreed to such replacement. Under the Spark Networks 2018 VSOP, Spark Networks granted participants a certain number of virtual stock options in exchange for options granted under the Spark Networks 2017 VSOP and/or a certain number of new virtual stock options, and can grant additional options in the future. The Spark Networks 2018 VSOP entitles Spark Networks to a choice of settlement whereby the cash amount or equal value in shares to be received by the beneficiaries for a single vested option shall equal the market price per Spark Networks ADS minus the exercise price. Based on Spark Networks' policy, the Spark Networks 2018 VSOP is classified as equity-settled.

The grant-date fair value of equity-settled share-based payment arrangements granted to employees is generally recognized as an expense, with a corresponding increase in shareholders' equity, over the vesting period of the awards. The amount recognized as an expense is adjusted to reflect the number of awards for which the related service and non-market performance conditions are expected to be met, such that the amount ultimately recognized is based on the number of awards that meet the related service and non-market performance conditions at the vesting date. For share-based payment awards with non-vesting conditions, the grant-date fair value of the share-based payment is measured to reflect such conditions and there is no true-up for differences between expected and actual outcomes. Spark Networks recognizes compensation expense on a straight-line basis from the beginning of the service period, even when the grant date is subsequent to the service commencement date. During the period between service commencement date and grant date, the share-based payment expense recognized is based on an estimated grant date fair value of the award. Once the grant date has been established for equity-settled awards, the estimated fair value is revised so that the expense recognized is based on the actual grant date fair value of the equity instruments granted. For awards with graded-vesting features, each installment of the award is treated as a separate grant. This means that each installment is separately expensed over the related vesting period.

Spark Networks estimates the fair value of each stock option grant using a binomial option-pricing model, which uses as inputs the fair value per Spark Networks share and assumptions Spark Networks makes with respect to the volatility of Spark Networks shares, the expected terms of Spark Networks' stock options, the risk-free interest rates for a period that approximates the expected term of the stock option and the expected dividend yield.

Segment Reporting

Segment reporting requires the use of the management approach in determining the reportable operating segments. The management approach considers the internal organization and reporting used by Spark Networks' chief operating decision maker for making operating decisions and assessing performance. Spark Networks' internal financial reporting includes separate data for each country, and all countries other than the United States and Canada (together, "North America") have been aggregated into one reportable segment as the business model and long-term margin expectations are similar. Spark Networks reports two separate reportable segments: (1) North America, which consists of Spark Networks' operations in the United States and Canada; and (2) International, which consists of all other operations except for the United States and Canada.

The performance of the operating segments is measured on the basis of revenue and direct marketing costs only. Due to Spark Networks' integrated business structure, costs and expenses other than direct marketing expenses are not allocated to the individual reportable segments. As such, Spark Networks does not measure operating profit or loss by segment for internal reporting purposes.

Results of Operations

The following is a more detailed discussion of our financial condition and results of operations for the periods presented:

(in € thousands)	Years Ended December 31,		
	2018	2017	2016
Revenue	104,551	85,637	73,491
Cost of revenue	(69,490)	(58,776)	(51,202)
Gross profit	35,061	26,861	22,289
Other income	240	54	126
Other operating expenses	(36,299)	(32,030)	(19,742)
Sales and marketing expenses	(4,938)	(5,540)	(3,919)
Customer service expenses	(4,626)	(3,971)	(2,791)
Technical operations and development expenses	(7,195)	(6,428)	(3,305)
General and administrative expenses	(19,540)	(16,091)	(9,727)
Operating (loss)/profit	(998)	(5,115)	2,673
Interest income and similar income	478	239	157
Interest expense and similar charges	(1,436)	(782)	(425)
Net finance expenses	(958)	(543)	(268)
(Loss)/income before taxes	(1,956)	(5,658)	2,405
Income tax benefit (expense)	(1,147)	84	(1,082)
(Loss)/income from continuing operations	(3,103)	(5,574)	1,323
Discontinued operations			
Loss from discontinued operations, net of tax	—	—	(632)
Net (loss)/income	(3,103)	(5,574)	691

The following table presents certain selected information and Adjusted EBITDA⁽¹⁾ for the periods presented:

(in € thousands)	Years Ended December 31,		
	2018	2017	2016
Net (loss)/income	(3,103)	(5,574)	691
Discontinued operations	—	—	632
Net finance expenses	958	543	268
Income tax (benefit) expense	1,147	(84)	1,082
Depreciation and amortization	3,565	3,084	1,278
Impairment of intangible assets and goodwill	3,324	25	—
Share-based compensation expense	4,091	488	991
Non-recurring costs	970	8,123	927
Adjusted EBITDA⁽¹⁾	10,952	6,605	5,869

Summary of non-recurring costs (in € thousands)	Years Ended December 31,		
	2018	2017	2016
Contract liabilities write-offs	289	603	—
Restructuring expenses	—	—	642
Transaction and advisory fees	264	3,995	162
Merger integration costs	101	2,042	—
Other employee payments	—	1,053	—
Severance costs	316	430	123
Total adjustments	970	8,123	927

(1) Adjusted EBITDA is not a measure defined by International Financial Reporting Standards ("IFRS"). The most directly comparable IFRS measure for Adjusted EBITDA is our net (loss)/profit for the relevant period. This measure is one of the primary metrics by which we evaluate the performance of our businesses, budget, forecast and compensate management. We believe this measure provides management and investors with a consistent view, period to period, of the core earnings generated from ongoing operations and excludes the impact of items that we do not consider representative of our ongoing operating performance, including: (i) non-cash items such as share-based compensation, asset impairments, net finance expenses and (ii) one-time items that have not occurred in the past two years and are not expected to recur in the next two years including severance, transaction advisory fees, and merger integration costs, and (iii) discontinued operations. Adjusted EBITDA has inherent limitations in evaluating the performance of the Company, including, but not limited to the following:

- Adjusted EBITDA does not reflect the cash capital expenditures during the measurement period,
- Adjusted EBITDA does not reflect any changes in working capital requirements during the measurement period,
- Adjusted EBITDA does not reflect the cash tax payments during the measurement period, and
- Adjusted EBITDA may be calculated differently by other companies in our industry, thus limiting its value as a comparative measure.

Adjusted EBITDA should not be construed as a substitute for net (loss) / profit (as determined in accordance with IFRS) for the purpose of analyzing our operating performance or financial position, as Adjusted EBITDA is not defined by IFRS.

The following table presents our historical operating results as a percentage of revenue for the periods presented:

	Years Ended December 31,		
	2018	2017	2016
Revenue	100.0 %	100.0 %	100.0 %
Cost of revenue	(66.5)	(68.6)	(69.7)
Gross profit	33.5	31.4	30.3
Other income	0.2	0.1	0.2
Other operating expenses	(34.7)	(37.4)	(26.9)
Sales and marketing expenses	(4.7)	(6.5)	(5.3)
Customer service expenses	(4.4)	(4.6)	(3.8)
Technical operations and development expenses	(6.9)	(7.5)	(4.5)
General and administrative expenses	(18.7)	(18.8)	(13.2)
Operating (loss)/profit	(1.0)	(6.0)	3.6
Interest income and similar income	0.5	0.3	0.2
Interest expense and similar charges	(1.4)	(0.9)	(0.6)
Net finance expenses	(0.9)	(0.6)	(0.4)
(Loss)/income before taxes	(1.9)	(6.6)	3.3
Income tax benefit (expense)	(1.1)	0.1	(1.5)
(Loss)/income from continuing operations	(3.0)	(6.5)	1.8
Discontinued operations			
Loss from discontinued operations, net of tax	—	—	(0.9)
Net (loss)/income	(3.0) %	(6.5) %	0.9 %

Unaudited pro forma financial information

The unaudited pro forma financial information in the table below presents the combined results of the Company and Spark as if the Affinitas / Spark Merger had occurred on January 1, 2017. The unaudited pro forma financial information includes adjustments required under the acquisition method of accounting and is presented for informational purposes only. This presentation is not necessarily indicative of the results that would have been achieved had the acquisition actually occurred on January 1, 2017.

For the year ended December 31, 2017, pro forma adjustments include a reduction in revenue of €943 thousand due to the write-offs of contract liabilities at the assumed date of acquisition, as well as decreases in depreciation and amortization expense of €2,089 thousand and the removal of transaction related costs of €11,921 thousand as they are one-time in nature and will not have a continuing impact on operations. The post-tax impact to net loss resulting from the pro forma adjustments applied in 2017 assumes a 40% rate. The transaction related costs include merger integration costs of €2,663 thousand, transaction and advisory fees of €6,650 thousand, and severance and other employee costs of €2,608 thousand related to the Affinitas / Spark Merger.

(in € thousands)	Years Ended December 31,	
	2018 (pro forma)	2017 (pro forma)
Revenue	104,840	105,911
Net loss	(2,814)	(3,134)

The following table presents certain selected information and Adjusted EBITDA⁽¹⁾ for the periods presented:

(in € thousands)	Years Ended December 31,	
	2018	2017
	(pro forma)	(pro forma)
Net loss	(2,814)	(3,134)
Net finance expenses	958	261
Income tax (benefit) expense	1,147	5,057
Depreciation and amortization	3,565	4,266
Impairment of intangible assets and goodwill	3,324	46
Share-based compensation expense	4,091	1,175
Non-recurring costs	681	943
Adjusted EBITDA⁽¹⁾	10,952	8,614

Summary of non-recurring costs	Years Ended December 31,	
	2018	2017
	(pro forma)	(pro forma)
Contract liabilities write-offs	—	943
Transaction and advisory fees	264	—
Merger integration costs	101	—
Severance costs	316	—
Total adjustments	681	943

(1) Adjusted EBITDA is not a measure defined by International Financial Reporting Standards ("IFRS"). The most directly comparable IFRS measure for Adjusted EBITDA is our net (loss)/profit for the relevant period. This measure is one of the primary metrics by which we evaluate the performance of our businesses, budget, forecast and compensate management. We believe this measure provides management and investors with a consistent view, period to period, of the core earnings generated from ongoing operations and excludes the impact of items that we do not consider representative of our ongoing operating performance, including: (i) non-cash items such as share-based compensation, asset impairments, net finance expenses and (ii) one-time items that have not occurred in the past two years and are not expected to recur in the next two years including severance, transaction advisory fees, and merger integration costs, and (iii) discontinued operations. Adjusted EBITDA has inherent limitations in evaluating the performance of the Company, including, but not limited to the following:

- Adjusted EBITDA does not reflect the cash capital expenditures during the measurement period,
- Adjusted EBITDA does not reflect any changes in working capital requirements during the measurement period,
- Adjusted EBITDA does not reflect the cash tax payments during the measurement period, and
- Adjusted EBITDA may be calculated differently by other companies in our industry, thus limiting its value as a comparative measure.

Adjusted EBITDA should not be construed as a substitute for net (loss) / profit (as determined in accordance with IFRS) for the purpose of analyzing our operating performance or financial position, as Adjusted EBITDA is not defined by IFRS.

Unaudited pro forma revenue during the year ended December 31, 2018 decreased by 1.0% to €104,840 thousand compared to unaudited pro forma revenue of €105,911 thousand during the year ended December 31, 2017. Pro forma revenue in the periods ended December 31, 2018 and December 31, 2017 reflects a reduction of €0 thousand and €943 thousand, respectively, due to the write-off of contract liabilities related to the Affinitas / Spark Merger.

Unaudited pro forma net loss during the year ended December 31, 2018 decreased by €320 thousand to €2,814 thousand compared to the unaudited pro forma net loss of €3,134 thousand during the year ended December 31, 2017. The decrease in unaudited pro forma net loss was the result of an increase in revenue driven by the growth of

SilverSingles following its launch in December 2017, and a decrease in other operating expenses from the prior year as a result of the elimination of redundant costs following the Affinitas / Spark Merger in 2017.

Unaudited pro forma Adjusted EBITDA during the year ended December 31, 2018 increased by €2,338 thousand to €10,952 thousand compared to the unaudited pro forma adjusted EBITDA of €8,614 thousand during the year ended December 31, 2017. The increase was the result of an increase in revenue driven by the growth of SilverSingles following its launch in December 2017, and a decrease in other operating expenses from the prior year as a result of the elimination of redundant costs following the Affinitas / Spark Merger in 2017.

Key Business Metrics

Spark Networks regularly reviews certain operating metrics in order to evaluate the effectiveness of its operating strategies and monitor the financial performance of its business. The key business metrics that Spark Networks utilizes include the following:

Total Registrations:

Total registrations are defined as the total number of new members registering to the platforms with their email address. Those include members who enter into premium subscriptions and free memberships.

Average Paying Subscribers:

Paying subscribers are defined as individuals who have paid a monthly fee for access to premium services, which include, among others, unlimited communication with other registered users, access to user profile pictures and enhanced search functionality. Average paying subscribers for each month are calculated as the sum of the paying subscribers at the beginning and the end of the month, divided by two. Average paying subscribers for periods longer than one month are calculated as the sum of the average paying subscribers for each month, divided by the number of months in such period.

Monthly Average Revenue Per User (ARPU):

Monthly Average Revenue Per User (ARPU) represents the total net subscriber revenue for the period divided by the number of average paying subscribers for the period, divided by the number of months in the period.

Contribution:

Contribution is defined as revenue, net of credits, less direct marketing.

Direct Marketing:

Direct Marketing is defined as online and offline advertising spend, and is included within Cost of Revenue within the Group's Consolidated Statement of Comprehensive (Loss)/Income.

Unaudited selected statistical information regarding the key business metrics described above for Spark Networks' reportable segments is shown in the table below:

	Years Ended December 31,		
	2018	2017	2016
# of Registrations			
North America	4,376,883	2,289,036	1,616,963
International	5,767,290	6,162,597	5,280,686
Total # of Registrations	10,144,173	8,451,633	6,897,649
Average Paying Subscribers			
North America	183,794	83,870	46,453
International	299,619	295,533	270,823
Total Average Paying Subscribers	483,413	379,403	317,276
Monthly ARPU			
North America	€ 21.98	€ 24.42	€ 28.71
International	€ 15.60	€ 17.22	€ 17.69
Total Monthly ARPU	€ 18.02	€ 18.81	€ 19.30
Total Net Revenue			
North America	€ 48,470	€ 24,574	€ 16,004
International	€ 56,081	€ 61,063	€ 57,487
Total Net Revenue	€ 104,551	€ 85,637	€ 73,491
Direct Marketing			
North America	€ 27,862	€ 17,980	€ 15,059
International	€ 32,026	€ 35,489	€ 33,311
Total Direct Marketing	€ 59,888	€ 53,469	€ 48,370
Contribution			
North America	€ 20,608	€ 6,594	€ 944
International	€ 24,055	€ 25,574	€ 24,177
Total Contribution	€ 44,663	€ 32,168	€ 25,121

During the year ended December 31, 2018, 10,144 thousand new members registered to Spark Networks' platforms, compared to 8,452 thousand new members during the year ended December 31, 2017. The 20.0% total increase in new registrations is due to new registrations in the North America segment with 4,377 thousand registrations compared to 2,289 thousand in the previous year, partially offset by a decrease in new registrations in the International segment with 5,767 thousand registrations compared to 6,163 thousand in the previous year. The increase in the North America segment was due to the addition of Jdate and Christian Mingle following the Affinitas / Spark Merger in November 2017 and increased direct marketing efforts. Registrations in the year ended December 31, 2018 include 1,046 thousand new registrations in North America and 66 thousand new International registrations from the Spark brands.

Average paying subscribers increased by 27.4% to 483,413 during the year ended December 31, 2018, compared to 379,403 during the year ended December 31, 2017. Average paying subscribers for the North America segment increased by 119.1% to 183,794 during the year ended December 31, 2018, compared to 83,870 during the year ended December 31, 2017. The increase was primarily the result of the addition of Jdate and Christian Mingle following the Affinitas / Spark Merger in November 2017 and increased marketing efforts in North America. Average paying subscribers in the North America segment from the Spark brands accounted for 65.7% of the increase relative to the prior year. Average paying subscribers in the International segment increased by 1.4% to 299,619 during the year ended December 31, 2018, compared to 295,533 during the year ended December 31, 2017. Average paying subscribers in the International segment from the Spark brands accounted for 68.5% of the increase relative to the prior year.

Monthly ARPU decreased by 4.2% to €18.02 during the year ended December 31, 2018, compared to €18.81 during the year ended December 31, 2017. Monthly ARPU of the North America segment decreased by 10.0% to €21.98 during the year ended December 31, 2018 compared to €24.42 during the year ended December 31, 2017. Monthly ARPU for the North America segment from the Spark brands accounted for 48.8% of the decrease relative to the prior year period. Monthly ARPU within the International segment decreased by 9.4% to €15.60 during the year ended December 31, 2018 compared to €17.22 during the year ended December 31, 2017. Monthly ARPU is lower in the International segment than in the North America segment primarily because the segment includes Eastern European countries in which subscription fees are significantly lower than Spark Networks' overall average. The proportion of Eastern European customers within the International segment increased in 2018, contributing to the modest decrease in International segment ARPU.

Year Ended December 31, 2018 Compared to Year Ended December 31, 2017

Revenue

Revenue during the year ended December 31, 2018 increased by 22.2% to €104,551 thousand from €85,637 thousand during the year ended December 31, 2017. The growth was primarily attributable to the 27.4% increase in the number of average paying subscribers, offset by the 4.2% decrease in Monthly ARPU. Spark contributed €17,710 thousand, or 93.6%, of the revenue increase through the addition of Jdate, JSwipe and Christian Mingle following the close of the Affinitas / Spark Merger in November 2017. Spark revenue in the period was reduced by a €289 thousand write-off of contract liabilities related to the Affinitas / Spark Merger.

During the year ended December 31, 2018, revenue in Spark Networks' North America segment increased by 97.2% to €48,470 thousand from €24,574 thousand during the year ended December 31, 2017, mainly due to the addition of Jdate, JSwipe and Christian Mingle following the Affinitas / Spark Merger in November 2017. Revenue for the North America segment from the Spark brands accounted for 71.7% of the increase relative to the prior year. During the year ended December 31, 2018, revenue in Spark Networks' International segment decreased by 8.2% to €56,081 thousand from €61,063 thousand during the year ended December 31, 2017. Spark contributed €662 thousand to revenue for the International segment in the period. The decrease in 2018 revenue within the International segment is the result of the 9.8% decrease in 2018 International segment direct marketing costs, as the Company focused its marketing efforts within the North American market.

Cost of revenue

Cost of revenue consists primarily of direct marketing costs, data center expenses, credit card fees and mobile application processing fees. Cost of revenue increased by 18.2% to €69,490 thousand during the year ended December 31, 2018, compared to €58,776 thousand during the year ended December 31, 2017. The increase in cost of revenue was primarily attributable to increases in direct marketing costs within the North America segment. Spark contributed €5,622 thousand, or 52.5%, of the year over year increase due to the addition of Jdate, JSwipe and Christian Mingle following the Affinitas / Spark Merger in November 2017. The increase in cost of revenue was also attributable to €12,839 thousand of direct marketing investment in SilverSingles during the year ended December 31, 2018 following its December 2017 launch, compared to €361 thousand during the year ended December 31, 2017. Additionally, mobile application processing fees increased by €1,741 thousand as a result of the addition of Jdate, JSwipe and Christian Mingle, which generates a higher proportion of revenue from the Apple App Store and the Google Play Store. Subscriptions sold through these app stores incur a commission equal to 30% of revenue. Cost of revenue as a percentage of revenue decreased by 2.2% to 66.5% as a result of revenue growth outpacing growth in direct marketing costs within North America.

Sales and marketing expenses

Sales and marketing expenses consist primarily of salaries for Spark Networks' sales and marketing personnel, expenses for market research, and amortization of sales related intangible assets. Sales and marketing expenses decreased by 10.9% to €4,938 thousand during the year ended December 31, 2018, as compared to €5,540 thousand during the year ended December 31, 2017. The decrease was primarily attributable to reductions in amortization expense, marketing research costs, and television advertising production costs.

Customer service expenses

Customer service expenses consist primarily of personnel costs and third party service fees associated with Spark Networks' customer service centers. The members of Spark Networks' customer service team primarily respond to billing questions, detect and eliminate suspected fraudulent activity, and address site usage and dating questions from Spark Networks' members. Customer service expenses increased by 16.5% to €4,626 thousand during the year ended December 31, 2018, as compared to €3,971 thousand during the year ended December 31, 2017. The increase was mainly attributable to increased customer support staffing to support the newly acquired Spark brands and the December 2017 launch of SilverSingles.

Technical operations and development expenses

Technical operations and development expenses consist primarily of the personnel and systems necessary to support Spark Networks' corporate technology requirements as well as costs incurred in the development, enhancement and maintenance of Spark Networks' new and existing technology platforms. Technical operations and development expenses increased by 11.9% to €7,195 thousand during the year ended December 31, 2018, as compared to €6,428 thousand during the year ended December 31, 2017. The increase is primarily due to an increase in amortization expense on internally generated intangible assets and an increase in personnel expenses to facilitate the transition of technological oversight of the Spark tools and systems from the United States based development team to the development team in Berlin. Further, expenses also increased as a result of higher average salaries in the department.

General and administrative expenses

General and administrative expenses consist primarily of personnel costs, professional fees, occupancy and other overhead costs. General and administrative expenses increased by 21.4% to €19,540 thousand for the year ended December 31, 2018, compared to €16,091 thousand for the year ended December 31, 2017. The increase was due to Samadhi goodwill impairment and an increase in personnel expenses and related overhead, partially offset by a year over year decrease in legal and consulting costs that related to the Affinitas / Spark Merger in November 2017. Spark contributed €605 thousand, or 17.5%, of the year over year increase following the Affinitas / Spark Merger in November 2017.

Net Finance expenses

Net finance expenses consist primarily of interest income and expenses, foreign exchange gains and losses, and other related finance costs. Net finance expenses increased to €958 thousand for the year ended December 31, 2018, compared to €543 thousand for the year ended December 31, 2017. The increase was mainly due to the early termination fee of €307 thousand that was paid in March 2018 pursuant to the Termination Agreement (as defined below) and net foreign exchange losses of €388 thousand during the year ended December 31, 2018 compared to €53 thousand during the year ended December 31, 2017. The increase in net finance expenses was partially offset by income of €220 thousand related to the repayment on a related party loan receivable in August 2018. Net finance expenses in 2018 include expense of €241 thousand from Spark related to foreign exchange losses.

Income tax benefit (expense)

Income tax expense for the year ended December 31, 2018, was €1,147 thousand compared to income tax benefit of €84 thousand for the year ended December 31, 2017. The income tax expense during the year ended December 31, 2018 consists of an expense of €531 thousand from origination and reversal of temporary differences mainly related to intangible assets and income tax credits, a deferred tax expense of €397 thousand relating to net operating loss carryforwards, and €219 thousand of current income tax expense. The income tax expense for the year ended December 31, 2018 is significantly impacted by current year losses for which no deferred tax assets are recognized with an impact of €1,997 thousand, and an adjustment to deferred taxes on foreign net operating loss carryforwards of €604 thousand, due to new information that became available to Spark Networks.

The income tax benefit during the year ended December 31, 2017 consists of €159 thousand of deferred tax benefit relating to the addition of net operating loss carryforwards, offset by €67 thousand of current income tax expense and an expense of €8 thousand from origination and reversal of temporary differences, mainly attributable to intangible assets recognized as a result of the Affinitas / Spark Merger and deferred taxes on the fair value adjustment on deferred income.

Total comprehensive (loss) income.

Total comprehensive loss was €1,486 thousand for the year ended December 31, 2018, compared to total comprehensive loss of €6,457 thousand for the year ended December 31, 2017. The reduction in total comprehensive loss was primarily due to a reduction in net operating loss and an increase in other comprehensive income related to foreign currency translation.

Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

Revenue

Revenue during the year ended December 31, 2017 increased 16.5% to €85,637 thousand from €73,491 thousand during the year ended December 31, 2016. The increase was primarily attributable to 19.6% growth in our average paying subscribers resulting from extensive marketing efforts in North America and the addition of Jdate and Christian Mingle following the Affinitas / Spark Merger in November 2017. Revenue in 2017 includes €2,719 thousand from Spark since the date of the Affinitas / Spark Merger, which reflects a reduction in revenue during this period of €603 thousand due to the write-off of contract liabilities related to the Affinitas / Spark Merger.

During the year ended December 31, 2017, revenue in Spark Networks' North America segment increased 53.6% from €16,004 thousand during the year ended December 31, 2016 to €24,574 thousand during the year ended December 31, 2017. The North America revenue increases resulted from increased marketing efforts and the addition of Jdate and Christian Mingle following the Affinitas / Spark Merger in November 2017. North America revenue in 2017 includes €2,622 thousand from Spark since the date of the Affinitas / Spark Merger, or 30.6% of the increase in the period. During the year ended December 31, 2017, revenue in Affinitas' International segment increased by 6.2% from €57,487 thousand during the year ended December 31, 2016 to €61,063 thousand during the year ended December 31, 2017. International revenue increases resulted primarily from increased marketing efforts.

Cost of revenue

Cost of revenue consists primarily of direct marketing costs, data center expenses, credit card fees and mobile application processing fees. Cost of revenue increased by 14.8% to €58,776 thousand during the year ended December 31, 2017, compared to €51,202 thousand during the year ended December 31, 2016. The increase in cost of revenue was primarily attributable to increases in direct marketing costs within the North America segment, as mentioned above. Cost of revenue expenses in 2017 include €1,893 thousand from Spark since the date of the Affinitas / Spark Merger, or 25.0% of the 2017 increase. Additionally, mobile application processing fees increased due to increases in the proportion of customer subscriptions sold through the Apple App Store and the Google Play Store. Cost of revenue as a percentage of revenue decreased by 1.1% to 68.6% as a result of revenue growth outpacing growth in direct marketing costs within North America.

Sales and marketing expenses

Sales and marketing expenses consist primarily of salaries for Spark Networks' sales and marketing personnel, expenses for market research, and amortization of sales related intangible assets. Sales and marketing expenses increased by 41.4% to €5,540 thousand during the year ended December 31, 2017, as compared to €3,919 thousand during the year ended December 31, 2016. The increase was primarily attributable to higher personnel expenses caused by hiring to grow the sales and marketing team and termination costs. The increase was also attributable to increased amortization expenses resulting from the amortization of acquired intangible assets resulting from the Samadhi Acquisition and the Affinitas / Spark Merger. Sales and marketing expenses in 2017 include €327 thousand from Spark since the date of the Affinitas / Spark Merger, or 20.2% of the 2017 increase.

Customer service expenses

Customer service expenses consist primarily of personnel costs and third party service fees associated with Spark Networks' customer service centers. The members of Spark Networks' customer service team primarily respond to billing questions, detect and eliminate suspected fraudulent activity, and address site usage and dating questions from Spark Networks' members. Customer service expenses increased by 42.3% from €2,791 thousand during the year ended December 31, 2016, to €3,971 thousand during the year ended December 31, 2017. The increase was primarily attributable to an increase in third party services of €515 thousand, resulting from the strategic decision to reduce internal customer service staffing and engage external service providers to increase overall customer responsiveness. As a result, personnel expenses decreased by €95 thousand. Customer service expense increases were also driven by higher customer claim volumes in North America. Customer service expenses in 2017 include €276 thousand from Spark since the date of the Affinitas / Spark Merger, or 23.4% of the 2017 increase.

Technical operations and development expenses

Technical operations and development expenses consist primarily of the personnel and systems necessary to support Spark Networks' corporate technology requirements as well as costs incurred in the development, enhancement and maintenance of Spark Networks' websites and services. Technical operations and development expenses increased 94.5% from €3,305 thousand during the year ended December 31, 2016, to €6,428 thousand during the year ended December 31, 2017, due to an increase in personnel expenses stemming from the hiring of senior team members and retention and severance payments made to Spark personnel, and an increase in amortization on intangible assets identified in the Samadhi Acquisition. Technical operations and development expenses in 2017 include €932 thousand from Spark since the date of the Affinitas / Spark Merger, or 29.8% of the 2017 increase.

General and administrative expenses

General and administrative expenses consist primarily of corporate personnel-related costs, professional fees, occupancy and other overhead costs. General and administrative expenses increased by 65.4% to €16,091 thousand for the year ended December 31, 2017, compared to €9,727 thousand for the year ended December 31, 2016. The increase was due to higher bad debt expenses and write-offs of receivables, an increase in personnel expenses, and professional fees resulting from the Affinitas / Spark Merger. General and administrative expenses in 2017 include €2,038 thousand from Spark since the date of the Affinitas / Spark Merger, or 32.0% of the 2017 increase.

Net Finance expenses

Net finance expenses consist primarily of interest income and expenses and foreign exchange gains and losses. Net finance expenses increased to €543 thousand for the year ended December 31, 2017, compared to €268 thousand for the year ended December 31, 2016. The increase was due to higher interest expenses of €516 thousand for the year ended December 31, 2017 compared to €129 thousand for the year ended December 31, 2016, mainly relating to a loan facility drawn in September 2016 to finance a portion of the consideration for the Samadhi Acquisition. Net currency translation losses were €53 thousand during the year ended December 31, 2017, compared to €139 thousand during December 31, 2016. Net finance expenses in 2017 include income of €76 thousand from Spark since the date of the Affinitas / Spark Merger.

Income tax benefit (expense)

Income tax benefit for the year ended December 31, 2017, was €84 thousand compared to income tax expense of €1,082 thousand for the year ended December 31, 2016. The income tax benefit during the year ended December 31, 2017 consists of €67 thousand of current income tax expense and €159 thousand of deferred tax benefit relating to the addition of net operating loss carryforwards, offset by an expense of €8 thousand from origination and reversal of temporary differences, mainly attributable to intangible assets recognized as a result of the Affinitas / Spark Merger and deferred taxes on the fair value adjustment on deferred income.

The expense for income tax during the year ended December 31, 2016 consists of €752 thousand of current income tax expense and €541 thousand deferred tax expense relating to the use of net operating loss carryforwards, offset by an income tax benefit of €211 thousand from origination and reversal of temporary differences, mainly attributable to intangible assets recognized as a result of the Samadhi Acquisition and deferred taxes on the fair value adjustment on deferred income.

Discontinued operations.

The loss from discontinued operations during the year ended December 31, 2016 was €632 thousand and relates to Affinitas's interest in Top 10 Media UG and its subsidiary, Top 10 Advantage GmbH (together, "Top 10"). The equity interest was sold on December 29, 2016 for gross proceeds of €250 thousand. The entities generated losses from operating activities of €1,013 thousand during 2016. Net assets at the time of the sale amounted to €(131) thousand.

Total comprehensive (loss) income.

Total comprehensive loss was €6,457 thousand for the year ended December 31, 2017, compared to total comprehensive income of €691 thousand for the year ended December 31, 2016. The decrease in total comprehensive income was primarily due to higher professional fees and other integration costs resulting from the Affinitas / Spark Merger in 2017.

B. Liquidity and capital resources.

Spark Networks' ongoing liquidity requirements arise primarily from working capital needs, research and development requirements and the repayment of debt. In addition, Spark Networks may use liquidity to fund acquisitions or make other investments. Sources of liquidity are cash balances and cash flows from operations and from time to time, Spark Networks may obtain additional liquidity through the issuance of equity or debt. As of December 31, 2018, Spark Networks had cash and cash equivalents of €11,095 thousand.

We believe that our current cash and cash flow from operations will be sufficient to meet our anticipated cash needs for working capital, capital expenditures and contractual obligations, for at least the next 12 months. We do not anticipate requiring additional capital; however, if required or desirable, we may utilize our revolving credit facility, raise additional debt or issue additional equity in the private or public markets.

Cash Flows

The following table summarizes Spark Networks' cash flows for the periods presented:

(in € thousands)	December 31,		
	2018	2017	2016
Net cash inflow (outflow) from operating activities	8,457	(1,180)	6,840
Cash inflow (outflow) from investing activities	(3,531)	2,388	(7,617)
Cash inflow (outflow) from financing activities	(2,309)	(885)	5,854
Net change in cash and cash equivalents	2,617	323	5,077

Operating Activities

During the year ended December 31, 2018, net cash inflow was €8,457 thousand, primarily resulting from non-cash charges of €11,550 thousand and cash increases from operating assets and liabilities of €452 thousand, offset by Spark Networks' net loss of €3,103 thousand and interest payments of €442 thousand. Net cash provided by changes in operating assets and liabilities for the year ended December 31, 2018 consisted primarily of a €4,209 thousand increase from changes in other working capital, a €932 thousand change in tax positions, and a €112 thousand cash increase from other operating assets and liabilities, offset by a €3,895 thousand decrease in contract liabilities and a €906 thousand change in provisions.

Investing Activities

During the year ended December 31, 2018, cash outflow from investing activities was €3,531 thousand as a result of the capitalization of internally generated software of €3,219 thousand and purchases of fixed assets of €312 thousand.

Financing Activities

During the year ended December 31, 2018, cash outflow from financing activities was €2,309 thousand as a result of €6,157 thousand in shareholder loan repayments, cash merger consideration payments to Affinitas shareholders of €5,730 thousand, and cash paid for settlement of share-based payment arrangements of €3,161 thousand, offset by €12,036 thousand in net proceeds from bank loans, €483 thousand in proceeds from the exercise of stock options, and €220 thousand in proceeds from shareholder loans.

Inflation

Spark Networks believes that any effect of inflation at current levels will be minimal. Historically, Spark Networks has been able to increase prices at a rate equal to or greater than that of inflation and believes that it will continue to be able to do so for the foreseeable future. In addition, Spark Networks has been able to maintain a relatively stable variable cost structure for its products due, in part, to a continued optimization of marketing spend.

Termination of Loan Agreement relating to Affinitas GmbH and entry into New Debt Financing

On March 15, 2018, Affinitas entered into a termination agreement (the "Termination Agreement") to its Loan Agreement dated as of September 2016 (the "Loan Agreement"), by and among Affinitas and certain persons and entities, including certain of its stockholders and officers, named as lenders thereunder (the "Lenders"), pursuant to which the Lenders had granted Affinitas certain loans with an interest rate of 8% per annum maturing on June 30, 2018 (the "Type A Loans") and certain loans with an interest rate of 9% per annum maturing on March 31, 2019 (the "Type B Loans") in an aggregate principal amount of €5.850 million (€1.850 million of which was under the Type A Loans and €4.0 million of which was under the Type B Loans). Pursuant to the terms of the Termination Agreement, in exchange for the early termination of the loans under the Loan Agreement effective as of March 15, 2018 and the repayment in full of the then outstanding principal amount of the loans under the Loan Agreement of €5.850 million, the parties agreed to an early termination fee of €307 thousand, consisting of a 2% fee on the repaid principal amount of the Type A loans and a 6.75% fee on the repaid principal amount of the Type B loans. In addition, the parties agreed that interest on the loans of approximately €40 thousand under the Loan Agreement was paid in full for the month of March 2018. All payments under the Termination Agreement were made on or before March 31, 2018.

Entry into €25 million Senior Facilities Agreement

On March 28, 2018, Spark Networks and Silicon Valley Bank entered into a four-year €25 million Senior Facilities Agreement (the "Senior Facilities Agreement"). The Senior Facilities Agreement provides for a multicurrency term loan facility in an aggregate amount equal to €15 million (the "Term Loan Facility") and a multicurrency revolving credit facility in an aggregate amount equal to €10 million (the "Revolving Credit Facility" and, together with the Term Loan Facility, the "Facilities"). In addition, subject to the terms and conditions of the Senior Facilities Agreement, including compliance with certain financial covenants, Spark Networks may incur additional incremental facilities in an aggregate amount of up to €35 million.

Borrowings under the Facilities bear interest at a rate equal to LIBOR for deposits in the applicable currency plus an applicable margin ranging from 2.5% to 3.0% to be determined based on the net leverage ratio (as defined in the Facilities) for the most recently completed 12 month period ending on the last day of the fiscal year or quarterly period as applicable. The applicable margin and interest rate in effect for borrowings under the Term Loan Facility as of December 31, 2018 was 2.5%.

In addition to paying interest on outstanding principal under the Facilities, Spark Networks is required to pay a commitment fee to the lenders under the Revolving Credit Facility in respect of the unutilized commitments thereunder. The commitment fee rate is 0.60% per annum, and the Revolving Credit Facility currently has €10 million of undrawn availability.

Upon closing, a one-time facility fee of €150 thousand was payable, of which €90 thousand was allocated to the Term Loan Facility and €60 thousand was allocated to the Revolving Credit Facility. The facility fee on the Term Loan Facility is reflected as a debt discount and is deducted from the carrying value of the borrowings and amortized using the effective interest method. The facility fee on the Revolving Credit Facility is capitalized as a prepayment and amortized through the maturity of the Facilities on March 31, 2022. The facility fee is amortized to Interest expense and similar charges in the Consolidated Statements of Operations and Comprehensive Loss/Income.

The Facilities contain a number of covenants that, among other things, restrict, subject to certain exceptions, the Company's ability and the ability of its subsidiaries to: incur additional indebtedness, create liens, engage in mergers or consolidations, sell or transfer assets, pay dividends and distributions and make share repurchases, make certain acquisitions, engage in certain transactions with affiliates, and change lines of business.

In addition, the Facilities require the following financial covenants to be maintained: (i) a fixed charge coverage ratio (as defined in the Facilities) of no less than 1:25 to 1:00 (other than for the first quarter of 2019 when it shall be no less than 1.10 to 1.00), (ii) a net leverage ratio of no greater than 2.50 to 1.00 (declining to 2.25 to 1.00 for 12-month periods ending June 30, 2019, September 30, 2019, December 31, 2019, and March 31, 2020, and declining further to 2.00 to 1.00 for 12-month periods ending June 30, 2020 and thereafter), and (iii) a minimum liquidity threshold of €5 million until March 31, 2019, consisting of available cash funds and availability under the Revolving Credit Facility. The Facilities also contain certain customary affirmative covenants and events of default, including a change of control. Spark Networks is in compliance with all of its debt covenants as of December 31, 2018.

The Term Loan Facility amortizes in equal quarterly installments of €938 thousand commencing on June 29, 2018, while principal amounts outstanding under the Revolving Credit Facility are due and payable in full at maturity. As of December 31, 2018, the outstanding principal balance of the Term Loan Facility is €12,098 thousand, and there were no outstanding borrowings under the Revolving Credit Facility.

C. Research and development, patents and licenses, etc.

As of December 31, 2018, we had two issued U.S. patents and no pending patent applications in the United States.

Investing in product and development initiatives is a key part of our strategy. We are currently developing a new, scalable and unified technology platform that will support the Company's future growth. Our new platform will be architected and built with a particular emphasis on supporting the mobile applications that many of our members utilize to access our products. With a single, shared platform to power our sites, we expect to match subscribers across brands, reduce the time and resources required to launch new brands or integrate potential acquisitions, and quickly adopt new features, trends and consumer preferences. We expect to launch our new technology platform in 2019.

Implementing new systems carries substantial risk, including implementation delays, cost overruns, disruption of operations, potential loss of data or information, and lower customer satisfaction resulting in lost customers or sales, many of which are outside Spark Networks' control. If Spark Networks does not implement this platform successfully, its ability to perform key business processes could be disrupted and its financial performance could be adversely affected. Currently, Spark Networks believes it has sufficient cash resources on hand to accomplish the enhancements contemplated.

D. Trend information.

Spark Networks' performance each year is affected by the ability to attract and retain paying subscribers, particularly within the North American market. In recent years, we have grown our North American market share through (i) the introduction of established European brands such as EliteSingles, (ii) the launch of new brands such as SilverSingles, and (iii) acquiring established North American brands such as Jdate, Christian Mingle, and JSwipe. Going forward, we expect to continue to allocate significant marketing capital towards North America as we look to drive both the organic growth of our existing brand portfolio and expansion through the launch of new or acquired brands.

Additionally, as mentioned above, Spark Networks is currently in the process of developing a new technology platform.

Other than as disclosed elsewhere in this annual report, we are not aware of any trends, uncertainties, demands, commitments or events for the year ended December 31, 2018 that are reasonably likely to have a material adverse effect on our revenue, profitability, liquidity or capital resources, or that would cause the disclosed financial information to be not necessarily indicative of future operating results or financial conditions.

E. Off-balance sheet arrangements.

We do not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. We do not have any outstanding derivative financial instruments, off-balance sheet guarantees, interest rate swap transactions or foreign currency forward contracts.

F. Contractual obligations.

The following table describes our contractual commitments and obligations as of December 31, 2018:

(in € thousands)	Less than 1 year	1 - 3 years	3 - 5 years	More than 5 years	Total
Operating lease commitments	1,225	1,003	33	—	2,261
Debt obligations	4,020	7,758	943	—	12,721
Other commitments and contingencies	968	53	—	—	1,021
Total contractual obligations	6,213	8,814	976	—	16,003

We had non-cancelable contractual obligations consisting of operating lease commitments, debt obligations, and other non-cancelable commitments and obligations. Amounts in the table reflect payments due for Spark Networks' principal administrative office space and related premises in Berlin, Germany, under an operating lease agreement that expires in January 2022, as well as payments for office space within the United States, and the lease of certain office equipment. Amounts also reflect the contractually required principal and interest payments payable under the Senior Facilities Agreement entered into on March 28, 2018. Other commitments and obligations totaled €1,021 thousand and primarily relate to a legal settlement and contracts with marketing service providers. For contingences related to our tax positions, we are unable to make a reasonably reliable estimate of the timing of payments in individual years beyond 12 months. As a result, these amounts are not included in the table above.

G. Safe Harbor

See “Cautionary Statement Regarding Forward Looking Statements” on page 1 of this annual report.

Item 6. Directors, Senior Management and Employees

A. Directors and senior management.

The following table sets forth the names, ages, and positions of our Administrative Board, Managing Directors and Executive Officers as of April 11, 2019.

Joshua Keller resigned from the Administrative Board effective June 5, 2018. Cheryl Law and Hermoine McKee were appointed to the Administrative Board effective June 5, 2018.

Name	Age	Position
<u>Administrative Board</u>		
David Khalil ⁽¹⁾	36	Director of the Board & Chairman
Brad Goldberg ⁽²⁾	49	Director of the Board & Vice Chairman
Colleen Birdnow Brown ⁽³⁾	60	Director of the Board
Cheryl Law ⁽¹⁾	48	Director of the Board
Hermione McKee ⁽⁴⁾	37	Director of the Board
Axel Hefer ⁽⁴⁾	41	Director of the Board
<u>Managing Directors and Executive Officers</u>		
Jeronimo Folgueira	37	Managing Director, Chief Executive Officer & Director of the Board
Robert O'Hare	38	Managing Director & Chief Financial Officer
Michael Schrezenmaier	37	Managing Director & Chief Operating Officer
Benjamin Hoskins	44	Chief Technology Officer

(1) Member of our Presiding & Nominating Committee

(2) Chairperson of our Presiding & Nominating Committee

(3) Chairperson of our Audit Committee and member of our Presiding & Nominating Committee

(4) Member of our Audit Committee

Administrative Board

David Khalil is an entrepreneur and business angel. Previously, he served as interim CFO at flaschenpost GmbH from August 2016 to November 2016. Mr. Khalil served as managing director at Affinitas from 2008 until February 2016. Prior to his time at Affinitas, Mr. Khalil worked as an investment manager at European Founders Fund from 2007 to 2008 and as a business consultant at Boston Consulting Group from 2006 to 2007. He has also made numerous angel investments. In 2006, Mr. Khalil received a Master's degree in business administration from WHU-Otto Beisheim School of Business, where he focused in corporate finance, controlling and entrepreneurship.

Brad Goldberg joined the Spark Board on August 10, 2016. Mr. Goldberg has served as the President of PEAK6 Investments, L.P. since 2012. Mr. Goldberg focuses on business strategy, business operations, and people development across PEAK6 and its operating companies. From 2009 until 2011, Mr. Goldberg was the CEO of PEAK6 Online, where he led a portfolio of early stage financial technology businesses including OptionsHouse, which was subsequently sold to General Atlantic and then to E*TRADE. Prior to PEAK6, Mr. Goldberg served in multiple leadership positions at Microsoft across the Online, Enterprise, and Developer businesses. Mr. Goldberg was the General Manager for the Search Business Unit, where he was accountable for global product management, marketing, and revenue for Bing. Mr. Goldberg graduated with a Bachelor's degree in Economics from Amherst College and completed post graduate work in Japan, at the Inter-University Center for Japanese Language Studies. Mr. Goldberg earned an MBA from Harvard Business School, where he was awarded second year honors.

Colleen Birdnow Brown has been Chairman and CEO of Marca Global LLC, which she founded, since July 2015. Ms. Brown served as President and CEO at Fisher Communications from 2005 to 2013, and as Senior Vice-President of A.H. Belo from 2000 to 2004. Prior to 2000, she held a number of positions in the media and broadcasting industries, including President of Broadcast at Lee Enterprises from 1998 to 2000, President at 12 News (KPNX-TV, NBC) from 1995 to 1998, various positions at TEGNA (formerly Gannett) from 1980 to 1998, President of WFMY News 2 from 1991 to 1995, and station manager and CFO at KUSA-TV from 1980 to 1991. She has also served on numerous

boards, including TrueBlue Inc. from 2014 to present, Port Blakely from 2010 to present, DataSphere Technologies Inc. from 2008 to June 2017, as Chairman of the Board of American Apparel from August 2014 until March 2016, CareerBuilder from 2001 to 2004, and Classified Ventures from 2001 to 2004. She holds an MBA from the University of Colorado Boulder (1981) and a BS in Business Administration from the University of Dubuque (1979).

Cheryl Law has been a member of the Board of Compare.com since December 2013 and Chairman of the Board of Compare.com since 2016. Moreover, Ms. Law has been a member of the Marketing Advisory Board of Freenome, Inc. since December 2017 and has been acting as CMO of Little Passports since September 2017. Ms. Law also held executive positions of several leading online companies in the past. Ms. Law holds a Bachelor's degree in Economics from Vanderbilt University.

Hermione McKee has been Chief Financial Officer of WOOGA GmbH since 2016. Ms. McKee also held the position of Investor Relations Manager of Hellofresh AG in 2016 and was Vice-President & Executive Director of Morgan Stanley & Co. (UK) from 2008 to 2015. Ms. McKee started her career as business development analyst at Unilever in Sydney, Australia from 2003 to 2005 and also worked for Goldman Sachs Jbwereas (Sydney, Australia) as a business analyst and sales manager of equity derivatives from 2005 to 2007. Ms. McKee holds an MBA from INSEAD (France), a Post-Graduate Diploma in Applied Finance and Investment from Securities Institute of Australia and a Bachelor's degree in Mathematics, Physics and English Literature from University of Canterbury, Christchurch, New Zealand.

Axel Hefer has been a managing director and CFO at trivago since 2016 (NASDAQ: TRVG). Prior to joining trivago, Mr. Hefer was managing director, CFO and COO of Home24 AG, an online home furniture and decor company, from 2014 to 2016, and managing director of One Equity Partners, the Private Equity Division of J.P. Morgan Chase from 2011 to 2014. Mr. Hefer holds a Master's degree in management from Leipzig Graduate School of Management (HHL) in 2000 and an M.B.A. from INSEAD in 2003.

Managing Directors and Executive Officers

Jeronimo Folgueira has been Chief Executive Officer of Spark Networks (formerly Affinitas GmbH) since October 2015. Before joining Spark Networks, Mr. Folgueira held several senior management positions at a number of other companies, including as Managing Director, International at Betfair plc (now Paddy Power Betfair plc) from 2014 to 2015, Managing Director at Bigpoint S.a.r.l. from 2011 to 2014 and Senior Strategy Executive at RTL Group from 2008 to 2011. Mr. Folgueira started his career as an investment banking analyst for Lehman Brothers from 2003 to 2005 and also worked at Citigroup from 2005 to 2006. He holds an MBA from Columbia Business School and has a bachelor's degree in Economics from University of Navarra, Spain.

Robert O'Hare joined Spark Networks in 2015 from Square, Inc., where he served as Corporate Finance & Investor Relations Lead since 2013. Prior to Square, he was Director of Financial Planning & Analysis at Pandora Media, Inc. from 2010 to 2013. Prior to Pandora, he held financial roles at Spitfire Capital from 2009 to 2010, Spectrum Equity Investors from 2006 to 2009 and Thomas Weisel Partners from 2004 to 2006. Mr. O'Hare received his B.S. from Georgetown University and is a CFA charterholder.

Michael Schrezenmaier has been Chief Operating Officer of Spark Networks (formerly Affinitas GmbH) since September 2012. Before joining Spark Networks, Mr. Schrezenmaier worked at Kuehne + Nagel, an international logistics company, from 2008 to 2012. Mr. Schrezenmaier started his career as an analyst at European Founders Fund, Germany, where he worked in 2008. He holds a master's degree in Business Administration with an emphasis on Finance and Accounting from WHU-Otto-Beisheim School of Management, Germany.

Benjamin Hoskins has been Chief Technology Officer for Spark Networks (formerly Affinitas GmbH) in Berlin since January 2017. Prior to joining Spark Networks, Mr. Hoskins worked with OLX (registered as PT Tokabagus) in Indonesia as Chief Technology Officer and Acting Chief Product Officer from May 2015 until December 2016. Mr. Hoskins served as Head of Product Development Europe for eBay UK Ltd. from February 2012 until April 2015. He was previously an Principal Agile Consultant, and, in parallel, as Head of Product Development at Emergn, where he worked from January 2008 until February 2012.

B. Compensation.

Administrative Board

In our Articles of Association dated November 2017 and amended in June 2018, the following remuneration system was resolved:

- The members of the Administrative Board shall receive a fixed remuneration for each full fiscal year of Administrative Board membership. This remuneration amounts to €25 thousand for each Administrative Board member.
- The fixed remuneration shall be increased by the amounts set out below for serving on the following positions:
 - €10 thousand for the Chairman of the Administrative Board
 - €5 thousand for the Vice Chairman
 - €5 thousand for the Chairman of the Presiding and Nominating Committee
 - €3 thousand for other members of the Presiding and Nominating Committee
 - €8 thousand for the Chairman of the Audit Committee, and
 - €5 thousand for other members of the Audit Committee
- If a member of the Administrative Board serves on several of the above positions, the respective increase amounts shall apply cumulatively.
- Members of the Administrative Board who are also managing directors of the Company shall be compensated exclusively under their respective service agreements for their duties carried out in their capacity as managing director.
- The remunerations pursuant to the above are payable in four equal installments, each due after the expiration of a quarter. Administrative Board members who served on the Administrative Board or in the positions mentioned above for only part of the financial year shall receive pro rata remuneration in accordance with the duration of their service.
- Members of the Administrative Board shall be reimbursed for all out-of-pocket expenses and for the sales tax payable of their out-of-pocket expenses and remuneration.

Managing Directors

Spark Networks has entered into service agreements with the current members of its management board (Messrs. Folgueira, O'Hare and Schrezenmaier). These agreements generally provide for an annual fixed compensation (base salary) and an annual performance award (annual bonus). The performance targets of the annual bonuses are a mix of certain financial and non-financial targets, such as revenue and profitability goals. In addition to the fixed and variable remuneration components, under the terms of their service agreements, the members of Spark Networks' management board are entitled to additional benefits (including mobile phone, accident and director and officer liability insurance) and reimbursement of necessary and reasonable expenses.

Spark Networks believes that the service agreements between it and the members of its management board provide for payments and benefits (including upon termination of employment) that are customary for similar companies who are operating in its industry.

In 2018, the three members of Spark Networks' management board, Mr. Folgueira, Mr. O'Hare, and Mr. Schrezenmaier, collectively received total compensation of €970 thousand, which included base salary and other compensation, but excludes equity incentive awards as described below.

Additional Employment Contracts

On September 27, 2016, the Company entered into an employment contract with Mr. Hoskins (as amended on October 1, 2018, the "Hoskins Employment Contract") with respect to his employment as Chief Technology Officer of the Company. The Hoskins Employment Contract initially provided for a monthly gross salary of €14,166.67, which was increased to €16,166.67 as of the date of the amendment, and an annual bonus of up to €25,000.00 if certain targets are achieved in accordance with the bonus plan in place from time to time. Pursuant to the Hoskins Employment Contract, the bonus plan for each year shall be based on milestones agreed between Mr. Hoskins, the managing directors and the

shareholders or, in certain cases, Mr. Hoskins and the advisory board, which may include defined and weighted revenue, EBIT, as well as customer or market-oriented targets. Mr. Hoskins's employment commenced on September 1, 2017 for an indefinite period of time and may be terminated by either party with six months contractual notice, by either party for cause or by the Company for justified cause, in each case as further described in the Hoskins Employment Contract.

On December 22, 2018, Spark Networks Inc. entered into the Third Amended and Restated Employment Agreement with Mr. O'Hare (the "O'Hare Employment Agreement") with respect to his employment as Chief Financial Officer of the Company and as Chief Executive Officer of Spark Networks Inc. The O'Hare Employment Agreement provides for an annual base salary of \$305,000 and an annual bonus in a target amount of 30% of such annual base salary based on the achievement of individual and Spark Networks Inc. specific performance goals to be determined by the Board of Directors and the Compensation Committee of Spark Networks Inc. or the Company, as the case may be. Pursuant to the O'Hare Employment Agreement, Mr. O'Hare also receives an annual housing stipend of \$100,000 so long as he continues to live in New York and is entitled to participate in any of Spark Networks Inc.'s current or future employee benefit plans and to reimbursement of certain reasonable business and relocation expenses. Either Spark Networks Inc. or Mr. O'Hare may terminate the O'Hare Employment Agreement for Cause (as defined therein) upon thirty days' notice to the other party, upon which Mr. O'Hare will receive his prorated annual salary, accrued but unused vacation and will forfeit any unvested equity interests. In addition, pursuant to the O'Hare Employment Agreement, if Mr. O'Hare is terminated without Cause or resigns for Good Reason (as defined therein), or voluntarily resigns after June 30, 2019 but prior to August 31, 2019, Mr. O'Hare is entitled to receive a severance package consisting of a lump sum payment equal to 100% of his Aggregate Annual Compensation (as defined therein) but not to exceed \$500,000, and reimbursement of any COBRA payments for twelve months following the termination.

Affinitas VESOP

In 2013, prior to the Affinitas / Spark Merger, Affinitas established a virtual employee stock option program (the "Affinitas VESOP") with the goal of incentivizing management and aligning management's interest with those of its shareholders. Messrs. Folgueira and Schrezenmaier were participants in the Affinitas VESOP. Under the Affinitas VESOP, Spark Networks had a choice of settlement whereby the cash amount or equal value in shares to be received by the beneficiaries for a single vested option shall equal the price or proceeds per common share in case of a change in control event ("Share Sale") or an Initial Public Offering ("IPO") of Affinitas's shares minus the exercise price. In connection with the Affinitas / Spark Merger, shareholders of Affinitas elected to settle all the options outstanding at the merger date at a fixed valuation of €3,839 thousand, which was equivalent to a total equity value of €90 million for Affinitas. This equity value of Affinitas was determined based on the Spark share price and the exchange ratio that Affinitas and Spark agreed on in relation to the Affinitas / Spark Merger. Options to purchase 192 shares with a value of €78 thousand were settled in cash and a payment of €586 thousand has been paid to selected participants. The remaining value of the outstanding options, amounting to €3,161 thousand, was deferred and settled in cash in November 2018, subject to the participants being employed by the Group at the settlement date. These transactions were accounted for as the repurchase of equity interests. During the year ended December 31, 2018, the Spark Networks managing directors received €2,617 thousand in settlement payments related to the Affinitas VESOP. During the year ended December 31, 2017, the Spark Networks managing directors received €861 thousand in settlement payments related to the Affinitas VESOP.

Termination of the Affinitas VESOP

The Affinitas VESOP was terminated and replaced with the Spark Networks virtual stock option plan established in 2017 ("Spark Networks 2017 VSOP"), which included make-up or replacement awards in respect of outstanding awards under the Affinitas VESOP.

In November 2017, options to acquire ADSs of the Company ("Options") were granted to selected and eligible employees, including Messrs. Folgueira and Schrezenmaier, pursuant to the Spark Networks 2017 VSOP. Spark Networks has a choice of settlement under the Spark Networks 2017 VSOP, whereby the cash amount or equal value in ADSs to be received for a single vested Option shall equal the ADS stock price at exercise minus the exercise price. Based on management's assessment and Spark Network's policy, the Options are most likely to be settled in ADSs. The Options granted to eligible and selected employees under the Spark Networks 2017 VSOP are therefore classified as equity-settled share-based payment transactions.

During the year ended December 31, 2018, Spark Networks replaced the Spark Networks 2017 VSOP by establishing the Spark Networks 2018 VSOP for selected executives and employees of Spark Networks and its subsidiaries if and

to the extent that the plan participants under the Spark Networks 2017 VSOP have agreed to such replacement. Under the Spark Networks 2018 VSOP, Spark Networks granted participants a certain number of virtual stock options in exchange for options granted under the Spark Networks 2017 VSOP and/or a certain number of new virtual stock options, and can grant additional options in the future. Options to acquire ADSs of the Company were granted to Messrs. Folgueira, O'Hare and Schrezenmaier.

The Spark Networks 2017 VSOP Options which were exchanged for the Spark Networks 2018 VSOP Options vest over a period of three years from the grant date, whereby one-third of the Options vest on the first year anniversary of the grant and the remaining Options vest every six months thereafter. The new Spark Networks 2018 VSOP Options vest over a period of four years from the grant date, whereby one-fourth of the Options vest on the first year anniversary of the grant and the remaining Options vest every six months thereafter. The contractual life of the options is 85 months. A maximum exercise value (cap) applies to the Options. The cap is set at 500% of the exercise price.

Spark Non-Qualified Stock Options

Prior to the Affinitas / Spark Merger, in 2007 Spark established the 2007 Omnibus Incentive Plan (the "Spark 2007 Plan"), pursuant to which Spark granted share-based payment awards, including nonqualified stock options, which were outstanding as of the date of the Affinitas / Spark Merger. These equity-settled options are vested and exercisable as of December 31, 2018. Mr. O'Hare is a participant in the Spark 2007 Plan.

In connection with the Affinitas / Spark Merger, Spark established the Chardonnay Trust, with the purpose of holding such number of shares of Spark Networks SE ADSs as shall be necessary to satisfy the obligations under all unexercised Spark stock options awarded under the Spark 2007 Plan. Following the completion of the Affinitas / Spark Merger, Spark no longer has any rights to revoke or amend the Chardonnay Trust in a manner that is detrimental to Spark 2007 Plan participants.

In connection with the Affinitas / Spark Merger, each Spark stock option was converted into an award to acquire ADSs from the Chardonnay Trust, on the same terms and conditions as were applicable under the Spark stock option, and subject to adjustment based on the exchange ratio stipulated in the merger agreement. The shares underlying the ADSs held in the Chardonnay Trust are recognized as treasury stock within the Consolidated Statement of Shareholders' Equity.

Compensation expense for Spark options is recognized over the requisite service period. As the Affinitas / Spark Merger was considered a change in control, all unvested Spark options vested by May 2018 to the extent outstanding at such time.

C. Board practices.

Administrative Board

Our Administrative Board consists of seven board members, with three board members initially designated by Affinitas, one board member initially designated by Spark and three independent board members (meeting the independence definition of the NYSE American rules) mutually agreed upon by Spark and Affinitas. Our Administrative Board is composed of the following members: Jeronimo Folgueira, a current managing director of Spark Networks and an Affinitas designee, David Khalil, a founder and current shareholder of Affinitas and an Affinitas designee, Brad Goldberg, an executive with PEAK6 and a Spark designee, Colleen Birdnow Brown, Cheryl Law and Hermoine McKee, who were mutually agreed on by Spark and Affinitas, and Axel Hefer, an Affinitas designee.

Messrs. Khalil, Goldberg and Hefer, and Ms. Brown were appointed effective as of November 3, 2017, upon the consummation of the Affinitas / Spark Merger. Mses. Law and McKee were appointed effective as of June 5, 2018, at the Annual General Meeting of Spark Networks. Under the Articles of Association, unless a general meeting of shareholders determines a shorter term, the members of the Administrative Board are elected for a term ending with the close of the general meeting of stockholders which resolves on the formal approval of their acts for the fourth fiscal year following the commencement of their term, not counting the year in which their term of office commences; provided, that such term may not exceed six years. The Administrative Board has determined that age and term limits are not appropriate at this time, because Board Members who have developed increasing insight into Spark Networks and its operations over time provide an increasing contribution to the Administrative Board as a whole. Instead, the Presiding and Nominating Committee formally reviews each Board Member elected by the stockholders to consider

the desirability of such Board Member's continuation on the Board at the expiration of the Board Member's term. The Administrative Board is required to elect from its members a Chairman and at least one Vice Chairman. The terms of office as Chairman and Vice Chairman will correspond to their terms of office as Administrative Board members.

The Administrative Board currently has two committees: (a) Audit and (b) Presiding and Nominating. Membership on the Audit and Presiding and Nominating Committees is limited to independent Board Members. The Administrative Board retains discretion to form new committees or disband current committees depending upon the circumstances. Each committee complies with the independence and other requirements established by applicable law and regulations, including Securities and Exchange Commission and NYSE American rules.

Audit Committee

The Audit Committee assists the Administrative Board in fulfilling its responsibility to oversee management regarding:

- the conduct and integrity of the Group's financial reporting to any governmental or regulatory body, the public or other users thereof;
- the Group's systems of internal accounting and financial and disclosure controls;
- the qualifications, engagement, compensation, independence and performance of the Group's independent auditors, their conduct of the annual audit, and their engagement for any other services;
- the Group's legal and regulatory compliance;
- the Group's codes of ethics as established by management and the Administrative Board; and
- the preparation of any audit committee report required by Securities and Exchange Commission ("SEC") rules.

In discharging its oversight role, the Audit Committee is authorized: (i) to investigate any matter that the Audit Committee deems appropriate, with access to all books, records, facilities and personnel of the Company; and (ii) to retain independent counsel, auditors or other experts, with adequate funding provided by the Group.

The charter of the Audit Committee provides that it is a three member committee of the Administrative Board, with each member being "independent" in accordance with applicable rules of the SEC and the NYSE American as determined by the Administrative Board. All members of the Audit Committee shall meet the financial literacy requirements of the NYSE American and at least one member shall have accounting or related financial management expertise as determined by the Administrative Board. At least one member of the Committee shall be an "audit committee financial expert" as such term is defined under applicable SEC rules. The Administrative Board shall designate a member of the Audit Committee as chairperson.

Presiding & Nominating Committee

The Presiding & Nominating Committee assists the Administrative Board by:

- identifying, screening and reviewing individuals qualified to serve as managing directors and/or Administrative Board members and recommending to the Administrative Board candidates for election as Administrative Board members at the annual meeting of shareholders to fill Board vacancies;
- overseeing the evaluation of the Board and management, including overseeing Board decisions with respect to the appointment, dismissal and remuneration of the managing directors as well as the conclusion, amendment and annulment of their employment contracts, and consulting regularly on long-term succession planning for the managing directors;
- developing, recommending to the Board and overseeing implementation of the Group's Corporate Governance Guidelines and Principles; and
- reviewing, on a regular basis, the overall corporate governance of the Group and recommending to the Administrative Board improvements when necessary.

In discharging its role, the Presiding & Nominating Committee is empowered to investigate any matter brought to its attention with access to all books, records, facilities and personnel of the Group. The Presiding & Nominating Committee has the power to retain outside counsel, search and recruitment consultants or other experts and will receive from the Group adequate funding, as determined by the Presiding & Nominating Committee, for payment of

reasonable compensation to such advisors. The Presiding & Nominating Committee shall have the sole authority to retain, compensate, terminate and oversee search and recruitment consultants, who shall be accountable ultimately to the Presiding & Nominating Committee.

The charter of the Presiding & Nominating Committee provides that it is a three member committee of the Administrative Board, with each member being “independent” in accordance with applicable rules of NYSE American as determined by the Administrative Board. The members of the Presiding & Nominating Committee shall be appointed by the Administrative Board. The members of the Presiding & Nominating Committee shall serve for such term or terms as the Administrative Board may determine or until earlier resignation or death. The Administrative Board may remove any member from the Presiding & Nominating Committee at any time with or without cause. The Administrative Board shall designate a member of the Presiding & Nominating Committee as the chairperson.

D. Employees.

The table below sets forth the number of employees we had as of December 31 of each of the years represented:

	December 31,	
	2018	2017
Managing director	3	3
Data center	4	5
Sales and marketing	51	51
Customer service	109	119
Technical operations and development	70	94
General and administrative	36	34
Total	273	306

As of December 31, 2018, we had 273 employees of whom 206 were based in Germany and 67 were based in the United States.

E. Share ownership.

The following table sets forth information, as of April 11, 2019, regarding the beneficial ownership of our ADSs.

Name & Principal Position	Owned ADSs	Grant Date	ADSs Underlying Award	Exercise Price	Expiration Date
<u>Management Board</u>					
Jeronimo Folgueira, Chief Executive Officer ⁽¹⁾	6,181	November 30, 2017	400,108	\$ 10.62	December 28, 2024
Robert O'Hare, Chief Financial Officer ⁽²⁾	4,000	March 30, 2017	40,000	\$ 10.10	March 30, 2024
		March 30, 2018	265,526	\$ 14.63	April 27, 2025
Michael Schrezenmaier, Chief Operating Officer ⁽³⁾	23,500	November 30, 2017	265,526	\$ 10.62	December 28, 2024
<u>Administrative Board</u>					
David Khalil ⁽⁴⁾	914,030				
Brad Goldberg ⁽⁵⁾	23,112	August 18, 2016	5,000	\$ 14.50	August 18, 2023
		March 21, 2017	2,400	\$ 10.00	March 21, 2024
Colleen Birdnow Brown	—				
Cheryl Law	—				
Hermione McKee	—				
Axel Hefer	—				

(1) Mr. Folgueira's awards include 133,368 of virtual stock options that have vested as of the reporting date.

(2) Mr. O'Hare's awards include 106,380 options and virtual stock options that have vested as of the reporting date.

- (3) Mr. Schrezenmaier's awards include 88,510 of virtual stock options that have vested as of the reporting date.
(4) Mr. Khalil's ADS ownership includes his interest in Affinitas Phantom Share GmbH of 871,190 ADSs.
(5) Mr. Goldberg's option awards were fully vested as of the reporting date.

Item 7. Major Shareholders and Related Party Transactions

A. Major shareholders.

The following table sets forth information, as of April 11, 2019, regarding the beneficial ownership of our ADSs:

Name of Beneficial Owner	Number of ADSs	Percentage of Total
5% shareholders:		
Rocket Internet SE	3,366,720	25.9%
Mercutio GmbH	1,190,560	9.2%
Holtzbrinck Ventures NM GmbH	1,073,550	8.3%
PDV Inter-Media Venture GmbH	1,073,380	8.3%
Lukas Brosseder ⁽¹⁾	914,030	7.0%
David Khalil ⁽¹⁾	914,030	7.0%
Supervisory and Management Board Members		
David Khalil ⁽¹⁾	914,030	7.0%
Robert O'Hare ⁽²⁾	44,000	0.3%
Brad Goldberg ⁽³⁾	30,512	0.2%
Michael Schrezenmaier	23,500	0.2%
Jeronimo Folgueira	6,181	0.0%
Colleen Birdnow Brown	—	—
Cheryl Law	—	—
Hermione McKee	—	—
Axel Hefer	—	—
All Members of our Supervisory and Management Boards as a Group (9 people)	1,018,223	7.8%

⁽¹⁾The ownership positions of Mr. Brosseder and Mr. Khalil include their individual interests in Affinitas Phantom Share GmbH of 871,190 each.

⁽²⁾Mr. O'Hare's holdings include 4,000 ADSs and 40,000 options to acquire Spark Networks ADSs at an exercise price of \$10.10. As of the reporting date, 40,000 options had vested.

⁽³⁾Mr. Goldberg's holdings include 23,112 ADSs, 5,000 options to acquire Spark Networks ADSs at an exercise price of \$14.50, and 2,400 options to acquire Spark Networks ADSs at an exercise price of \$10.00. As of the reporting date, 7,400 options had vested.

B. Related party transactions.

Transactions with shareholders

Consultation services

In 2008 and 2009, Affinitas and Rocket Internet SE ("Rocket") entered into two agreements. Under these agreements Rocket is obliged to render consulting services to Affinitas in business, professional and/or technical areas and programming services. Affinitas is obliged to pay Rocket fees for the services rendered under the agreements, which are calculated on the basis of the incurred costs of Rocket plus expenses. For the years ended December 31, 2018, 2017 and 2016, Spark Networks recorded costs of €25 thousand, €36 thousand and €22 thousand, respectively. There was €0 thousand payable to Rocket as of December 31, 2018 and €5 thousand as of December 31, 2017.

Shareholder loans

During the year ended December 31, 2016, the Company entered into loans with some of its shareholders as described in more detail in Note 5.9 to the consolidated financial statements. The total amount outstanding as of December 31, 2018 and December 31, 2017 was €0 thousand and €5,850 thousand, respectively, and the amount of interest incurred during the years ended December 31, 2018, 2017, and 2016 was €127 thousand, €508 thousand and €130 thousand, respectively. The loan was fully repaid in March 2018.

Shareholder payments

Per the terms of the Affinitas / Spark Merger, Affinitas' shareholders received an aggregate cash payout of €5,730 thousand. This payout included payments to Affinitas Phantom Share GmbH, Rocket, and David Khalil of €1,641 thousand, €1,377 thousand, and €25 thousand, respectively.

Affinitas Phantom Share GmbH

On April 20, 2012, eHarmony, Inc. ("eH") in its capacity as a shareholder of Affinitas GmbH, granted a shareholder loan to Affinitas Phantom Share GmbH ("APS") in the amount of €213 thousand (the "eH Shareholder Loan") for the purpose of financing certain payments made by APS in connection with the formation of APS. On March 3, 2013, eH assigned the eH Shareholder Loan to Affinitas GmbH. The eH Shareholder Loan and all interest was fully repaid by APS on August 23, 2018. As of December 31, 2018, APS beneficially owned approximately 14% of the ordinary shares of the Company and was jointly controlled by David Khalil and Lukas Brosseder.

MLLNNL, LLC

The acquired subsidiary Spark had multiple, ongoing engagements with MLLNNL, LLC ("Mllnnl"), a marketing agency that employs, and was co-founded by, an employee of the Group's wholly-owned subsidiary, Smooch Labs. Expenses related to Mllnnl appear in the consolidated results following the Affinitas / Spark Merger in November 2017. For the years ended December 31, 2018 and December 31, 2017, the Company has expensed €313 thousand and €50 thousand, respectively, for services performed by Mllnnl.

Union Square Media Group, LLC

In December 2017, the Group entered into an advertising agreement with Union Square Media Group, LLC, a full-service digital advertising agency. Joshua Keller, the President of Union Square Media Group, LLC, was a member of the Group's Administrative Board from November 3, 2017 until June 5, 2018, the effective date of Mr. Keller's resignation from the Administrative Board. For the year ended December 31, 2018, the Group expensed €739 thousand for services performed by Union Square Media Group, LLC. There was a €223 thousand payable to Union Square Media Group, LLC as of December 31, 2018.

Management Services Agreement with PEAK6

In August 2016, Spark entered into a purchase agreement with PEAK6 pursuant to which Spark issued and sold to PEAK6 an aggregate of 5,000,000 shares of common stock of Spark at a purchase price of \$1.55 per share. Spark also issued the Spark Warrant to PEAK6 to purchase up to 7,500,000 shares of common stock of Spark at an exercise price of \$1.74 per share pursuant to the terms of a warrant agreement. Upon consummation of the merger between Affinitas and Spark, all of the shares subject to the Spark Warrant vested immediately prior to the closing of the merger, and the Spark Warrant expired upon the closing of the merger.

In connection with the execution of the PEAK6 purchase agreement, Spark entered into a management services agreement dated as of August 9, 2016 with PEAK6 (the "Management Services Agreement"), pursuant to which PEAK6 provides certain marketing, technology, strategy, development and other services to Spark over a five-year term, for a cash fee of \$1.5 million per year (the "Management Fee"), which was paid on a quarterly basis in an amount of \$375 thousand per quarter. On November 2, 2017, in connection with the consummation of the merger between Affinitas and Spark, Spark and PEAK6 mutually agreed to terminate the Management Services Agreement effective December 31, 2017. As consideration for the termination, Spark paid PEAK6 an amount equal to \$2.4 million (€2.0 million) in January 2018 in full satisfaction of any obligation or liability of Spark to PEAK6 for payments due to PEAK6 under the termination agreement.

Consulting Agreement with PEAK6

In March 2018, Spark Networks entered into a consulting agreement dated as of March 9, 2018 with PEAK6 (the “Consulting Agreement”), pursuant to which PEAK6 provides certain technology and infrastructure advice and information gathering services and other services to Spark Networks. The Consulting Agreement can be terminated by either party upon 30 days’ notice. Under the Consulting Agreement, PEAK6 is not entitled to any fees or other amounts.

C. Interests of experts and counsel.

Not applicable.

Item 8. Financial Information

A. Consolidated Statements and Other Financial Information.

Consolidated Financial Statements

For our audited consolidated balance sheets as of December 31, 2018 and 2017, and the related consolidated statements of operations and comprehensive loss/income, statement of shareholders’ equity and cash flows for each of the three years in the period ended December 31, 2018, please see pages F-3 to F-6 of this report.

Export Sales

See Item 5: Key Business Metrics for a geographical breakdown of sales for the last two fiscal years.

Legal Proceedings

Pending legal proceedings

Stephanie J. Benabu vs. Videotron Ltee and Affinitas GmbH, et al.

On August 1, 2016, Affinitas was served with a copy of an application to bring a class action lawsuit and to appoint the status of representative plaintiff filed with the Superior Court of the District of Montreal. The potential suit relates to the practice of automatically renewing the services provided to Canadian users of Affinitas’ products at standard pricing after a discounted trial period without active consent by the consumer. Affinitas ceased engaging in these practices and entered into a settlement agreement with the plaintiffs. The settlement agreement was ratified by the Superior Court of the District of Montreal on May 8, 2018. The closing judgment was delivered by the Superior Court on November 2, 2018, declaring that Affinitas had complied with its obligations under the settlement agreement.

City of Santa Monica, California – City Attorney General Investigation

On May 16, 2016, representatives from Spark met with representatives from a cross-jurisdictional working group consisting of consumer fraud attorneys from the City of Santa Monica and offices of the District Attorney from the counties of Los Angeles, Santa Cruz, Santa Clara and San Diego (“Cross Jurisdictional Group”). This meeting was held at the request of the Cross Jurisdictional Group, as a “pre-filing” meeting to explain and potentially resolve issues over auto-renewal disclosures by the Spark websites. The Cross Jurisdictional Group alleges that the Spark websites violate California law on disclosure of auto-renewal terms and ability to cancel auto-renewal. They also claim that the Spark websites violate California dating contract statutes, which (where applicable) require a three day right to cancel. The Cross Jurisdictional Group sent a voluntary document request to the company on June 2, 2016. The company cooperated with the Cross Jurisdictional Group and provided information in response to the voluntary request. The Cross Jurisdictional Group has indicated that it would like the company to change its disclosures in certain respects, and that it intends to seek the payment of a penalty in an unspecified amount. In response to these disclosure requests, the company has made changes. On December 1, 2017, the company received a settlement communication from the City of Santa Monica and offices of the District Attorney, proposing settlement terms including payment of civil penalties, restitution to consumers, investigative costs and legal fees in a maximum amount of \$1.6 million (€1.3 million). The proposal was accepted by Spark and a final judgment was received on October 3, 2018. The Group made payments of \$76 thousand (€67 thousand) for restitution to consumers and administrative fees in 2018 and recognized a financial liability of \$575 thousand (€502 thousand) at December 31, 2018 for civil penalties and investigative costs

to be paid per the terms of the final judgment. Management believes that this matter was fully resolved in the first quarter of 2019.

Upmarket vs. Spark Networks (Israel) Ltd.

On August 6, 2017, UpMarket Projects Ltd ("UpMarket") filed a civil action ("Complaint") for breach of contract and unjust enrichment against Spark Networks USA, LLC ("Spark USA") and against Spark Networks (Israel) LTD. ("Spark Israel") in Tel-Aviv District court. In the statement of claim, UpMarket alleges that Spark USA materially breached a commercial contract between the parties by terminating such contract in contravention to its terms. The parties executed a settlement agreement in January 2018, whereby Spark made settlement payments amounting to ILS 1.1 million (€0.3 million).

Trademarks

Trademarks are an important element in running online dating websites. Given the large number of markets and brands, Spark Networks is dealing with oppositions to its trademarks from time to time. As of December 31, 2018, there are several ongoing national procedures which affect trademarks within Germany, France, Finland, Sweden, the United Kingdom and Benelux. The procedures are expected to continue for more than 12 months. Outcome is unforeseeable as of the reporting date.

We have additional existing legal claims and may encounter future legal claims in the normal course of business. In our opinion, the resolutions of the existing legal claims are not expected to have a material impact on our financial position or results of operations.

We intend to defend vigorously against each of the above lawsuits. At this time, management does not believe the above matters, either individually or in the aggregate, will have a material adverse effect on the Group's results of operations or financial condition and believes the recorded legal provisions as of December 31, 2018 are adequate in light of the probable and estimable liabilities. However, no assurance can be given that these matters will be resolved in our favor.

Dividends

Spark Networks does not anticipate paying cash dividends in the foreseeable future on its ordinary shares, but intends to retain future earnings to finance internal growth, acquisitions and development of its business. Any future determination to propose the payment of cash dividends for resolution by the general meeting of shareholders of Spark Networks will be at the discretion of the Administrative Board and will depend upon Spark Networks' financial condition, results of operations, capital requirements and such other factors as the Administrative Board deems relevant.

B. Significant Changes.

Termination of Loan Agreement relating to Affinitas GmbH and entry into New Debt Financing.

On March 15, 2018, Affinitas, a wholly-owned subsidiary of Spark Networks SE, entered into a termination agreement (the "Termination Agreement") to its Loan Agreement dated as of September 2016 (the "Loan Agreement"), by and among Affinitas and certain persons and entities, including certain of its stockholders and officers, named as lenders thereunder (the "Lenders"), pursuant to which the Lenders had granted Affinitas certain loans with an interest rate of 8% per annum maturing on June 30, 2018 (the "Type A Loans") and certain loans with an interest rate of 9% per annum maturing on March 31, 2019 (the "Type B Loans") in an aggregate principal amount of €5.850 million (€1.850 million of which was under the Type A Loans and €4.0 million of which was under the Type B Loans). Pursuant to the terms of the Termination Agreement, in exchange for the early termination of the loans under the Loan Agreement effective as of March 15, 2018 and the repayment in full of the then outstanding principal amount of the loans under the Loan Agreement of €5.850 million, the parties agreed to an early termination fee of €307 thousand, consisting of a 2% fee on the repaid principal amount of the Type A loans and a 6.75% fee on the repaid principal amount of the Type B loans. In addition, the parties agreed that interest on the loans of approximately €40 thousand under the Loan Agreement was paid in full for the month of March 2018. All payments under the Termination Agreement were made on or before March 31, 2018.

Entry into €25 million Senior Facilities Agreement.

On March 28, 2018, Spark Networks and Silicon Valley Bank entered into a four-year €25 million Senior Facilities Agreement (the "Senior Facilities Agreement"). The Senior Facilities Agreement provides for a multicurrency term loan facility in an aggregate amount equal to €15 million (the "Term Loan Facility") and a multicurrency revolving credit facility in an aggregate amount equal to €10 million (the "Revolving Credit Facility" and, together with the Term Loan Facility, the "Facilities"). In addition, subject to the terms and conditions of the Senior Facilities Agreement, including compliance with certain financial covenants, Spark Networks may incur additional incremental facilities in an aggregate amount of up to €35 million.

Borrowings under the Facilities bear interest at a rate equal to LIBOR for deposits in the applicable currency plus an applicable margin ranging from 2.5% to 3.0% to be determined based on the net leverage ratio (as defined in the Facilities) for the most recently completed 12 month period ending on the last day of the fiscal year or quarterly period as applicable. The applicable margin and interest rate in effect for borrowings under the Term Loan Facility as of December 31, 2018 was 2.5%.

In addition to paying interest on outstanding principal under the Facilities, Spark Networks is required to pay a commitment fee to the lenders under the Revolving Credit Facility in respect of the unutilized commitments thereunder. The commitment fee rate is 0.60% per annum, and the Revolving Credit Facility currently has €10 million of undrawn availability.

The Term Loan Facility amortizes in equal quarterly installments of €938 thousand commencing on June 29, 2018, while principal amounts outstanding under the Revolving Credit Facility are due and payable in full at maturity.

Item 9. The Offer and Listing.

Not applicable, except for Items 9.A.4 and 9.C, which are detailed below.

Stock Price History

Our ADSs, each representing one-tenth of an ordinary share, have been listed on the New York Stock Exchange since November 3, 2017 under the trading symbol "LOV." The following table sets forth the high and low closing sales prices of our ADSs as reported by the NYSE American, in U.S. dollars, for the periods presented:

	High	Low
Year Ended December 31, 2018	\$ 15.12	\$ 7.88
For the period of November 3, 2017 through December 31, 2017	\$ 12.75	\$ 10.00

Markets

Our ADSs have been quoted under the symbol "LOV" on the NYSE American market since November 3, 2017.

Item 10. Additional Information.

A. Share capital

Not applicable.

B. Memorandum and articles of association

Form of Articles of Association of Spark Networks SE are incorporated by reference to Exhibit 3.1 of the Registrant's Amendment No. 1 to Form F-4 Registration Statement Under the Securities Act of 1933 filed with the Securities and Exchange Commission on September 15, 2017.

C. Material contracts

We have not entered into any material contracts other than in the ordinary course of business and other than those described elsewhere in Item 7. Major Shareholders and Related Party Transactions, or elsewhere in this annual report.

D. Exchange controls

There are currently no legal restrictions in Germany on international capital movements and foreign-exchange transactions, except in limited embargo circumstances (Teilembargo) relating to certain areas, entities or persons as a result of applicable resolutions adopted by the United Nations and the European Union. Restrictions currently exist with respect to Russia and Ukraine.

For statistical purposes, there are, however, limited notification requirements regarding transactions involving cross-border monetary transfers. With some exceptions, every corporation or individual residing in Germany must report to the German Central Bank (Deutsche Bundesbank) (i) any payment received from, or made to, a non-resident corporation or individual that exceeds €12,500 (or the equivalent in a foreign currency) and (ii) any claim against, or liability payable to, a non-resident corporation in excess of €5 million (or the equivalent in a foreign currency) at the end of any calendar month. Payments include cash payments made by means of direct debit, checks and bills, remittances denominated in euros and other currencies made through financial institutions, as well as netting and clearing arrangements.

E. Taxation

German Taxation

The following discussion describes the material German tax consequences for a holder that is a U.S. person of acquiring, owning, and disposing of the ADSs. A holder that is a U.S. person, which we refer to as a “U.S. treaty beneficiary,” is a resident of the United States for purposes of the Agreement between the Federal Republic of Germany and United States of America for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with respect to Taxes on Income and on Capital as of June 4, 2008 (Abkommen zwischen der Bundesrepublik Deutschland und den Vereinigten Staaten von Amerika zur Vermeidung der Doppelbesteuerung und zur Verhinderung der Steuerverkürzung auf dem Gebiet der Steuern vom Einkommen und vom Vermögen und einiger anderer Steuern in der Fassung vom 4. Juni 2008), which we refer to as the “Treaty,” who is fully eligible for benefits under the Treaty.

A holder will be a U.S. treaty beneficiary entitled to full Treaty benefits in respect of the ADSs if it is, inter alia:

- the beneficial owner of the ADSs (and the dividends paid with respect thereto);
- a citizen or an individual resident of the United States, a corporation or other entity treated as a corporation for U.S. federal income tax purposes created or organized under the laws of the United States or any state thereof or the District of Columbia, an estate the income of which is subject to U.S. federal income tax without regard to its source, or a trust if a court within the United States is able to exercise primary supervision over the administration of the trust and one or more U.S. persons have the authority to control all substantial decisions of the trust, or the trust has elected to be treated as a domestic trust for U.S. federal income tax purposes;
- not also a resident of Germany for German tax purposes; and
- not subject to the limitation on benefits (i.e., anti treaty shopping) article of the Treaty that applies in limited circumstances.

Special rules apply to pension funds and certain other tax exempt investors.

This discussion does not address the treatment of ADSs that are (i) held in connection with a permanent establishment or fixed base through which a U.S. treaty beneficiary carries on business or performs personal services in Germany or (ii) part of business assets for which a permanent representative in Germany has been appointed. With the exception of the subsection “—General Rules for the Taxation of Shareholders Tax Resident in Germany” below, which provides an overview of dividend taxation with regards to the general principles applicable on tax residents in Germany, this discussion applies only to U.S. treaty beneficiaries that acquired ADSs in the initial offering and hold ADSs as capital assets for U.S. federal income tax purposes. It does not purport to be a comprehensive description of all tax considerations that may be relevant to a decision to purchase ADSs by any particular investor, including tax considerations that arise from rules of general application to all taxpayers or to certain classes of taxpayers that are

generally assumed to be known by investors. In particular, this discussion does not address tax considerations applicable to a U.S. treaty beneficiary that may be subject to special tax rules, including, without limitation, a dealer in securities or currencies, a trader in securities that elects to use a mark to market method of accounting for securities holdings, banks, thrifts, or other financial institutions, U.S. expatriates, an insurance company, a tax exempt organization, a person that holds ADSs as part of a hedge, straddle, conversion or other integrated transaction for tax purposes, a person that purchases or sells ordinary shares or ADSs as part of a wash sale for tax purposes, a person whose functional currency for tax purposes is not the U.S. dollar, a person subject to the U.S. alternative minimum tax, or a person that owns or is deemed to own 10% or more of the company's voting stock. In addition, the discussion does not address tax consequences to an entity treated as a partnership (or other pass through entity) for U.S. federal income tax purposes that holds ADSs. The U.S. federal income tax treatment of each partner of the partnership generally will depend upon the status of the partner and the activities of the partnership. Prospective purchasers that are partners in a partnership holding ADSs should consult their own tax advisors.

This discussion is based on German tax laws, including, but not limited to interpretation circulars issued by German tax authorities, which are not binding on the courts, and the Treaty. It is based upon tax laws in effect at the time of preparation of this annual report (March 2019). These laws are subject to change, possibly on a retroactive basis. There is no assurance that German tax authorities will not challenge one or more of the tax consequences described in this discussion.

In addition, this discussion is based upon the assumption that each obligation in the deposit agreement and any related agreement will be performed in accordance with its terms. It does not purport to be a comprehensive or exhaustive description of all German or U.S. tax considerations that may be of relevance in the context of acquiring, owning and disposing of ADSs.

Prospective holders of ADSs should consult their own tax advisors regarding the German tax consequences of the purchase, ownership and disposition of ADSs in light of their particular circumstances, including the effect of any state, local, or other foreign or domestic laws or changes in tax law or interpretation.

German Taxation of ADSs

General

As of the date hereof, no published German tax court cases exist as to the German tax treatment of ADRs or ADSs, but based on the interpretation circular regarding the taxation of ADRs issued by the German Federal Ministry of Finance (BMF Schreiben) (dated May 24, 2013, and partly revoked, amended and complemented by BMF Schreiben on December 18, 2018, reference number IV C 1 S2204/12/10003) (the "ADR Tax Circular"), for German tax purposes, although it is not free from doubt, the ADSs should represent a beneficial ownership interest in the underlying shares and qualify as ADRs for the purpose of the ADR Tax Circular. If the ADSs qualify as ADRs under the ADR Tax Circular, dividends would accordingly be attributable to U.S. treaty beneficiaries of the ADSs for tax purposes, and not to the legal owner of the ordinary shares (i.e., the financial institution on behalf of whom the ordinary shares are stored at a domestic depository for the ADS holders), and U.S. treaty beneficiaries would be treated as holding an interest in the company's ordinary shares for German tax purposes. However, investors should note that interpretation circulars published by the German tax administration (including the ADR Tax Circular) are not binding on German courts, including German tax courts, and it is unclear whether a German tax court would follow the ADR Tax Circular in determining the German tax treatment of ADRs or ADSs. For the purpose of this German tax section it is assumed that the ADSs qualify as ADRs within the meaning of the ADR Tax Circular.

German Taxation of Dividends and Capital Gains

General Rules for the Taxation of Shareholders Tax Resident in Germany

This subsection provides an overview of dividend taxation with regards to the general principles applicable on tax residents in Germany.

The German dividend and capital gains taxation rules applicable to German tax residents require a distinction between shares held as private assets (Kapitalvermögen) and shares held as business assets (Gewerbebetrieb). In case the shares are held as private assets, dividends and capital gains are taxed as investment income and are principally subject to 25% German flat income tax on capital income (Abgeltungsteuer) (plus a 5.5% solidarity surcharge (Solidaritätszuschlag) thereon, resulting in an aggregate rate of 26.375%), which is levied in the form of withholding

tax (Kapitalertragsteuer). The shareholder is taxed on its gross personal investment income, less the saver's tax free allowance of €801 for an individual or €1,602 for a married couple filing taxes jointly. The deduction of income related expenses actually incurred is generally not possible. Private investors can apply to have their investment income assessed in accordance with the general rules on determining an individual's tax bracket if this would result in a lower tax burden. In this case, the shareholder will be taxed on gross personal investment income, less the saver's tax free allowance of €801 (€1,602 for married couples filing jointly), without deduction of income related expenses actually incurred. If tax is initially withheld, it will be credited against the amount of personal income tax assessed against the shareholder.

Losses resulting from the disposal of shares can only be offset with capital gains from the sale of shares and if a tax certificate is provided. If, however, a shareholder directly or indirectly held at least 1% of the share capital of the company at any time during the five years preceding the sale, 60% of any capital gains resulting from the sale are taxable at the shareholder's personal income tax rate (plus 5.5% solidarity surcharge thereon). Conversely, 60% of any capital losses are recognized for tax purposes.

In case the shares are held as business assets, the taxation depends on the legal form of the shareholder (i.e., whether the shareholder is a corporation, an individual or a partnership). Irrespective of the legal form of the shareholder, dividends are also in this business assets scenario subject to the aggregate withholding tax rate of 26.375%. The withholding tax (Kapitalertragsteuer) is credited against the respective shareholder's final (corporate) income tax liability. To the extent the amount withheld exceeds the (corporate) income tax liability; the withholding tax will be refunded, provided that certain requirements are met.

Special rules apply to financial institutions (Kreditinstitute), financial services providers (Finanzdienstleistungsinstitute), financial enterprises (Finanzunternehmen), life insurance and health insurance companies, and pension funds.

With regard to shareholders in the legal form of a corporation, dividends and capital gains are effectively 95% tax exempt from corporate income tax (including solidarity surcharge). However, with regards to dividends (not to capital gains) realized after February 28, 2013, the 95% corporate income tax exemption only applies if the corporation holds at least 10% of the shares in the company at the beginning of the calendar year. However, in case the acquisition of at least 10% of the shares takes place in the course of the year, in general, for corporate tax purposes, this shall be deemed as an acquisition of the shares already at the beginning of the calendar year, as well. As a result, shares acquired through such an intra-year acquisition qualify for the aforementioned tax exemption, as well.

A circular issued by the Regional Tax Office Frankfurt/Main (Verfügung der OFD), dated December 2, 2013, reference number S 2750a A 19 St 52, provides for further comments on the scope of application of the 10% threshold.

Dividends are fully subject to trade tax (Gewerbsteuer), unless the shareholder holds at least 15% of the shares in the company at the beginning of the tax assessment period. In the latter case, effectively 95% of the dividends are also exempt from trade tax. Capital gains, however, are, irrespective of the size of the shareholding, 95% exempt from trade tax. Losses from the sale of shares are not tax deductible for corporate income tax and trade tax purposes.

With regards to individuals holding shares as business assets, 60% of dividends and capital gains are taxed at the individual's personal income tax rate (plus 5.5% solidarity surcharge thereon). Correspondingly, only 60% of business expenses related to the dividends and capital gains are principally deductible for income tax purposes.

If shares are held as business assets of a commercial permanent establishment located in Germany, dividends are fully subject to trade tax, unless the sole proprietor holds at least 15% of the company's shares at the beginning of the tax assessment period. In this case dividends are fully tax exempt from trade tax. With regards to capital gains, only 60% of the gains are subject to trade tax. 60% of any losses from the sale of shares are tax deductible for income tax and trade tax purposes. All or part of the trade tax is generally credited as a lump sum against the income taxes of the individual.

General rules for the Taxation of Shareholders Not Tax Resident in Germany

Non German resident holders of ADSs are subject to German taxation with respect to German source income (beschränkte Steuerpflicht). According to the ADR Tax Circular dated May 24, 2013 (as partly revoked, amended and complemented by BMF Schreiben on December 18, 2018), income from the shares should be attributed to the holder

of the ADSs for German tax purposes. As a consequence, income from the ADSs should be treated as German source income (beschränkte Steuerpflicht).

The full amount of a dividend distributed by the company to a non-German resident shareholder which does not maintain a permanent establishment or other taxable presence in Germany is subject to (final) German withholding tax (Kapitalertragsteuer) at an aggregate rate of 26.375%. The basis for the withholding tax is the approval of the dividend for distribution by the company's general shareholder meeting. The amount of the relevant taxable income is based on the gross amount in euro; any currency differences shall be irrelevant.

German withholding tax is withheld and remitted to the German tax authorities by the disbursing agent (i.e., the German bank, financial services institution, securities trading enterprise or securities trading bank (each as defined in the German Banking Act (Kreditwesengesetz) and in each case including a German branch of a foreign enterprise, but excluding a foreign branch of a German enterprise) that holds or administers the underlying shares in custody and disburses or credits the dividend income from the underlying shares or disburses or credits the dividend income from the underlying shares on delivery of the dividend coupons or disburses such dividend income to a foreign agent or the central securities depository (Wertpapiersammelbank) in terms of the German Depository Act (Depotgesetz)) holding the underlying shares in a collective deposit, if such central securities depository disburses the dividend income from the underlying shares to a foreign agent, regardless of whether or not a holder must report the dividend for tax purposes and regardless of whether or not a holder is a resident of Germany.

Pursuant to the Treaty, the German withholding tax generally may not exceed 15% of the gross dividends received by U.S. treaty beneficiaries. In case of any U.S. treaty beneficiary qualifying as a not tax transparent corporation and directly holding at least 10% or more of the company's voting shares, the German withholding tax is capped at 5% of the gross dividends. The excess of the total withholding tax, including the solidarity surcharge, over the maximum rate of withholding tax permitted by the Treaty is refunded to U.S. treaty beneficiaries upon application. For example, for a declared dividend of 100, a U.S. treaty beneficiary initially receives 73.625 (100 minus the 26.375% withholding tax). The U.S. treaty beneficiary is entitled to a partial refund from the German tax authorities in the amount of 11.375% of the gross dividend (of 100). As a result, the U.S. treaty beneficiary ultimately receives a total of 85 (85% of the declared dividend) following the refund of the excess withholding. However, investors should note that it is unclear how the German tax administration will apply the refund process to dividends on the ADSs and ADRs. Further, such refund is subject to the German anti avoidance treaty shopping rule (as described below in section “—Withholding Tax Refund for U.S. Treaty Beneficiaries”).

German Taxation of Capital Gains of the U.S. Treaty Beneficiaries of the ADSs

The capital gains from the disposition of ADSs realized by a non-German resident shareholder which does not maintain a permanent establishment or other taxable presence in Germany would be treated as German source income and subject to German tax (beschränkte Steuerpflicht) especially (but not exclusively) if such holder at any time during the five years preceding the disposition, directly or indirectly, held ADSs that represent 1% or more of the company's shares. If such holder had acquired the ADSs without consideration, the previous owner's holding period and size of the holding would also be taken into account.

However, U.S. treaty beneficiaries are eligible for treaty benefits under the Treaty (as discussed above in the section “—German Taxation”). Pursuant to the Treaty, U.S. treaty beneficiaries are not subject to German tax even under the circumstances described in the preceding paragraph.

German statutory law requires the disbursing agent to levy withholding tax on capital gains from the sale of shares or other securities held in a custodial account in Germany. With regards to the German taxation of capital gains, disbursing agent means a German bank, a financial services institution, a securities trading enterprise or a securities trading bank (each as defined in the German Banking Act (Kreditwesengesetz) and, in each case including a German branch of a foreign enterprise, but excluding a foreign branch of a German enterprise) that holds the ADSs in custody or administers the ADSs for the investor or conducts sales or other dispositions and disburses or credits the income from the ADSs to the holder of the ADSs. The German statutory law does not explicitly condition the obligation to withhold taxes on capital gains being subject to taxation in Germany under German statutory law or on an applicable income tax treaty permitting Germany to tax such capital gains.

However, an interpretation circular issued by the German Federal Ministry of Finance (BMF Schreiben) (dated January 18, 2016, reference number IV C 1 S2252/08/10004:017) provides that taxes need not be withheld when the holder of the custody account is not a resident of Germany for tax purposes and the income is not subject to German

taxation. The interpretation circular further states that there is no obligation to withhold such tax even if the non-resident holder owns 1% or more of the shares of a German company. While interpretation circulars issued by the German Federal Ministry of Finance are only binding on the tax authorities but not on the tax courts, in practice, the disbursing agents nevertheless typically rely on guidance contained in such interpretation circulars. Therefore, a disbursing agent would only withhold tax at 26.375% on capital gains derived by a U.S. treaty beneficiary from the sale of ADSs held in a custodial account in Germany in the unlikely event that the disbursing agent did not follow this guidance. In this case, the U.S. treaty beneficiary should be entitled to claim a refund of the withholding tax from the German tax authorities under the Treaty (as described in the section “—Withholding Tax Refund for U.S. Treaty Beneficiaries”).

Withholding Tax Refund for U.S. Treaty Beneficiaries

U.S. treaty beneficiaries are generally eligible for treaty benefits under the Treaty (as discussed above in Section “— German Taxation”). Accordingly, U.S. treaty beneficiaries are entitled to claim a refund of the portion of the otherwise applicable 26.375% German withholding tax on dividends that exceeds the applicable Treaty rate. However, as previously discussed, investors should note that it is unclear how the German tax administration will apply the refund process to dividends on the ADSs and ADRs. Further, such refund is subject to the German anti avoidance treaty shopping rule according to section 50d para. 3 of the German Income Tax Act (Einkommensteuergesetz). Generally, this rule requires that the U.S. treaty beneficiary (in case it is a non German resident company) maintains its own administrative substance and conducts its own business activities. In particular, a foreign company has no right to a full or partial refund to the extent persons holding ownership interests in the company would not be entitled to the refund if they derived the income directly and the gross income realized by the foreign company is not caused by the business activities of the foreign company, and there are either no economic or other valid reasons for the interposition of the foreign company, or the foreign company does not participate in general commerce by means of a business organization with resources appropriate to its business purpose. However, this shall not apply if the foreign company’s principal class of stock is regularly traded in substantial volume on a recognized stock exchange, or if the foreign company is subject to the provisions of the German Investment Tax Act (Investmentsteuergesetz). However, according to a decision of the European Court of Justice (“ECJ”) as of June 14, 2018, Section 50d paragraph 3 of the German Income Tax Act in its current version infringes EU Laws and the EU P/S Directive. It is noteworthy that the underlying case the ECJ had to decide referred to EU-companies, only. Thus, the ECJ based his decision on the freedom of establishment that is (in contrast to the free movement of capital) not applicable to Non-EU-companies. Thus, for U.S. treaty beneficiaries this decision should initially have no direct effect. However, there are ongoing discussions on whether the arguments of the ECJ could also be extended to Non-EU-cases, where the free movement of capital is affected. The German legislator didn’t react on this ECJ decision such that the German tax authorities still apply the Anti-Treaty Shopping Rule with a strict approach in assessing the above requirements but with a slightly modified scope (e.g., reduced substance requirements for asset managing companies). However, this modified scope is only applicable in case of EU-companies.

Individual claims for refunds may be made on a separate form, which must be filed with the German Federal Central Tax Office (Bundeszentralamt für Steuern), An der Kuppel 1, 53225 Bonn, Germany. The form is available at the same address, on the German Federal Tax Office’s website (www.bzst.de) or from the Embassy of the Federal Republic of Germany, 4645 Reservoir Road NW, Washington, DC 20007. Generally, the refund claim becomes time barred after four years following the calendar year in which the dividend is received. As part of the individual refund claim, a U.S. treaty beneficiary must submit to the German tax authorities the original withholding certificate (or a certified copy thereof) issued by the disbursing agent and documenting the tax withheld, and an official certification of United States tax residency on IRS Form 6166. IRS Form 6166 may be obtained by filing a properly completed IRS Form 8802 with the Internal Revenue Service, P.O. Box 71052, Philadelphia, PA 19176 6052. Requests for certification must include the U.S. treaty beneficiary’s name, social security number or employer identification number, the type of U.S. tax return filed, the tax period for which the certification is requested and a user fee of \$85. An online payment option is also available at www.irs.gov. If the online payment option is used, then the completed IRS Form 8802 and all required attachments should be mailed to Department of the Treasury, Internal Revenue Service, Philadelphia, PA 19255 0625. The Internal Revenue Service will send the certification on IRS Form 6166 to the U.S. treaty beneficiary, who must then submit the certification with the claim for refund of withholding tax.

German Inheritance and Gift Tax (Erbchaft und Schenkungsteuer)

It is unclear whether the German inheritance or gift tax applies to the transfer of the ADSs as the ADR Tax Circular does not refer explicitly to the German Inheritance and Gift Tax Act. However, if German inheritance or gift tax is

applicable to ADSs, then under German domestic law, the transfer of the ordinary shares in the company and, as a consequence, the transfer of the ADSs would be subject to German gift or inheritance tax if:

(a) the decedent or donor or heir, beneficiary or other transferee (i) maintained his or her residence or a habitual abode in Germany or had its place of management or registered office in Germany at the time of the transfer, or (ii) is a German citizen who has spent no more than five consecutive years outside Germany without maintaining a residence in Germany or (iii) is a German citizen who serves for a German entity established under public law and is remunerated for his or her service from German public funds (including family members who form part of such person's household, if they are German citizens) and is only subject to estate or inheritance tax in his or her country of residence or habitual abode with respect to assets located in such country (special rules apply to certain former German citizens who neither maintain a residence nor have their habitual abode in Germany), or (b) at the time of the transfer, the ADSs are held by the decedent or donor as business assets forming part of a permanent establishment in Germany or for which a permanent representative in Germany has been appointed, or (c) the ADSs subject to such transfer form part of a portfolio that represents at the time of the transfer 10% or more of the registered share capital of the company (with its seat or place of management in Germany) and that has been held directly or indirectly by the decedent or donor, either alone or together with related persons.

Under the Agreement between the Federal Republic of Germany and the United States of America for the avoidance of double taxation with respect to taxes on inheritances and gifts (Abkommen zwischen der Bundesrepublik Deutschland und den Vereinigten Staaten von Amerika zur Vermeidung der Doppelbesteuerung auf dem Gebiet der Nachlass-, Erbschaft- und Schenkungsteuern in der Fassung vom 21. Dezember 2000), hereinafter referred to as the "United States Germany Inheritance and Gifts Tax Treaty," a transfer of ADSs by gift or upon death is not subject to German inheritance or gift tax if the donor or the transferor is domiciled in the United States, within the meaning of the United States Germany Inheritance and Gift Tax Treaty, and is neither a citizen of Germany nor a former citizen of Germany and, at the time of the transfer, the ADSs are not held by the decedent or donor as business assets forming part of a permanent establishment in Germany or for which a permanent representative in Germany has been appointed.

Notwithstanding the foregoing, in case the heir, transferee or other beneficiary (i) has, at the time of the transfer, his or her residence or habitual abode in Germany, or (ii) is a German citizen who has spent no more than five (or, in certain circumstances, ten) consecutive years outside Germany without maintaining a residence in Germany or (iii) is a German citizen who serves for a German entity established under public law and is remunerated for his or her service from German public funds (including family members who form part of such person's household, if they are German citizens) and is only subject to estate or inheritance tax in his or her country of residence or habitual abode with respect to assets located in such country (or special rules apply to certain former German citizens who neither maintain a residence nor have their habitual abode in Germany), the transferred ADSs are subject to German inheritance or gift tax.

If, in this case, Germany levies inheritance or gift tax on the ADSs with reference to the heir's, transferee's or other beneficiary's residence in Germany or his or her German citizenship, and the United States also levies federal estate tax or federal gift tax with reference to the decedent's or donor's residence (but not with reference to the decedent's or donor's citizenship), the amount of the U.S. federal estate tax or the U.S. federal gift tax, respectively, paid in the United States with respect to the transferred ADSs is credited against the German inheritance or gift tax liability, provided the U.S. federal estate tax or the U.S. federal gift tax, as the case may be, does not exceed the part of the German inheritance or gift tax, as computed before the credit is given, which is attributable to the transferred ADSs. A claim for credit of the U.S. federal estate tax or the U.S. federal gift tax, as the case may be, may be made within one year of the final determination (administrative or judicial) and payment of the U.S. federal estate tax or the U.S. federal gift tax, as the case may be, provided that the determination and payment are made within ten years of the date of death of the decedent or of the date of the making of the gift by the donor. Similarly, U.S. state level estate or gift taxes are also creditable against the German inheritance or gift tax liability to the extent that U.S. federal estate or gift tax is creditable.

United States Taxation of ADSs and Ordinary Shares

The following discussion describes the material U.S. federal income tax consequences that are relevant with respect to the acquisition, ownership and disposition of the ADSs and ordinary shares by a U.S. holder (as defined below) as in effect on the date of this annual report. The information provided below is based on the Internal Revenue Code of 1986, as amended, or the Code, Internal Revenue Service, or IRS, rulings and pronouncements, and judicial decisions all as now in effect and all of which are subject to change or differing interpretations, possibly with retroactive effect. This summary addresses only U.S. federal income tax considerations of U.S. holders that will hold ADSs or ordinary

shares as capital assets. It does not provide a complete analysis of all potential tax considerations. In particular, this summary does not address all of the tax considerations applicable to a particular holder of the ADSs or ordinary shares in light of the holder's circumstances (for example, financial institutions; insurance companies; dealers or traders in securities; currencies or notional principal contracts; persons that will hold ADSs or ordinary shares as part of a hedging or conversion transaction or as a position in a straddle or other integrated transactions for U.S. federal income tax purposes; persons that have a functional currency other than the U.S. dollar; persons that own (or are deemed to own) 10% or more (by voting power or value) of our share capital; persons who are subject to the alternative minimum tax, regulated investment companies, real estate investment trusts; tax exempt entities; persons who hold ADSs or ordinary shares through partnerships or other pass through entities or arrangements; tax deferred or other retirement accounts; certain former citizens or residents of the United States; or persons deemed to sell ADSs or ordinary shares under the constructive sale provisions of the Code). Finally, the summary does not describe the effect of the U.S. federal estate and gift tax laws on U.S. holders or the effects of any applicable foreign, state or local laws.

For purposes of this summary, a "U.S. holder" is a beneficial owner of ADSs or ordinary shares that for U.S. federal income tax purposes, is (1) an individual who is a citizen or resident of the United States, (2) a corporation, or an entity treated as a corporation for U.S. federal income tax purposes, created or organized in or under the laws of the United States or any state of the United States, including the District of Columbia, (3) an estate, the income of which is subject to U.S. federal income taxation regardless of its source, or (4) a trust, if it (i) is subject to the primary supervision of a U.S. court and the control of one or more U.S. persons or (ii) has a valid election in effect under applicable U.S. Treasury Regulations to be treated as a U.S. person. A "non U.S. holder" is a beneficial owner of the ADSs or ordinary shares, other than a partnership or entity or arrangement treated as a partnership, that is not a U.S. holder.

If a partnership (including an entity or arrangement, domestic or foreign, treated as a partnership for U.S. federal income tax purposes) holds ADSs or ordinary shares, the tax treatment of a partner in the partnership will depend upon the status of the partner and the activities of the partnership. A holder of ADSs or ordinary shares that is a partnership, and partners in such partnership, should consult their own tax advisors about the U.S. federal income and estate tax consequences of purchasing, owning and disposing of the ADSs or ordinary shares.

Each prospective holder of ADSs should consult its own tax advisors regarding the U.S. federal, state and local or other tax consequences of acquiring, owning and disposing of the company's ADSs or ordinary shares in light of their particular circumstances. U.S. holders should also review the discussion under "German Taxation of ADSs" for the German tax consequences to a U.S. holder of the acquisition ownership and disposition of the ADSs.

General

In general, and taking into account the earlier assumptions, a U.S. holder of ADSs is treated as the owner of the ordinary shares represented by such ADSs. Exchanges of ordinary shares for ADSs, and ADSs for ordinary shares, respectively, generally will not be subject to U.S. federal income tax.

Distributions

Under the United States federal income tax laws, and subject to the discussion below under "Additional United States Federal Income Tax Consequences – PFIC Rules," the gross amount of any distribution that is actually or constructively received by a U.S. holder with respect to its ordinary shares (including shares deposited in respect of ADSs) will be a dividend includible in gross income of a U.S. holder as ordinary income to the extent the amount of such distribution is paid out of our current and accumulated earnings and profits, as determined for U.S. federal income tax purposes. To the extent the amount of such distribution exceeds our current and accumulated earnings and profits as so computed, it will be treated first as a non taxable return of capital to the extent of such U.S. holder's adjusted tax basis in its ADSs or ordinary shares, and to the extent the amount of such distribution exceeds such adjusted tax basis, will be treated as gain from the sale of the ADSs or ordinary shares. Dividends paid to non-corporate U.S. holders may not be eligible for the preferential income tax rate applicable to "qualified dividend income" received from certain foreign corporations. Prospective investors should consult their own tax advisors regarding the taxation of distributions under these rules.

A U.S. holder must include any German tax withheld from the dividend payment in this gross amount even though the holder does not in fact receive it. The gross amount of the dividend is taxable to a U.S. holder when the holder receives the dividend, actually or constructively. Dividends paid on ADSs will not be eligible for the dividends received deduction generally available to corporate U.S. holders. The gross amount of any dividend paid in foreign

currency will be included in the gross income of a U.S. holder in an amount equal to the U.S. dollar value of the foreign currency calculated by reference to the exchange rate in effect on the date the dividend distribution is includable in the U.S. holder's income, regardless of whether the payment is in fact converted into U.S. dollars. If the foreign currency is converted into U.S. dollars on the date of receipt by the depository, in the case of ADSs, or the U.S. holder, in the case of ordinary shares, a U.S. holder generally should not be required to recognize foreign currency gain or loss in respect of the dividend. If the foreign currency received is not converted into U.S. dollars on the date of receipt, a U.S. holder will have a basis in the foreign currency equal to its U.S. dollar value on the date of receipt. Any gain or loss on a subsequent conversion or other disposition of the foreign currency will be treated as ordinary income or loss, and will generally be income or loss from sources within the United States for foreign tax credit limitation purposes.

For foreign tax credit purposes, our dividend distributions will generally constitute income from sources outside the United States and be "passive" income for purposes of computing the foreign tax credit allowable to the U.S. holder. Prospective investors should consult their own tax advisors regarding the implications of the foreign tax credit provisions for them, in light of their particular situation.

U.S. Taxation of Sale or Other Disposition

Subject to the discussion below under "—Additional United States Federal Income Tax Consequences—PFIC Rules," a U.S. holder will generally recognize a gain or loss for U.S. federal income tax purposes upon the sale or other disposition of ADSs or ordinary shares in an amount equal to the difference between the U.S. dollar value of the amount realized from such sale or other disposition and the U.S. holder's tax basis in such ADSs or ordinary shares. Such gain or loss generally will be capital gain or loss. Capital gain of a non corporate U.S. holder recognized on the sale or other disposition of ADSs or ordinary shares held for more than one year is generally eligible for a reduced rate of taxation. The gain or loss will generally be income or loss from sources within the United States for foreign tax credit limitation purposes. The deductibility of capital losses is subject to limitations.

A U.S. holder that receives foreign currency on the sale or other disposition of ADSs or ordinary shares will realize an amount equal to the U.S. dollar value of the foreign currency on the date of sale (or, in the case of cash basis and electing accrual basis taxpayers, the U.S. dollar value of the foreign currency on the settlement date) provided that the ADSs or ordinary shares, as the case may be, are treated as being "traded on an established securities market." If a U.S. holder receives foreign currency upon a sale or exchange of ADSs or ordinary shares, gain or loss, if any, recognized on the subsequent sale, conversion or disposition of such foreign currency will be ordinary income or loss, and will generally be income or loss from sources within the United States for foreign tax credit limitation purposes. However, if such foreign currency is converted into U.S. dollars on the date received by the U.S. holder, a cash basis or electing accrual U.S. holder should not recognize any gain or loss on such conversion.

Redemption

A redemption of ADSs or the ordinary shares underlying such ADSs by us will be treated as a sale of the redeemed ADSs or ordinary shares by the U.S. holder or as a distribution to the U.S. holder (which is taxable as described above under "—Distributions").

Additional United States Federal Income Tax Consequences

PFIC Rules. Special adverse U.S. federal income tax rules apply to U.S. holders owning shares of a passive foreign investment company, or PFIC. In general, we will be a PFIC with respect to a U.S. holder if for any taxable year in which the holder has held our ADSs or ordinary shares: (i) at least 75% of our gross income for the taxable year is passive income (the "income test") or (ii) at least 50% of the value, determined on the basis of a quarterly average, of our assets is attributable to assets that produce or are held for the production of passive income (the "asset test"). Whether a company is a PFIC for any given year is an annual determination that cannot be made until after the close of the taxable year. Accordingly, it is possible that we may become a PFIC in the current or any future taxable year due to changes in our asset or income composition. The composition of income and assets will be affected by whether, how, and how quickly, we spend any cash we currently hold.

Passive income for purposes of the income test generally includes dividends, interest, royalties, rents (other than certain rents and royalties derived in the active conduct of a trade or business), annuities and gains from the disposition of assets that produce passive income. Any cash we hold generally will be treated as held for the production of passive income for the purpose of the PFIC test, and any income generated from cash or other liquid

assets generally will be treated as passive income for such purpose. If a foreign corporation owns at least 25% by value of the stock of another corporation, the foreign corporation is treated for purposes of the PFIC tests as owning its proportionate share of the assets of the other corporation, and as receiving directly its proportionate share of the other corporation's income.

We believe that we were not a PFIC for our taxable year ending December 31, 2018. However, since the determination of whether we are a PFIC is based upon such factual matters as our market capitalization and the valuation of our assets and upon certain assumptions and methodologies in which we have based our analysis, there can be no assurance that the IRS will agree with our position. Furthermore, because we have valued our goodwill for purposes of the asset test based on the market value of our equity, a further decline in the value of our equity due to fluctuations in the price of our ADSs and ordinary shares could result in us becoming a PFIC for our taxable year ending on December 31, 2018 or for future taxable years. If we are a PFIC for any taxable year in which a U.S. holder holds our ordinary shares or ADSs and any of our subsidiaries is also a PFIC, such U.S. holder will be treated as owning a proportionate amount (by value) of the shares of the lower-tier PFIC. U.S. holders should consult with their tax advisors regarding the application of the PFIC rules to any of our subsidiaries.

If we were to be treated as a PFIC, the U.S. federal income tax consequences to a U.S. holder of the acquisition, ownership, and disposition of ADSs or ordinary shares will depend on whether such U.S. holder makes an election to treat us as a "qualified electing fund" or "QEF" under Section 1295 of the Code (a QEF Election) or a mark-to-market election under Section 1296 of the Code (a Mark-to-Market Election). A U.S. holder who makes a QEF election will be taxed currently on such U.S. holder's pro rata share of our annual ordinary income and capital gains (each separately stated). However, we do not intend to furnish holders with the information necessary to make a QEF Election. A U.S. holder may make a Mark-to-Market Election with respect to its ADSs or ordinary shares provided such ADS or ordinary shares are treated as regularly traded on a qualified exchange. A U.S. holder that makes a Mark-to-Market Election would include as ordinary income the excess of the fair market value of such United States holder's ADSs at year-end over such United States holder's basis in those ADSs. In addition, any gain recognized upon a sale of ADSs would be taxed as ordinary income in the year of sale. A U.S. holder will not be able to make a Mark-to-Market Election for any lower-tier PFIC we may own.

A U.S. Holder that does not make either a QEF Election or a Mark-to-Market Election (a Non-Electing United States Holder) would be subject to special adverse tax rules with respect to (i) "excess distributions" (generally, any distribution paid during the taxable year that is greater than 125% of the average annual distributions paid by us in the three preceding taxable years or, if shorter, the U.S. holder's holding period) received on our ADSs or ordinary shares and (ii) any gain recognized upon a sale or other disposition (including a pledge) of our ADSs or ordinary shares. A Non-Electing U.S. Holder would be treated as if it had realized such gain and certain "excess distributions" ratably over its holding period for our ADSs or ordinary shares and would be taxed at the highest tax rate in effect for each such year to which the gain was allocated, together with an interest charge in respect of the tax attributable to each such year. Special rules apply for calculating the amount of the foreign tax credit with respect to "excess distributions" by a PFIC.

With certain exceptions, a Non-Electing U.S. Holder's ADSs or ordinary shares will be treated as stock in a PFIC if we were a PFIC at any time during the U.S. holder's holding period in for its ordinary shares or ADSs, even if we are not currently a PFIC.

If we were to be treated as a PFIC, owners of our ordinary shares or ADSs (including, potentially, indirect owners) would be required to file an information report with respect to such interest on their tax returns, subject to certain exceptions. U.S. holders are urged to consult their tax advisors regarding the application of these rules to their ownership of the ADSs.

Medicare Tax. Certain U.S. holders who are individuals, estates and trusts will be required to pay an additional 3.8% tax on some or all of their "net investment income," which generally includes its dividend income and net gains from the disposition of our ADSs or ordinary shares. U.S. holders should consult their own tax advisors regarding the applicability of this additional tax on their particular situation.

Information with Respect to Foreign Financial Assets. Owners of "specified foreign financial assets" with an aggregate value in excess of \$50,000 (and in some circumstances, a higher threshold) may be required to file an information report with respect to such assets on their tax returns. "Specified foreign financial assets" may include financial accounts maintained by foreign financial institutions, as well as the following, but only if they are not held in accounts maintained by financial institutions: (i) stocks and securities issued by non U.S. persons, (ii) financial

instruments and contracts held for investment that have non U.S. issuers or counterparties, and (iii) interests in foreign entities. U.S. holders are urged to consult their tax advisors regarding the application of this legislation to their ownership of the ADSs and ordinary shares.

Backup Withholding and Information Reporting. Backup withholding and information reporting requirements will generally apply to certain payments to U.S. holders of dividends on ADSs or ordinary shares. We, our agent, a broker or any paying agent, may be required to withhold tax from any payment that is subject to backup withholding unless the U.S. holder (1) is an exempt payee, or (2) provides the U.S. holder's correct taxpayer identification number and complies with applicable certification requirements. Payments made to U.S. holders by a broker upon a sale of our ADSs or ordinary shares will generally be subject to backup withholding and information reporting. If the sale is made through a foreign office of a foreign broker, however, the sale will generally not be subject to either backup withholding or information reporting. This exception may not apply if the foreign broker is owned or controlled by U.S. persons, or is engaged in a U.S. trade or business.

Backup withholding is not an additional tax. Any amounts withheld from a payment to a U.S. holder of ADSs or ordinary shares under the backup withholding rules can be credited against any U.S. federal income tax liability of the U.S. holder, provided the required information is timely furnished to the IRS. A U.S. holder generally may obtain a refund of any amounts withheld under the backup withholding rules that exceeds the U.S. holder's income tax liability by filing a refund claim with the IRS. Prospective investors should consult their own tax advisors as to their qualification and procedure for exemption from backup withholding

The above description is not intended to constitute a complete analysis of all tax consequences relating to the purchase, ownership or disposition of the ADSs or ordinary shares. Investors deciding on whether or not to invest in ADSs or ordinary shares should consult their own tax advisors concerning the tax consequences of their particular situations.

F. Dividends and paying agents

Not applicable.

G. Statement by experts

Not applicable.

H. Documents on display

We are currently subject to the information and periodic reporting requirements of the Exchange Act, and file periodic reports and other information with the SEC through its electronic data gathering, analysis and retrieval (EDGAR) system. Our securities filings, including this annual report and the exhibits thereto, are available over the internet at the SEC's website at <http://www.sec.gov>. Please call the SEC at 1-800-SEC-0330 for further information.

We maintain a corporate website at www.spark.net. You may access our annual reports filed with or furnished to the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The reference to our website is provided for informational purposes only and does not constitute incorporation by reference of the information contained on this website.

As a foreign private issuer, we are exempt from the rules under the Exchange Act relating to the furnishing and content of proxy statements, and our officers, directors and principal shareholders will be exempt from the reporting and short-swing profit recovery provisions contained in Section 16 of the Exchange Act. In addition, we are not required under the Exchange Act to file periodic reports and financial statements with the SEC as frequently or as promptly as United States companies whose securities are registered under the Exchange Act. However, we are required to file with the SEC, within 120 days after the end of each subsequent fiscal year, an annual report on Form 20-F containing financial statements which will be examined and reported on, with an opinion expressed, by an independent public accounting firm. We also file with the SEC reports on Form 6-K containing quarterly unaudited financial information.

I. Subsidiary Information.

Not applicable

Item 11. Quantitative and Qualitative Disclosures About Market Risk.

Market risk is the potential loss from adverse changes in foreign exchange rates, interest rates, and market prices. Spark Networks' exposure to market risk includes Spark Networks' cash, accounts receivable, other financial assets, accounts payable, and other financial liabilities. Spark Networks manages its exposure to these risks through established policies and procedures. Spark Networks' objective is to mitigate potential income statement, cash flow and market exposures from changes in interest and foreign exchange rates. See Note 7.2 to our consolidated financial statements for our quantitative and qualitative disclosures about market risk.

Item 12. Description of Securities Other than Equity Securities.

Not applicable.

PART II

Item 13. Defaults, Dividend Arrearages and Delinquencies.

None.

Item 14. Material Modifications to the Rights of Security Holders and Use of Proceeds.

A. Material Modifications to the Rights of Security Holders.

None.

B. Use of proceeds.

None.

Item 15. Controls and Procedures.

(a) Disclosure Controls and Procedures.

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Annual Report on Form 20-F. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost benefit relationship of possible controls and procedures. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that as of December 31, 2018, the design and operation of our disclosure controls and procedures were effective.

(b) Management's Annual Report on Internal Control over Financial Reporting.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rule 13a-15(e) under the Exchange Act. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board. Management assessed the effectiveness of the Company's internal control over financial reporting using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in "Internal Control - Integrated Framework (2013)." Based on such evaluation, our Chief Executive Officer and Chief Financial

Officer have concluded that as of December 31, 2018, the Company's internal control over financial reporting was effective.

(c) Attestation Report of the Registered Public Accounting Firm.

The Annual Report on Form 20-F does not include a report of the Company's independent registered public accounting firm due to the Company's status as an emerging growth company.

(d) Changes in Internal Control over Financial Reporting.

There was no change in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the year ended December 31, 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 16. Reserved.

Item 16A. Audit committee financial expert.

The board of directors has determined that Colleen Birdnow Brown is an "audit committee financial expert" as defined under the U.S. federal securities laws and is independent under the rules of the SEC.

Item 16B. Code of ethics.

We have adopted a code of ethics applicable to our Chairman, Chief Executive Officer, Chief Financial Officer and other senior financial officers of Spark Networks SE. We have also adopted a Code of Business Conduct and Ethics that applies to directors, officers and employees of the Company. This code has been posted on our website, www.spark.net. Information contained on, or that can be accessed through, our website does not constitute a part of this annual report and is not incorporated by reference herein. Waivers of our code of ethics may only be granted by the board of directors. Under Item 16B of Form 20-F, if a waiver or amendment of the code of ethics applies to the persons specified in Item 16B(a) of the Form 20-F and relates to standards promoting any of the values described in Item 16B(b) of Form 20-F, we will disclose such waiver or amendment (i) on our website within five business days following the date of amendment or waiver in accordance with the requirements of Instruction 4 to such Item 16B or (ii) through the filing of a 6-K. We granted no waivers under our code of ethics in 2018.

Item 16C. Principal accountant fees and services.

Fees paid to the Auditors

The following table sets forth, for each of the years indicated, the fees billed to us by our independent registered public accounting firm for audit and non audit services.

(in € thousands)	December 31,	
	2018	2017
Audit fees ⁽¹⁾	548	714
Audit-related fees ⁽¹⁾	50	—
Tax fees ⁽²⁾	8	64
Other ⁽³⁾	—	568
Total	606	1,346

(1) Audit fees for 2018 and 2017 include costs associated with the half year and annual audits, and statutory audits required internationally.

Audit-related fees for 2018 include services related to a Form F-1 filing.

(2) Tax fees for 2018 represent Israel and United Kingdom tax compliance. Tax fees for 2017 include tax due diligence in connection with the Affinitas / Spark Merger.

(3) Other fees for 2017 represent due diligence and prospectus related services in connection with the Affinitas / Spark Merger.

Audit Committee's Pre-Approval Policies and Procedures

Our audit committee pre-approved all audit and non-audit services provided to us and to our subsidiaries during the periods listed above.

Item 16D. Exemptions from the listing standards for audit committees.

Not applicable.

Item 16E. Purchases of equity securities by the issuer and affiliated purchasers.

During the twelve months ended December 31, 2018, the Company did not make any stock repurchases.

As of December 31, 2018, the Company held 18,070 (December 31, 2017: 23,667) ordinary shares as treasury shares, in accordance with local law. The treasury shares were exchanged without any consideration in the course of establishing the Chardonnay Trust in connection with the Affinitas / Spark Merger. The treasury shares are recognized at par value and deducted from the ordinary shares of subscribed capital outstanding at December 31, 2018.

Item 16F. Change in registrant's certifying accountant.

Not applicable.

Item 16G. Corporate governance.

As a foreign private issuer with ADSs listed on the NYSE American, we are permitted to comply with the disclosure and corporate governance rules applicable to foreign private issuers, which differ in some respects from the disclosure and corporate governance rules applicable to a domestic company. We intend to comply with NYSE American corporate governance requirements applicable to U.S. issuers. However, as a foreign private issuer incorporated in Germany, in the future we may choose to follow home country corporate governance practices in lieu of certain NYSE American corporate governance requirements.

Item 16H. Mine safety disclosure.

Not applicable.

PART III**Item 17. Financial Statements.**

Not applicable.

Item 18. Financial Statements.

See Financial Statements included at the end of this report.

Item 19. Exhibits.**Exhibits and Financial Statement Schedules**

Exhibit No.	Description
<u>1.1</u>	<u>Spark Networks SE Amended Articles of Association (incorporated by reference to Exhibit 99.1 to the Registrant's Form 6-K filed with the SEC on June 8, 2018)</u>
<u>1.2</u>	<u>Form of Rules of Procedure for the Administrative Board of Spark Networks SE (incorporated by reference to Exhibit 3.2 to the registrant's Registration Statement on Form F-4/A (File No. 333-220000) filed with the Securities and Exchange Commission on September 29, 2017)</u>

- [1.3](#) [Rules of Procedure for the Administrative Board of Spark Networks SE \(incorporated by reference to Exhibit 3.1 of the registrant's Current Report on Form 6-K filed with the Securities and Exchange Commission on November 7, 2017\)](#)
- [2.1](#) [Form of Specimen Certificate representing Ordinary Shares of Spark Networks SE \(incorporated by reference to Exhibit 4.1 to Amendment No. 4 to the registrant's Registration Statement on Form F-4/A \(File No. 333-220000\) filed with the Securities and Exchange Commission on September 29, 2017\)](#)
- [2.2](#) [Deposit Agreement \(incorporated by reference to Exhibit 1 to the Registration Statement of Spark Networks SE/ADR on Form F-6 \(File No. 333-220610\)\)](#)
- [2.3](#) [Form of American Depositary Receipt \(incorporated by reference to Exhibit A of Exhibit 1 to the Registration Statement of Spark Networks SE/ADR on Form F-6 \(File No. 333-220610\)\)](#)
- [2.4](#) [Spark Networks SE Virtual Stock Option Plan, dated November 2017, including forms of agreements \(incorporated by reference to Exhibit 4.1 of the registrant's Registration Statement Form S-8 filed with the Securities and Exchange Commission on December 22, 2017\)](#)
- [2.5](#) [Spark Networks, Inc. 2007 Omnibus Incentive Plan, including forms of agreements \(incorporated by reference to Exhibit 10.6 of Spark Networks, Inc.'s Current Report on Form 8-K filed with the Securities and Exchange Commission on July 9, 2007\)](#)
- [2.6](#) [Spark Networks SE Virtual Stock Option Plan, dated March 2018 \(incorporated by reference to Exhibit 4.6 to the registrant's Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 25, 2018\)](#)
- [2.7](#) [Form of Registration Rights Agreement \(incorporated by reference to Annex E to Amendment No. 4 to the registrant's Registration Statement on Form F-4/A \(File No. 333-220000\) filed with the Securities and Exchange Commission on September 29, 2017\)](#)
- [4.1](#) [Voting Agreement \(incorporated by reference to Annex B to Amendment No. 4 to the registrant's Registration Statement on Form F-4/A \(File No. 333-220000\) filed with the Securities and Exchange Commission on September 29, 2017\)](#)
- [4.2](#) [Support Agreement \(incorporated by reference to Annex C to Amendment No. 4 to the registrant's Registration Statement on Form F-4/A \(File No. 333-220000\) filed with the Securities and Exchange Commission on September 29, 2017\)](#)
- [4.3](#) [Form of Registration Rights Agreement \(incorporated by reference to Annex E to Amendment No. 4 to the registrant's Registration Statement on Form F-4/A \(File No. 333-220000\) filed with the Securities and Exchange Commission on September 29, 2017\)](#)
- [4.4](#) [Form of Lock-up Agreements \(incorporated by reference to Annex D to Amendment No. 4 to the registrant's Registration Statement on Form F-4/A \(File No. 333-220000\) filed with the Securities and Exchange Commission on September 29, 2017\)](#)
- [4.5](#) [General Conditions of Sale \(English translation\) dated as of October 27, 2010, among Typhon SAS and Samadhi SAS \(incorporated by reference to Exhibit 10.8 to Amendment No. 4 to the registrant's Registration Statement on Form F-4/A \(File No. 333-220000\) filed with the Securities and Exchange Commission on September 29, 2017\)](#)
- [4.6](#) [Arrangement between Host Europe Solutions GmbH and Affinitas GmbH, dated May 11, 2015, which is subject to the "Managed Hosting General Terms and Conditions" attached thereto \(English Translation\) \(incorporated by reference to Exhibit 10.9 to Amendment No. 4 to the registrant's Registration Statement on Form F-4/A \(File No. 333-220000\) filed with the Securities and Exchange Commission on September 29, 2017\)](#)
- [4.7](#) [Framework Agreement/Master Service Agreement \(Contract for colocation services\) \(English translation\) dated as of March 23, 2016, among IPB Internet Provider in Berlin GmbH and Affinitas GmbH \(incorporated by reference to Exhibit 10.7 to Amendment No. 4 to the registrant's Registration Statement on Form F-4/A \(File No. 333-220000\) filed with the Securities and Exchange Commission on September 29, 2017\)](#)
- [4.8](#) [Loan Agreement dated as of September 21, 2016, among certain stockholders of Affinitas GmbH, as lenders, and Affinitas GmbH, as borrower \(incorporated by reference to Exhibit 10.5 to Amendment No. 4 to the registrant's Registration Statement on Form F-4/A \(File No. 333-220000\) filed with the Securities and Exchange Commission on September 29, 2017\)](#)
- [4.9](#) [Securities Purchase Agreement concerning Samadhi SAS, dated as of September 30, 2016, among the Stockholders of Samadhi SAS listed on Schedule A1 and Affinitas \(incorporated by reference to Exhibit 10.6 to Amendment No. 4 to the registrant's Registration Statement on Form F-4/A \(File No. 333-220000\) filed with the Securities and Exchange Commission on September 29, 2017\)](#)
- [4.10](#) [Agreement and Plan of Merger, dated May 2, 2017 \(incorporated by reference to Annex A to Amendment No. 4 to the registrant's Registration Statement on Form F-4/A \(File No. 333-220000\) filed with the Securities and Exchange Commission on September 29, 2017\)](#)

- [4.11](#) [Senior Facilities Agreement dated March 28, 2018, among Spark Networks SE, Silicon Valley Bank, as arranger, agent and security agent, the other lenders party thereto from time to time, and certain subsidiaries of Spark Networks SE party thereto. \(incorporated by reference to Exhibit 10.1 of the registrant's Current Report on Form 6-K filed with the Securities and Exchange Commission on April 2, 2018\)](#)
- [4.12*](#) [Managing Director Service Agreement between Jeronimo Folguiera and Spark Networks SE, effective December 1, 2017](#)
- [4.13*](#) [Amendment Agreement between Jeronimo Folguiera and Spark Networks SE, effective April 2, 2018](#)
- [4.14*](#) [Managing Director Service Agreement between Robert O'Hare and Spark Networks SE, dated January 11, 2018](#)
- [4.15*](#) [Managing Director Service Agreement between Michael Schrezenmaier and Spark Networks SE, effective December 1, 2017](#)
- [4.16*](#) [Amendment Agreement between Michael Schrezenmaier and Spark Networks SE, effective April 2, 2018](#)
- [4.17*](#) [Third Amended and Restated Employment Agreement between Robert O'Hare and Spark Networks Inc., effective December 22, 2018](#)
- [4.18*](#) [Employment Contract between Benjamin Hoskins and Spark Networks Services GmbH \(formerly Affinitas GmbH\), dated September 27, 2016](#)
- [4.19*](#) [Amendment Contract between Benjamin Hoskins and Spark Networks Services GmbH \(formerly Affinitas GmbH\), dated October 1, 2018](#)
- [8.1](#) [List of Subsidiaries of Spark Networks SE \(incorporated by reference to Exhibit 21.1 to Amendment No. 4 to the registrant's Registration Statement on Form F-4/A \(File No. 333-220000\) filed with the Securities and Exchange Commission on September 29, 2017\)](#)
- [12.1*](#) [Certification of Principal Executive Officer Pursuant to Rules 13a-14\(a\) and 15d-14\(a\) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002](#)
- [12.2*](#) [Certification of Principal Financial Officer Pursuant to Rules 13a-14\(a\) and 15d-14\(a\) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002](#)
- [13.1*](#) [Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002](#)
- [13.2*](#) [Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002](#)
- [15.1*](#) [Consent of KPMG AG Wirtschaftsprüfungsgesellschaft, Independent Registered Public Accounting Firm](#)
- 101.INS* XBRL Instance Document
- 101.SCH* XBRL Taxonomy Extension Schema Document
- 101.CAL* XBRL Taxonomy Extension Calculation Linkbase Document
- 101.DEF* XBRL Taxonomy Extension Definition Linkbase Document
- 101.LAB* XBRL Taxonomy Extension Label Linkbase Document
- 101.PRE* XBRL Taxonomy Extension Presentation Linkbase Document

* Filed herewith

SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

Spark Networks SE

Date: April 29, 2019

By: _____
/s/ Robert W. O'Hare
Robert W. O'Hare
Chief Financial Officer

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Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of Spark Networks SE:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Spark Networks SE and subsidiaries (the Company) as of December 31, 2018 and 2017, and the related consolidated statements of operations and comprehensive loss/income, statements of shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2018, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the express purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG AG Wirtschaftsprüfungsgesellschaft

We have served as the Company's auditor since 2013.

April 26, 2019
Hamburg, Germany

Spark Networks SE
Consolidated Balance Sheets
(in € thousands)

	Note	December 31, 2018	December 31, 2017
ASSETS			
Non-current assets		44,729	47,148
Intangible assets and goodwill	5.1	33,015	35,136
Internally generated software		2,221	3,503
Licenses and domains		209	128
Brands and trademarks		4,894	4,917
Purchased software		23	—
Intangible assets under development		3,691	1,090
Other intangible assets		1,173	2,314
Goodwill		20,804	23,184
Property, plant and equipment	5.2	2,015	2,082
Leasehold improvements		127	186
Other and office equipment		1,884	373
Property, plant and equipment under construction		4	1,523
Other non-current financial assets	5.4	24	23
Other non-current non-financial assets	5.5	271	—
Deferred tax assets	5.6	9,404	9,907
Current assets		18,133	22,034
Current trade and other receivables		7,004	13,820
Trade receivables	5.3	3,042	6,814
Other current financial assets	5.4	914	3,156
Other assets	5.5	3,048	3,850
Current income tax assets		34	—
Cash and cash equivalents	5.7	11,095	8,214
TOTAL ASSETS		62,862	69,182
SHAREHOLDERS' EQUITY AND LIABILITIES			
Shareholders' equity	5.8	19,409	19,477
Subscribed capital		1,317	1,317
Capital reserves		49,365	48,877
Share-based payment reserve	4.13	4,149	2,747
Accumulated deficit		(36,156)	(32,581)
Accumulated other comprehensive income		734	(883)
Non-current liabilities		9,582	765
Non-current borrowings	5.9	8,375	—
Other non-current provisions	5.10	16	17
Other non-current financial liabilities	5.11	54	—
Deferred tax liabilities	5.13	1,132	725
Non-current contract liabilities	5.15	5	23
Current liabilities		33,871	48,940
Current borrowings	5.9	3,750	5,850
Other current provisions	5.10	305	1,159
Current trade and other payables		12,863	21,291
Trade payables	7.1	10,166	11,489
Other current financial liabilities	5.11	878	6,515
Other liabilities	5.12	1,819	3,287
Current income tax liabilities	5.14	349	286
Current contract liabilities	5.15	16,604	20,354
Total liabilities		43,453	49,705
TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES		62,862	69,182

The accompanying notes are an integral part of these consolidated financial statements.

Spark Networks SE
Consolidated Statements of Operations and Comprehensive Loss/Income
(in € thousands, except per share data)

	Note	Years Ended December 31,		
		2018	2017	2016
Continuing operations				
Revenue	4.1 / 4.4	104,551	85,637	73,491
Cost of revenue	4.5	(69,490)	(58,776)	(51,202)
Gross profit		35,061	26,861	22,289
Other income	4.6	240	54	126
Other operating expenses		(36,299)	(32,030)	(19,742)
Sales and marketing expenses	4.7	(4,938)	(5,540)	(3,919)
Customer service expenses	4.8	(4,626)	(3,971)	(2,791)
Technical operations and development expenses	4.9	(7,195)	(6,428)	(3,305)
General and administrative expenses	4.10	(19,540)	(16,091)	(9,727)
Operating (loss)/profit		(998)	(5,115)	2,673
Interest income and similar income		478	239	157
Interest expense and similar charges		(1,436)	(782)	(425)
Net finance expenses	4.11	(958)	(543)	(268)
(Loss)/income before taxes		(1,956)	(5,658)	2,405
Income tax benefit (expense)	4.14	(1,147)	84	(1,082)
(Loss)/income from continuing operations		(3,103)	(5,574)	1,323
Discontinued operations				
Loss from discontinued operations, net of tax	4.2	—	—	(632)
Net (loss)/income		(3,103)	(5,574)	691
Other comprehensive (loss)/income		1,617	(883)	—
Total comprehensive (loss)/income		(1,486)	(6,457)	691
Earnings per share				
Basic earnings/(loss) per share (€)	4.15	(2.39)	(24.23)	27.64
Diluted earnings/(loss) per share (€)	4.15	(2.39)	(24.23)	27.64
Earnings per share - continuing operations				
Basic earnings/(loss) per share (€)	4.15	(2.39)	(24.23)	52.92
Diluted earnings/(loss) per share (€)	4.15	(2.39)	(24.23)	52.92

The accompanying notes are an integral part of these consolidated financial statements.

Spark Networks SE
Consolidated Statement of Shareholders' Equity
(in € thousands)

	Note	Subscribed capital	Capital reserves		Share-based payment reserve	Accumulated deficit	Accumulated other comprehensive income	Total shareholders' equity
			Treasury share reserves	Other capital reserves				
Balance as of January 1, 2016	5.8	25	—	—	1,268	(27,698)	—	(26,405)
Net income		—	—	—	—	691	—	691
Total comprehensive income		—	—	—	—	691	—	691
Share-based compensation		—	—	—	991	—	—	991
December 31, 2016	5.8	25	—	—	2,259	(27,007)	—	(24,723)
Net loss		—	—	—	—	(5,574)	—	(5,574)
Currency translation adjustment		—	—	—	—	—	(883)	(883)
Total comprehensive loss		—	—	—	—	(5,574)	(883)	(6,457)
Reorganization		945	—	19,725	—	—	—	20,670
Issuance of new shares		347	—	29,152	—	—	—	29,499
Purchase of treasury shares in connection with establishing the Chardonnay Trust		—	(24)	24	—	—	—	—
Share-based compensation	4.13	—	—	—	488	—	—	488
December 31, 2017	5.8	1,317	(24)	48,901	2,747	(32,581)	(883)	19,477
Net loss		—	—	—	—	(3,103)	—	(3,103)
Currency translation adjustment		—	—	—	—	—	1,617	1,617
Total comprehensive loss		—	—	—	—	(3,103)	1,617	(1,486)
Issuance of new shares		—	6	482	—	—	—	488
Cash settlement of share-based payment arrangements	4.13	—	—	—	(2,689)	(472)	—	(3,161)
Share-based compensation	4.12, 4.13	—	—	—	4,091	—	—	4,091
December 31, 2018	5.8	1,317	(18)	49,383	4,149	(36,156)	734	19,409

The accompanying notes are an integral part of these consolidated financial statements.

Spark Networks SE
Consolidated Statements of Cash Flows
(in € thousands)

	Note	Years Ended December 31,		
		2018	2017	2016
Net (loss)/income		(3,103)	(5,574)	691
Non-cash items:				
Depreciation of property, plant, and equipment	5.2	385	203	251
Amortization of intangible assets	5.1	3,180	2,881	1,027
Impairment of intangible assets and goodwill	5.1	3,324	25	—
Net finance expenses	4.11	958	543	268
Foreign currency gains and losses	4.11	(388)	(34)	(139)
Gain from the disposal of discontinued operations	4.2	—	—	(381)
Gain/loss on disposal of tangible and intangible assets	5.2	—	8	18
Share-based compensation expense	4.13	4,091	488	991
Change in operating assets and liabilities:				
Change in contract liabilities	5.15	(3,895)	739	2,797
Changes in tax positions	4.14	932	(232)	564
Change in provisions	5.10	(906)	(594)	608
Change in other operating assets and liabilities		112	16	—
Changes in working capital:				
Change in current trade and other receivables	5.3	6,990	(3,302)	(477)
Change in current trade and other payables	7.1	(2,781)	4,162	751
Cash inflow (outflow) from operating activities		8,899	(671)	6,969
Interest paid		(442)	(509)	(129)
Net cash inflow (outflow) from operating activities		8,457	(1,180)	6,840
Expenditure for investments in intangible assets	5.1	(3,219)	(2,418)	(1,845)
Expenditure for investments in property, plant and equipment	5.2	(312)	(1,755)	(147)
Cash acquired in business combinations		—	6,606	—
Cash paid for business combinations, net of cash acquired	2.2	—	—	(5,643)
Settlement of contingent consideration in connection with a business combination		—	(295)	—
Proceeds from the disposal of discontinued operations		—	250	—
Disposal of discontinued operations, net of cash disposed of	4.2	—	—	18
Cash inflow (outflow) from investing activities		(3,531)	2,388	(7,617)
Proceeds from stock option exercises		483	120	—
Proceeds from bank loans	5.9	14,910	—	4
Repayment of bank loans		(2,814)	(5)	—
Payments directly related to loan facility		(60)	—	—
Cash paid for settlement of share-based payment arrangements	4.13	(3,161)	—	—
Settlement of deferred compensation in connection with a business combination		—	(1,000)	—
Proceeds from shareholder loans	5.9, 8.1	220	—	5,850
Repayment of shareholder loans	5.9, 8.1	(6,157)	—	—
Cash merger consideration payments to Affinitas shareholders	8.1	(5,730)	—	—
Cash inflow (outflow) from financing activities		(2,309)	(885)	5,854
Net change in cash and cash equivalents		2,617	323	5,077
Cash and cash equivalents at January 1		8,214	8,064	2,987
Effects of exchange rate fluctuations on cash		264	(173)	—
Cash and cash equivalents at December 31		11,095	8,214	8,064

The accompanying notes are an integral part of these consolidated financial statements.

Spark Networks SE
Notes to Consolidated Financial Statements

Note 1. Description of Business and Basis for Preparation

1.1 Reporting Entity

Spark Networks SE is domiciled in Germany. The company's office is at Kohlfürter Str. 41/43, 10999 Berlin, registered with the commercial register (*Handelsregister*) of the local court (*Amtsgericht*) of Munich, Germany, under HRB 232591. The Group consists of Spark Networks SE ("Spark Networks") and its fully owned subsidiaries. The Group is a global operator of online dating websites and targets professionals and university-educated singles who are looking for a serious, long-term relationship. The Group reports two reportable segments – North America and International – and operates a portfolio of premium brands including EliteSingles, Jdate, Christian Mingle, SilverSingles, eDarling, JSwipe, and AttractiveWorld in 29 countries and 16 languages. Spark Networks SE is publicly listed on the NYSE American exchange under the ticker symbol "LOV".

The Group was formed in 2017 through the merger of Affinitas GmbH ("Affinitas") and Spark Networks, Inc. ("Spark") with Affinitas as the accounting acquirer and, therefore, the accounting predecessor of Spark Networks. As such, these consolidated financial statements are presented using the pre-combination book values (including comparatives) from the consolidated financial statements of Affinitas. The merger with Spark, which became effective on November 2, 2017, is accounted for as a business combination using the acquisition method.

1.2 Basis of Accounting

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB"). They were authorized for issuance by the Group's management board on April 26, 2019.

1.3 Functional and presentation currency

These consolidated financial statements are presented in euro, which is the Group's presentation currency. All amounts have been rounded to the nearest thousand, unless otherwise indicated. The financial statements of the Group's foreign subsidiaries are prepared using the local currency as the subsidiary's functional currency. The Group translates the assets and liabilities into euro using period-end exchange rates at the reporting date, and revenue and expenses using average exchange rates for the year. The resulting translation gain or loss is included in accumulated other comprehensive income and is excluded from net loss.

1.4 Use of judgments and estimates

In preparing these consolidated financial statements, management has made judgments, estimates and assumptions that affect the application of the Group's accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to estimates are recognized prospectively.

Assumptions and estimation uncertainties

Information about assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment in the year ending December 31, 2018 is included in the following notes:

- recognition and measurement of provisions and contingencies: key assumptions about the likelihood and magnitude of an outflow of resources;
- impairment test: key assumptions regarding underlying recoverable amounts;
- classification and measurement of virtual employee share option plan: key assumptions underlying the classification of the virtual employee share-option plans as equity-settled, the binomial option-pricing valuation model to calculate the fair value of granted share-based awards;
- recognition and measurement of internally generated software: key assumptions about the future economic benefits expected from those intangible assets;

- recognition of deferred tax assets: availability of future taxable profit against which tax losses carried forward can be used;
- acquisition of subsidiaries: fair value of the consideration transferred (including contingent consideration) and fair value of the assets acquired and liabilities assumed in accordance with IFRS 3 Business Combinations (“IFRS 3”); and
- recognition of revenue: the amount of revenue is based on estimates about future refunds and chargebacks. Revenue is realized to the extent that it is probable that the future economic benefits flow to the Group.

Measurement of fair values

A number of the Group’s accounting policies and disclosures require the measurement of fair values, for both financial and non-financial assets and liabilities.

The Group regularly reviews significant inputs and valuation adjustments.

If third party information, such as broker quotes or pricing services, is used to measure fair values, then the Group assesses the evidence obtained from the third parties to support the conclusion that these valuations meet the requirements of IFRS, including the level in the fair value hierarchy in which the valuations should be classified.

When measuring the fair value of an asset or a liability, the Group uses observable market data as far as possible. Fair values are categorized into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

If the inputs used to measure the fair value of an asset or a liability fall into different levels of the fair value hierarchy, then the fair value measurement is categorized in its entirety at the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement.

The Group recognizes transfers between levels of the fair value hierarchy at the end of the reporting period during which the change has occurred.

Further information about the assumptions made in measuring fair values is included in the following notes:

- share-based payment arrangements;
- financial instruments; and
- assets acquired and liabilities assumed in a business combination (acquisition of subsidiary)

1.5 Basis of measurement

The consolidated financial statements have been prepared on the historical cost basis except for the contingent consideration assumed in a business combination, which is measured at fair value on each reporting date.

1.6 New standards, interpretations and amendments to standards and interpretations

A number of new standards and amendments to standards are effective for annual periods beginning after January 1, 2019, and earlier application is permitted; however, the Group has not early adopted the following new or amended standards in preparing these consolidated financial statements.

	Standard / interpretation
IFRS16	Leases
Amendments to IAS 19	Amendments to 'Plan Amendment, Curtailment or Settlement'
Amendments to IAS 28	Amendments to 'Long-term Interest in Associates and Joint Ventures' - Clarifications
Amendments to IFRS 9	Amendments to 'Prepayment Features with Negative Compensation' - Clarifications
Annual Improvements	Annual improvements to IFRS standards 2015-2017 cycle (IFRS 3 Business Combinations, IFRS 11 Joint Arrangements, IAS 12 Income Taxes, IAS 23 Borrowing Costs)
IFRIC 23	Uncertainty over Income Tax Treatments

None of these standards, amendments to standards, or new interpretations are expected to have a significant effect on the consolidated financial statements of the Group (except those discussed below).

The following standard is effective for periods starting on or after January 1, 2019:

IFRS 16 Leases

IFRS 16 introduces a single, on-balance sheet lease accounting model for lessees. A lessee recognizes a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. There are optional exemptions for short-term leases and leases of low value items. Lessor accounting remains similar to the current standard - i.e. lessors continue to classify leases as finance or operating leases.

IFRS 16 replaces existing leases guidance including IAS 17 Leases, IFRIC 4 Determining whether an Arrangement contains a Lease, SIC-15 Operating Leases-Incentives and SIC-27 Evaluating the Substance of Transactions Involving the Legal Form of a Lease. The standard is effective for annual periods beginning on or after January 1, 2019. Early adoption is permitted for entities that apply IFRS 15 Revenue from Contracts with Customers at or before the date of initial application of IFRS 16.

The Group adopted IFRS 16 on January 1, 2019. Management has assessed the impact of the guidance and expects an immaterial negative impact on its operating results and an increase in its assets and liabilities in the Consolidated Balance Sheet of approximately €1,300 thousand.

The following standards were effective for annual periods starting on January 1, 2018, and were adopted by the Group for the first time in these consolidated financial statements:

IFRS 15 Revenue from Contracts with Customers

IFRS 15 establishes a comprehensive framework for determining whether, how much, and when revenue is recognized. It replaces existing revenue recognition guidance, including IAS 18 Revenue, IAS 11 Construction Contracts, and IFRIC 13 Customer Loyalty Programs. IFRS 15 is effective for annual periods beginning on or after January 1, 2018. The Group adopted IFRS 15 as of January 1, 2018 for the first time, applying the modified retrospective approach. Under the modified retrospective approach, the Group applied the new standards to all new contracts initiated on/after the effective date, and, for contracts which have remaining obligations as of the effective date, the Group entered an adjustment, if any, to the opening balance of retained earnings account. For contracts that had an original duration of one year or less, the Company used the practical expedient available under IFRS 15 applicable to such contracts and did not consider the time value of money or disclose the transaction price allocated to unfulfilled performance obligations as of the end of the reporting period. There was no cumulative impact to the Group's retained earnings at January 1, 2018 from the adoption of IFRS 15. Under the chosen transition method, comparative information has not been restated and the comparative period disclosures repeat those disclosures made in the prior year.

The contract liabilities balance consists of advance payments that are received or due in advance of the Company's performance. At January 1, 2018, the current deferred income balance of €20,354 thousand was reclassified to the newly created financial statement caption current contract liabilities. The non-current deferred income balance of €23 thousand was reclassified to the newly created financial statement caption non-current contract liabilities.

Furthermore, the Group recognized a refund liability for estimated refunds resulting from the customer's statutory right to revoke contracts for a specified period after the contract signing date. At January 1, 2018, the Group reclassified €120 thousand

from the financial statement caption Other current provisions to the financial statement caption Other current financial liabilities.

For more information about our revenue recognition policy, see Note 3.2.

IFRS 9 Financial Instruments

IFRS 9 replaces the provisions of IAS 39 *Financial Instruments: Recognition and Measurement* ("IAS 39") that relate to the recognition, classification and measurement of financial assets and financial liabilities, derecognition of financial instruments, impairment of financial assets, and hedge accounting. The Group adopted IFRS 9 with a date of transition of January 1, 2018. The adoption of IFRS 9 has resulted in changes in our accounting policies for recognition, classification, and measurement of financial assets and financial liabilities and impairment of financial assets.

As permitted by the transition provisions of IFRS 9, the Group elected not to restate the comparative figures and recognize any adjustment to carrying amounts of financial assets and liabilities to the opening balance of retained earnings. There is no cumulative impact to the Group's retained earnings at January 1, 2018 from the adoption of IFRS 9.

IFRS 9 also significantly amends other standards dealing with financial instruments such as IFRS 7 *Financial Instruments: Disclosures*. Since comparative amounts were not restated, the comparative period disclosures repeat those disclosures made in the prior year. Consequently, for notes disclosures, the consequential amendment to IFRS 7 disclosures has only been applied to the current period.

The following table shows the original classification of financial assets and liabilities in accordance with IAS 39 and the new classification under IFRS 9 for each class of the Group's financial assets and liabilities at January 1, 2018.

There was no impact to the carrying amounts of financial assets and liabilities with the adoption of IFRS 9.

January 1, 2018 (in € thousands)	Classification pursuant to IAS 39	Original carrying amount pursuant to IAS 39	Classification pursuant to IFRS 9	New carrying amount pursuant to IFRS 9
Deposits	LaR	20	AC	20
Other receivables	LaR	3	AC	3
Other non-current financial assets		23		23
Trade receivables	LaR	6,814	AC	6,814
Deposits	LaR	2,099	AC	2,099
Other receivables	LaR	1,057	AC	1,057
Other current financial assets		3,156		3,156
Cash and cash equivalents	LaR	8,214	AC	8,214
Total financial assets		18,207		18,207
Borrowings	OFL	5,850	AC	5,850
Trade payables	OFL	11,489	AC	11,489
Other liabilities	OFL	6,515	AC	6,515
Other current financial liabilities		6,515		6,515
Total financial liabilities		23,854		23,854

For more information about financial instruments, see Note 3.13.

Note 2. Basis of Consolidation

The accompanying consolidated financial statements include the accounts of Spark Networks as the parent company and all of its wholly owned subsidiaries. All significant intercompany transactions and balances have been eliminated upon consolidation.

Subsidiaries are entities controlled by the Group. The Group controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The financial statements of subsidiaries are included in the consolidated financial statements from the date on which control commences until the date on which control ceases.

The Group accounts for business combinations using the acquisition method when control is transferred to the Group. The consideration transferred in the acquisition is generally measured at fair value, as are the identifiable net assets acquired. Under the acquisition method of accounting, Spark Network allocates the fair value of purchase consideration to the tangible assets acquired, liabilities assumed, and intangible assets acquired based on their estimated fair values. The excess of the purchase consideration over the fair values of these identifiable assets and liabilities is recorded as goodwill. Such valuations require Spark Networks' management to make significant estimates and assumptions, especially with respect to estimating the fair value and expected useful life assigned to each class of assets and liabilities acquired. Different classes of assets will have varying useful lives.

Spark Networks' management's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates. During the measurement period, which can be up to one year from the acquisition date, Spark Networks may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Upon the conclusion of the measurement period, any subsequent adjustments are recorded in net financial results in the Consolidated Statements of Comprehensive Loss/Income.

Any goodwill that arises is tested annually for impairment. Any gain on a bargain purchase is recognized in profit or loss immediately. Transaction costs are expensed as incurred. The consideration transferred does not include amounts related to the settlement of pre-existing relationships. Such amounts are generally recognized in profit or loss. Any contingent consideration is measured at fair value at the date of acquisition. If an obligation to pay contingent consideration that meets the definition of a financial instrument is classified as equity, then it is not remeasured and settlement is accounted for within equity. Otherwise, other contingent consideration is remeasured at fair value at each reporting date and subsequent changes in the fair value of the contingent consideration are recognized in profit or loss.

2.1 Group composition

The consolidated financial statements comprise the following fully consolidated subsidiaries:

Entity	Equity Share as of December 31, 2018	Equity Share as of December 31, 2017
Spark Networks Services GmbH (previously, Affinitas GmbH)	100%	100%
Samadhi SAS (acquired on September 30, 2016)	100%	100%
EliteSingles LLC (formed on April 1, 2015)	100%	100%
Spark Networks, Inc. (acquired on November 2, 2017)	100%	100%
Spark Networks Limited (acquired on November 2, 2017)	100%	100%
LOV USA, LLC (acquired on November 2, 2017)	100%	100%
Spark Networks USA, LLC (acquired on November 2, 2017)	100%	100%
Spark Networks (Israel) Limited (acquired on November 2, 2017)	100%	100%
JDate Limited (acquired on November 2, 2017)	100%	100%
HurryDate, LLC (acquired on November 2, 2017)	100%	100%
MingleMatch, Inc. (acquired on November 2, 2017)	100%	100%
Kizmeet, Inc. (acquired on November 2, 2017)	100%	100%
Reseaux Spark Canada Ltd. (acquired on November 2, 2017)	100%	100%
SocialNet, Inc. (acquired on November 2, 2017)	100%	100%
SN Events, Inc. (acquired on November 2, 2017)	100%	100%
SN Holdco, LLC (acquired on November 2, 2017)	100%	100%
Smooch Labs, Inc. (acquired on November 2, 2017)	100%	100%
SilverSingles LLC (formed on December 22, 2018)	100%	—%

2.2 Merger with Spark Networks, Inc. on November 2, 2017

On May 2, 2017, Affinitas entered into a merger agreement with Spark, a publicly listed company located in Los Angeles, California, United States of America, pursuant to which the parties agreed to combine the businesses of Spark and Affinitas under Spark Networks SE (the “Affinitas / Spark Merger”). Spark Networks SE was formed at the end of March 2017 and was acquired by Affinitas in April 2017 for the purpose of effecting the business combination and becoming the ultimate holding company. The Affinitas / Spark Merger became effective as of November 2, 2017 and is accounted for as a business combination in accordance with IFRS 3, whereby Affinitas is the accounting acquirer.

The Affinitas / Spark Merger was effected in three principal steps:

- **Affinitas Share Transfer:** Each stakeholder has purchased stakeholder’s pro rata share of the 120,000 Spark Networks Ordinary Shares previously owned by Affinitas for a total purchase price among all Affinitas stakeholders of €132 thousand, of which €120 thousand is related to the purchase of 120,000 Spark Networks Ordinary Shares and €12 thousand is related to transaction-related expenses.
- **Affinitas Share Exchange:** Following the Affinitas Share Transfer, Spark Networks acquired all of the Affinitas Shares from the Affinitas stakeholders in exchange for 849,861 Spark Networks Ordinary Shares and a payment by Spark Networks to the respective stakeholders of Affinitas of €5,730 thousand, after which Affinitas became a wholly owned subsidiary of Spark Networks and the former Affinitas stakeholders own all of the outstanding Spark Networks Ordinary Shares.
- **Merger:** Immediately after the Affinitas Share Exchange, Spark and Affinitas merged, with Spark surviving as a wholly-owned subsidiary of Spark Networks. In the Merger, each outstanding Spark Share has been converted into the right to receive a number of Spark Networks American Depositary Shares (“ADSs”) equal to the Adjustment Ratio, with each Spark Networks ADS representing 0.1 Spark Networks Ordinary Shares.

Spark, which was incorporated in 1998, is a leader in creating communities that help individuals form life-long relationships with others that share their interests and values. Spark’s core properties, Jdate and Christian Mingle, are communities geared

towards singles of the Jewish and Christian faiths. Through Spark’s websites and mobile applications, Spark helps members search for and communicate with other like-minded individuals. Along with these two core brands, Spark also operates a number of other niche-focused and international websites and mobile applications and maintains a physical presence in the United States.

The combination of Spark and Affinitas helps to create one of the world’s premier online dating platforms and creates a strong platform with the executive knowledge, operational experience and financial means to continue to grow organically and through acquisitions in an expanding and attractive digital industry.

The consideration transferred by Spark Networks to acquire 100% of the outstanding shares of Spark is comprised of the fair value of the Spark Networks Ordinary Shares issued to Spark stakeholders in connection with the closing of the Affinitas / Spark Merger on November 2, 2017 at a fixed ratio.

Neither Spark Networks nor Affinitas were public reporting companies at the time of the merger; therefore, fair value of their respective shares of common stock was not readily available. As Spark’s common stock was publicly traded in the active market, Affinitas’s and Spark’s management determined that Spark’s common stock was a more reliable measure to determine fair value of the consideration transferred in the Affinitas / Spark Merger. Using this approach, the purchase price was calculated as follows:

	Spark Networks, Inc.
	(in thousands)
Spark common stock outstanding as of November 2, 2017	34,701
Multiplied by Adjustment Ratio	0.1
New Spark ADSs to be issued, as converted	3,470
Spark common stock per share price as of November 2, 2017	\$ 0.99
USD to EUR exchange rate as of November 2, 2017	0.8587
Spark common stock per share price as of November 2, 2017	€ 0.85
Divided by Adjustment Ratio	0.1
Per share fair value of Spark common stock as of November 2, 2017	€ 8.50
Fair value of New Spark ADSs to be issued pursuant to the Business Combination	€ 29,499

Per the terms of the Affinitas / Spark Merger and the reorganization of the existing group prior to the business combination, Affinitas’s shareholders received a cash payout of €5,730 thousand and paid €132 thousand, of which €120 thousand is related to the purchase of 120,000 Spark Network Ordinary Shares and €12 thousand is related to transaction-related expenses. Those transaction-related expenses of €12 thousand have been included in “General and administrative expenses” during the year ended December 31, 2017.

The following table summarizes the recognized amounts of assets acquired and liabilities assumed at the date of acquisition:

in thousands	Acquisition date fair values	
Goodwill	€	20,453
Intangible assets		6,243
Property, plant and equipment		81
Non-current assets		27
Trade receivables		336
Other current assets		1,424
Cash and cash equivalents		6,606
Total assets		35,170
Current liabilities		(4,071)
Other liabilities		(41)
Deferred income		(1,559)
Net assets acquired	€	29,499

The goodwill balance is primarily attributed to the assembled workforce, expanded market opportunities and cost and other operating synergies anticipated upon the integration of the operations of Affinitas and Spark.

The group incurred costs relating to the merger of €7,520 thousand during the year ended December 31, 2017.

For the two months ended December 31, 2017, Spark contributed revenue of €2,719 thousand and losses of €2,679 thousand to the Group's results. If the acquisition had occurred on January 1, 2017, management estimates that consolidated revenue would have been €105,911 thousand. In determining these amounts, management applied adjustments required under the acquisition method of accounting, including a reduction in revenue of €943 thousand due to the write-offs of contract liabilities at the assumed date in the year ended December 31, 2017.

Note 3. Significant Accounting Policies

3.1 Foreign Currency Transactions and Balances

Foreign currency transactions, balances, and cash flows

Transactions in foreign currencies are translated into the respective functional currencies of the Group's subsidiaries at the exchange rates prevailing at the transaction date.

At each subsequent balance sheet date, monetary assets and liabilities denominated in foreign currencies are translated into the functional currency at the exchange rate at the reporting date. Non-monetary assets and liabilities that are measured at fair value in a foreign currency are translated into the functional currency at the exchange rate when the fair value was determined. Non-monetary items that are measured based on historical cost in a foreign currency are translated into the functional currency at the exchange rate at the date of the transaction. Exchange gains and losses arising on the settlement of foreign currency transactions and the translation of monetary assets and liabilities denominated in foreign currencies into the functional currency are recognized in net loss.

In the Consolidated Statements of Cash Flows, cash flows from foreign currency transactions have been translated into euro using average exchange rates for the year. This method does not differ significantly from using the exchange rates at the dates the cash flows occur. The effect of exchange rate fluctuations on cash and cash equivalents denominated in foreign currencies is recognized separately as the financial statement caption Effects of exchange rate fluctuations on cash in the Consolidated Statements of Cash Flows.

Translation of foreign operations

The translation of foreign operations into the presentation currency is based on the following criteria:

- Assets and liabilities are translated using period-end exchange rates at the reporting date;

- Income and expense are translated using average exchange rates for the year. This method does not differ significantly from using the exchange rate at the date of the transaction;
- Translation differences resulting from the application of the above criteria are recognized in other comprehensive income and are excluded from net loss.

3.2 Revenue Recognition and Contract Balances

Revenue Recognition

The Group recognizes revenue in accordance with IFRS 15. The Group accounts for a contract when it has approval and commitment from all parties, the rights of the parties and payment terms are identified, the contract has commercial substance and collectability of consideration is probable. Revenue is recognized when control of the promised services is transferred to our customers, and in an amount that reflects the consideration the Group is contractually due in exchange for those services. The Company's revenue is primarily derived directly from users in the form of recurring subscriptions. Subscription revenue is presented net of refunds and credit card chargebacks. Subscribers pay in advance, primarily by credit card or through mobile app stores, and subject to certain conditions identified in our terms and conditions. Revenue is initially deferred and is recognized using the straight-line method over the terms of the applicable subscription period, which primarily range from one to twelve months.

The objective of determining the transaction price is to estimate the amount of consideration the Group is due in exchange for services, including amounts that are variable. The Company determines the total transaction price at contract inception and reassesses this estimate each reporting period. The Company excludes from the measurement of transaction price all taxes assessed by governmental authorities that are both (i) imposed on and concurrent with a specific revenue-producing transaction and (ii) collected from customers. Accordingly, such tax amounts are not included as a component of revenue or cost of revenue.

For revenue earned through certain mobile applications, including iOS and Android, the Group recognizes subscription revenue gross of the application processing fees primarily because the Group is the primary obligor and it has the contractual right to determine the price paid by the subscriber. The Group records the related application processing fees as cost of revenue in the period incurred.

The Group also earns a small amount of revenue from advertising revenue. The Group records advertising revenue as it is earned and includes advertising revenue in the total revenue of each segment that generates advertising revenue.

Contract Balances

The contract liabilities balance consists of advance payments that are received or due in advance of the Company's performance. The Company's liabilities are reported on a contract by contract basis at the end of each reporting period. The Company generally classifies contract liabilities as current when the term of the applicable subscription period or expected completion of our performance obligation is one year or less.

3.3 Cost of Revenue

Cost of revenue consists primarily of direct marketing costs, compensation and other employee-related costs for personnel dedicated to maintaining Spark Networks' data centers, data center expenses, credit card fees and mobile application processing fees. The Group incurs substantial advertising expenses in order to generate traffic to our websites. These advertising costs consist of offline marketing, particularly television and out-of-home advertising, as well as online advertising and are directly attributable to the revenue the Group receives from its subscribers.

3.4 Employee benefits

Short-term employee benefits are expensed as the related service is provided. A liability is recognized for the amount expected to be paid if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

Share-based payment arrangements

Share-based compensation expense reflected in the Company's consolidated financial statements consists of expense related to the Affinitas virtual employee share option plan (the "Affinitas VESOP"), the Spark 2007 Omnibus Incentive Plan ("Spark

2007 Plan”), the Spark Networks 2017 virtual stock option plan (the “Spark Networks 2017 VSOP”) and the Spark Networks 2018 virtual stock option plan (the “Spark Networks 2018 VSOP”). The Affinitas VESOP was independently established by Affinitas in 2013 and the Spark 2007 Plan was independently established by Spark in 2007, in each case prior to the Affinitas / Spark Merger. In connection with the Affinitas / Spark Merger, the Affinitas VESOP was terminated and replaced by the Spark Networks 2017 VSOP. The Spark Networks 2017 VSOP was subsequently replaced by the Spark Networks 2018 VSOP in 2018. Share-based compensation expense incurred in periods prior to the close of the Affinitas / Spark Merger resulted solely from share-based compensation granted by Affinitas.

The grant-date fair value of equity-settled share-based payment arrangements granted to employees is generally recognized as an expense, with a corresponding increase in shareholders' equity over the vesting period of the awards. The amount recognized as an expense is adjusted to reflect the number of awards for which the related service and non-market performance conditions are expected to be met, such that the amount ultimately recognized is based on the number of awards that meet the related service and non-market performance conditions at the vesting date.

Under the Affinitas VESOP, Spark Networks had a choice of settlement whereby the cash amount or equal value in shares to be received by the beneficiaries for a single vested option shall equal the price or proceeds per common share in case of a change in control event (“Share Sale”) or an Initial Public Offering (“IPO”) of Affinitas’ shares minus the exercise price. In connection with the Affinitas / Spark Merger, shareholders of Affinitas elected to settle all the options outstanding at the merger date at a fixed valuation of €3,839 thousand, which was equivalent to a total equity value of €90 million for Affinitas. This equity value of Affinitas was determined based on the Spark share price and the exchange ratio that Affinitas and Spark agreed on in relation to the Affinitas / Spark Merger.

In connection with the Affinitas / Spark Merger, Spark established the Chardonnay Trust, with the purpose of holding such number of shares of Spark Networks SE ADSs as shall be necessary to satisfy the obligations under all unexercised Spark stock options awarded under the Spark 2007 Plan. Following the completion of the Affinitas / Spark Merger, Spark no longer has any rights to revoke or amend the Chardonnay Trust in a manner that is detrimental to Spark 2007 Plan participants.

In connection with the Affinitas / Spark Merger, each Spark stock option was converted into an award to acquire ADSs from the Chardonnay Trust, on the same terms and conditions as were applicable under the Spark stock option, and subject to adjustment based on the exchange ratio stipulated in the merger agreement. The shares underlying the ADSs held in the Chardonnay Trust are recognized as treasury stock within the Consolidated Statement of Shareholders' Equity.

During the year ended December 31, 2017, Spark Networks established the Spark Networks 2017 VSOP for selected executives and employees of Spark Networks and its subsidiaries, which entitles Spark Networks to a choice of settlement whereby the cash amount or equal value in ADSs to be received by the beneficiaries for a single vested option shall equal the market price per Spark Networks ADS minus the exercise price. Spark Networks' policy is to avoid cash payments to participants if possible, which means that settlement of the outstanding options is expected to be made in Spark Networks ADSs. Based on this stated policy, the arrangement is classified as equity-settled unless settlement in cash is most probable.

During the year ended December 31, 2018, Spark Networks replaced the Spark Networks 2017 VSOP by establishing the Spark Networks 2018 VSOP for selected executives and employees of Spark Networks and its subsidiaries if and to the extent that the plan participants under the Spark Networks 2017 VSOP have agreed to such replacement. Under the Spark Networks 2018 VSOP, Spark Networks granted participants a certain number of virtual stock options in exchange for options granted under the Spark Networks 2017 VSOP and/or a certain number of new virtual stock options, and can grant additional options in the future. The Spark Networks 2018 VSOP entitles Spark Networks to a choice of settlement whereby the cash amount or equal value in shares to be received by the beneficiaries for a single vested option shall equal the market price per Spark Networks ADS minus the exercise price. Based on Spark Networks' policy, the Spark Networks 2018 VSOP is classified as equity-settled.

The grant-date fair value of equity-settled share-based payment arrangements granted to employees is generally recognized as an expense, with a corresponding increase in shareholders' equity, over the vesting period of the awards. The amount recognized as an expense is adjusted to reflect the number of awards for which the related service and non-market performance conditions are expected to be met, such that the amount ultimately recognized is based on the number of awards that meet the related service and non-market performance conditions at the vesting date. For share-based payment awards with non-vesting conditions, the grant-date fair value of the share-based payment is measured to reflect such conditions and there is no true-up for differences between expected and actual outcomes. Spark Networks recognizes compensation expense on a straight-line basis from the beginning of the service period, even when the grant date is subsequent to the service commencement date. During the period between service commencement date and grant date, the share-based payment expense recognized is based on an estimated grant date fair value of the award. Once the grant date has been established for equity-settled awards, the estimated fair value is revised so that the expense recognized is based on the actual grant date fair value of the equity

instruments granted. For awards with graded-vesting features, each installment of the award is treated as a separate grant. This means that each installment is separately expensed over the related vesting period.

Spark Networks estimates the fair value of each stock option grant using a binomial option-pricing model, which uses as inputs the fair value per Spark Networks share and assumptions Spark Networks makes with respect to the volatility of Spark Networks shares, the expected terms of Spark Networks' stock options, the risk-free interest rates for a period that approximates the expected term of the stock option and the expected dividend yield.

Defined contribution plans

Obligations for contributions to defined contribution plans are expensed as the related service is provided. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available.

Defined benefit plans

Defined benefit pension plans consisted of unfunded plans, where benefits are paid directly by the Group and the related obligation is covered by a provision corresponding to the present value of future benefit payments. The provision was related to employees of Samadhi and was released in the fourth quarter of 2016.

Termination benefits

Termination benefits are recognized at the earlier of when the Group can no longer withdraw the offer of those benefits and when the Group recognizes costs for a restructuring under IAS 37 Provisions, Contingent Liabilities and Contingent Assets. If benefits are not expected to be settled wholly within 12 months of the reporting date, then they are discounted.

3.5 Lease payments

Payments made under operating lease agreements are recognized in profit or loss on a straight-line basis over the term of the lease.

3.6 Finance income and finance costs

The Group's finance income and finance costs include interest income and expense, translation gains and losses, as well as any change in the fair value of contingent consideration classified as financial liability. Interest income or expense is recognized using the effective interest method.

The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument to:

- the gross carrying amount of the financial asset; or
- the amortized cost of the financial liability

In calculating interest income and expense, the effective interest rate is applied to the gross carrying amount of the asset (when the asset is not credit-impaired) or to the amortized cost of the liability. However, for the financial assets that have become credit-impaired subsequent to initial recognition, interest income is calculated by applying the effective interest rate to the amortized cost of the financial asset. If the asset is no longer credit-impaired, then the calculation of interest income reverts to the gross basis.

3.7 Income tax

Income tax expense comprises current and deferred tax. It is recognized in profit or loss except to the extent that it relates to a business combination, or items recognized directly in equity or in other comprehensive loss/income.

Current tax

Current tax is based on the taxable income or loss for the year and any adjustment to the tax payable or receivable in respect of previous years. The amount of current tax is the best estimate of the tax amount expected to be paid or received that reflects uncertainty related to income taxes, if any. It is measured using tax rates enacted or substantively enacted at the reporting date.

Deferred tax

Deferred tax is recognized in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognized for:

- temporary differences on the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit or loss;
- temporary differences related to investments in subsidiaries, associates and joint arrangements to the extent that the Group is able to control the timing of the reversal of the temporary differences and it is probable that they will not reverse in the foreseeable future; and
- taxable temporary differences arising on the initial recognition of goodwill.

Deferred tax assets are recognized for unused tax losses, unused tax credits and deductible temporary differences to the extent that it is probable that future taxable profits will be available against which they can be used. Future taxable profits are determined based on business plans for individual subsidiaries in the Group and the reversal of temporary differences. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realized; such reductions are reversed when the probability of future taxable profits improves.

Unrecognized deferred tax assets are reassessed at each reporting date and recognized to the extent that it has become probable that future taxable profits will be available against which they can be used. Deferred tax is measured at the tax rates that are expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The measurement of deferred tax reflects the tax consequences that would follow from the manner in which the Group expects, at the reporting date, to recover or settle the carrying amount of its assets and liabilities. Deferred tax assets and liabilities are offset only if certain criteria are met.

Accordingly, deferred income tax assets and liabilities are recognized for the future tax consequences attributable to differences between financial statement carrying amounts of existing assets and liabilities and their respective tax basis. In assessing the potential realization of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which the Group's tax loss carryforwards remain deductible.

3.8 Prepaid Advertising Expenses

The Group regularly pays in advance for online and offline advertising, and expenses the prepaid amounts as cost of revenue over the contract periods as the vendor delivers on its commitment. The Group evaluates the realization of prepaid amounts at each reporting period and expenses prepaid amounts if the applicable vendor is unable to deliver on its commitment and is not willing or able to repay the undelivered prepaid amounts. Prepaid expenses are shown as non-financial assets.

3.9 Business Combinations

From time to time, the Group acquires the stock or specific assets of companies in transactions that may be considered to be business acquisitions under IFRS 3 Business Combinations. Under the acquisition method of accounting, the Group allocates the fair value of purchase consideration to the tangible assets acquired, liabilities assumed, and intangible assets acquired based on their estimated fair values. The excess of the purchase consideration over the fair values of these identifiable assets and liabilities is recorded as goodwill. Such valuations require the Group's management to make significant estimates and assumptions, especially with respect to estimating the fair value and expected useful life assigned to each class of assets and liabilities acquired. Different classes of assets will have varying useful lives.

The Group's management's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates. During the measurement period, which can be up to one year from the acquisition date, the Group may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Upon the conclusion of the measurement period, any subsequent adjustments are recorded in net financial result in the consolidated statements of operations and comprehensive loss/income.

3.10 Discontinued operation

A discontinued operation is a component of the Group's business, the operations and cash flows of which can be clearly distinguished from the rest of the Group and which:

- represents a separate major line of business or geographic area of operations;
- is part of a single coordinated plan to dispose of a separate major line of business or geographic area of operations; or
- is a subsidiary acquired exclusively with a view to re-sell.

Classification as a discontinued operation occurs at the earlier of disposal or when the operation meets the criteria to be classified as held for sale. When an operation is classified as a discontinued operation, all attributable income and expenses as well as related income taxes are presented as “loss from discontinued operations” in the accompanying Consolidated Statements of Operations and Comprehensive Loss/Income as if the operation had been discontinued from the start of the comparative year. The elimination of intra-group transactions is presented following the general consolidation method by eliminating income at the servicing entity and the related expenses at the receiving entity.

3.11 Intangible assets and goodwill

Recognition and measurement of goodwill and intangible assets with indefinite life

Goodwill arising from the acquisition of subsidiaries is measured at fair value less accumulated impairment losses.

The Group’s goodwill represents the excess of the purchase price over the fair value of the net assets acquired resulting from business acquisitions. Intangible assets resulting from the acquisitions of entities in a business combination are recorded using the acquisition method of accounting and estimated by management based on the fair value of assets received.

Management reviews the potential impairment of goodwill and indefinite lived intangible assets at least annually, or more frequently if events or changes in circumstances indicate that the carrying value of goodwill may not be recoverable. Management also routinely reviews whether events and circumstances continue to support an infinite useful life for intangible assets that are not being amortized.

Recognition and measurement of intangible assets with finite life

Intangible assets with finite useful lives are amortized using the straight-line method over their estimated useful lives. In addition to the recoverability assessment, management routinely reviews the remaining estimated useful lives of its amortizable intangible assets. If the Group reduces its estimate of the useful life assumption for any asset, the remaining unamortized balance would be amortized over the revised estimated useful life.

Development expenditures such as internally generated software are capitalized only if the expenditure can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the Group intends to and has sufficient resources to complete development and to use or sell the asset. Otherwise, it is recognized in profit or loss as incurred. Costs incurred in the planning and post-implementation stages of a project are expensed as incurred while direct and indirect costs associated with the development phase are capitalized and amortized on a straight-line basis over the estimated useful lives. Costs associated with minor enhancements and maintenance are included in expenses in the accompanying consolidated statements of operations and comprehensive loss/income. Subsequent to initial recognition, development expenditure is measured at cost less accumulated amortization and any accumulated impairment losses.

The estimated useful lives of intangible assets for current and comparative periods are as follows:

- Internally generated software: 3 - 6 years
- Licenses and domains: 2 - 5 years
- Brands and trademarks: 10 - 20 years, indefinite
- Other intangible assets: 1 - 5 years

Impairment of non-financial assets

Management assesses the potential impairment of assets, which include intangible assets, whenever changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Events and circumstances that may indicate that an asset is impaired may include significant decreases in the market value of an asset or the Group’s common stock, a significant decline in actual or projected revenue, a change in the extent or manner in which an asset is used, shifts in technology, loss of

key management or personnel, changes in the Group's operating model or strategy and competitive forces, as well as other factors. In addition, goodwill is tested annually for impairment.

For impairment testing, assets are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or cash-generating units ("CGU"). Goodwill arising from a business combination is allocated to CGUs or groups of CGUs that are expected to benefit from the synergies of the combination. The Group identified six CGUs for impairment testing purposes: Samadhi, Christian Networks, Jdate USA, Jdate Israel, JSwipe, and Other Networks.

If events and circumstances indicate that the carrying amount of an asset may not be recoverable and the expected discounted future cash flows attributable to the asset or CGU are less than the carrying amount of the asset, an impairment loss equal to the excess of the asset's carrying value over its estimated recoverable amount is recorded. The recoverable amount is determined based on the present value of estimated expected future cash flows using a discount rate commensurate with the risk involved, and quoted market prices or appraised values, depending on the nature of the assets. Fair value measurements utilized for assets under nonrecurring measurements were measured with Level 3 unobservable inputs.

Subsequent expenditure

Subsequent expenditure is capitalized only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure, including expenditure on internally generated goodwill and brands, is recognized in profit or loss as incurred.

3.12 Property, plant and equipment

Recognition and measurement

Items of property, plant and equipment are measured at cost, which includes capitalized borrowing costs, less accumulated depreciation and any accumulated impairment losses. If significant parts of an item of property, plant and equipment have different useful lives, then they are accounted for as separate items (major components) of property, plant and equipment.

Any gain or loss on disposal of an item of property, plant and equipment is recognized in profit or loss.

Depreciation

Property and equipment is stated at cost, net of accumulated depreciation, which is provided using the straight-line method over the estimated useful life of the asset.

The estimated useful lives of property, plant, and equipment for current and comparative periods are as follows:

- Leasehold improvements: the shorter of the lease term or 5 years
- Other and office equipment: 3 - 5 years

Upon the sale or retirement of property or equipment, the cost and related accumulated depreciation and amortization are removed from the Group's Consolidated Balance Sheet with the resulting gain or loss, if any, reflected in the Group's consolidated statement of comprehensive income.

Depreciation methods, useful lives and residual values are reviewed at each reporting date and adjusted if appropriate.

3.13 Financial instruments

Classification and measurement

Prior to January 1, 2018, the Group applied IFRS 39 and classified its financial assets and financial liabilities in the following measurement categories:

- Loans and Receivables (LaR)
- Other Financial Liabilities (OFL)
- Liabilities designated at Fair Value (LdaFV)

From January 1, 2018, the Group applied IFRS 9 and classified its financial assets and financial liabilities in the following measurement categories:

- Fair value through profit or loss (FVPL)
- Fair value through other comprehensive income (FVOCI); or
- Amortized cost (AC)

Classification and subsequent measurement of financial assets depends on:

- The Group's business model for managing the asset; and
- The cash flow characteristics of the asset

Based on these factors, the Group classifies its financial assets into one of the following three measurement categories:

- Amortized costs: Assets that are held for collection of contractual cash flows where cash flows represent solely payments of principal interest (SPPI), and that are not designated at FVPL, are measured at amortized cost. The carrying amount of these assets is adjusted by any expected credit loss allowance recognized accordingly. Interest income from these financial assets is included in "interest and similar income" using the effective interest rate method.
- Fair value through other comprehensive income (FVOCI): Financial assets that are held for collection of contractual cash flows and for selling the assets, where the assets cash flows represent solely payments of principal and interest, and that are not designated at FVPL, are measured at fair value through other comprehensive income (FVOCI). Movements in the carrying amount are taken through OCI, except for the recognition of impairment gains or losses, interest revenue and foreign exchange gains and losses on the instruments amortized cost which are recognized in profit or loss. When the financial asset is derecognized, the cumulative gain or loss previously recognized in OCI and accumulated in equity is reclassified to profit or loss. Interest income from these financial assets is included in "interest and similar income" using the effective interest rate method.
- Fair value through profit or loss: Assets that do not meet the criteria for amortized cost or FVOCI are measured at fair value through profit or loss. A gain or loss on debt investment that is subsequently measured at fair value through profit or loss and is not part of a hedging relationship is recognized in profit or loss in the period in which it arises, unless it arises from debt instruments that were designated at fair value or which are not held for trading.

The Group's financial liabilities satisfy the conditions for classification at amortized cost.

Impairment of financial assets

The Group is exposed to credit risk if counterparties fail to make payments as they fall due in respect of payment of trade receivables specifically relating to receivables from chargebacks. The Group measures loss allowances for trade receivables at an amount equal to lifetime expected credit losses. The Group considers the probability of default upon initial recognition of asset and whether there has been a significant increase in credit risk on an ongoing basis throughout each reporting period. To assess whether there is a significant increase in credit risk, the Company compares the risk of a default occurring on the asset as at the reporting date with the risk of default as at the date of initial recognition. It considers available reasonable and supportive forwarding-looking information. Macroeconomic information (such as market interest rates or growth rates) is incorporated as part of the internal rating model. Credit risk relating to other financial assets mainly relates to cash deposits to payment processors. Management monitors the creditworthiness of payment processors closely. In the past, there were no indications that the payment processors would not meet their obligations.

3.14 Provisions

Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognized as finance cost.

Legal Contingencies

The Group is currently involved in certain legal proceedings, as discussed in Note 8.2. To the extent that a loss related to a contingency is reasonably estimable and probable, the Group accrues an estimate of that loss. Because of the uncertainties related to both the amount and range of loss on certain pending litigation, the Group may be unable to make a reasonable estimate of the liability that could result from an unfavorable outcome of such litigation. As additional information becomes available, the Group will assess the potential liability related to such pending litigation and make, or if necessary, revise its estimates. Such revisions in the Group's estimates of the potential liability could materially impact its consolidated results of operations and consolidated financial position.

Refunds

A provision for refunds is recognized when the underlying services are sold, based on historical refund data and a weighting of possible outcomes against their associated probabilities. At January 1, 2018, the Group reclassified €120 thousand from the financial statement caption Other current provisions to the financial statement caption Other current financial liabilities to recognize a refund liability for estimated refunds resulting from the customer's statutory right to revoke contracts for a specified period after the contract signing date.

Restructuring

A provision for restructuring is recognized when the Group has approved a detailed and formal restructuring plan, and the restructuring either has commenced or has been announced publicly. Future operating losses are not provided for.

3.15 Earnings per share

The Group presents earnings per share data for its common shares. Earnings per share is calculated by dividing the net loss/income of the period by the weighted average number of common shares outstanding during the period.

3.16 Segment Reporting

Segment reporting requires the use of the management approach in determining the reportable operating segments. The management approach considers the internal organization and reporting provided to the Group's chief operating decision maker ("CODM") for the purpose of making operating decisions and assessing performance. The Group's internal financial reporting provided to the CODM includes separate data for each country, and all countries other than the United States and Canada (together, "North America") have been aggregated into one reportable segment as the business model and long-term margin expectations are similar. The Group reports two separate reportable segments: (1) North America, which consists of Spark Networks' operations in the United States and Canada; and (2) International, which consists of all other operations except for the United States and Canada.

The performance of the operating segments is measured on the basis of revenue and direct marketing costs only. Due to the Group's integrated business structure, costs and expenses other than direct marketing expenses are not allocated to the individual reportable segments. As such, the Group does not measure operating profit or loss by segment for internal reporting purposes.

Note 4. Notes on the Consolidated Statements of Operations and Comprehensive Loss / Income

4.1 Operating segments

Basis for segmentation

The management board of Spark Networks is the Group's chief operating decision maker ("CODM").

In line with the management approach, the operating segments were identified on the basis of the Group's internal reporting. Internal reporting is the basis for the allocation of resources and the evaluation of the performance of the operating segments by the management board. On this basis, the Group's business activity is segmented according to the countries it operates in.

The performance of the operating segments is measured on the basis of revenue and direct marketing costs only. Due to the Group's integrated business structure, costs and expenses other than direct marketing expenses are not allocated to the

individual reportable segments. As such, the Group does not measure operating profit or loss by segment for internal reporting purposes. Assets are not allocated to the different business segments for internal reporting purposes.

In particular, for internal management reporting purposes, the CODM reviews cash collections from customers and the related estimates of the resulting recognized revenue before deductions for the reversal of adjustments to revenue in connection with the amortization of the fair value adjustment of deferred income from the Spark Merger and Samadhi Acquisition. In addition, when making operating decisions and assessing performance, the CODM only reviews direct marketing costs excluding personnel-related and certain other expenses, which are being presented as direct marketing costs in the IFRS Consolidated Statements of Operations and Comprehensive Loss/Income.

Information about reportable segments

While the CODM receives separate information for each country, all countries other than the United States and Canada (together, "North America") have been aggregated into one reportable segment as the business model and long-term margin expectations are similar. This means that the Group reports the two reportable segments as North America and International.

Following the Affinitas / Spark Merger, internal management reporting was adjusted to reflect the new group composition. The segment report for 2016 was restated to reflect the current management approach.

Reconciliation of reportable segment profit or loss:

2018 in € thousands	North America	International	Total
Revenue	48,470	56,081	104,551
Direct marketing expenses	(27,862)	(32,026)	(59,888)
Contribution	20,608	24,055	44,663
Cost of revenue			
Data center expenses			(3,311)
Credit card fees			(2,187)
Mobile application processing fees			(4,104)
Gross profit			35,061
Other income			240
Other operating expenses			
Sales and marketing expenses			(4,938)
Customer service expenses			(4,626)
Technical operations and development expenses			(7,195)
General and administrative expenses			(19,540)
Operating (loss)/profit			(998)
Interest income and similar income			478
Interest expense and similar charges			(1,436)
Net finance expenses			(958)
(Loss)/income before taxes			(1,956)
Income tax benefit (expense)			(1,147)
(Loss)/income from continuing operations			(3,103)
Revenue realized over time	48,470	56,081	104,551

2017 in € thousands	North America	International	Total
Revenue	24,574	61,063	85,637
Direct marketing expenses	(17,980)	(35,489)	(53,469)
Contribution	6,594	25,574	32,168
Cost of revenue			
Data center expenses			(1,964)
Credit card fees			(1,549)
Mobile application processing fees			(1,794)
Gross profit			26,861
Other income			54
Other operating expenses			
Sales and marketing expenses			(5,540)
Customer service expenses			(3,971)
Technical operations and development expenses			(6,428)
General and administrative expenses			(16,091)
Operating (loss)/profit			(5,115)
Interest income and similar income			239
Interest expense and similar charges			(782)
Net finance expenses			(543)
Loss before taxes			(5,658)
Income tax benefit			84
Loss from continuing operations			(5,574)
Revenue realized over time	24,574	61,063	85,637

2016 in € thousands	North America	International	Total
Revenue	16,004	57,487	73,491
Direct marketing expenses	(15,059)	(33,311)	(48,370)
Contribution	945	24,176	25,121
Cost of revenue			
Data center expenses			(726)
Credit card fees			(1,471)
Mobile application processing fees			(635)
Gross profit			22,289
Other income			126
Other operating expenses			
Sales and marketing expenses			(3,919)
Customer service expenses			(2,791)
Technical operations and development expenses			(3,305)
General and administrative expenses			(9,727)
Operating (loss)/profit			2,673
Interest income and similar income			157
Interest expense and similar charges			(425)
Net finance expenses			(268)
Income before taxes			2,405
Income tax expense			(1,082)
Income from continuing operations			1,323
Revenue realized over time	16,004	57,487	73,491

Geographic information

The Group operates across the world generating revenue from different countries. It has allocated its total revenue to countries based on where the revenue is generated and has deemed countries as material and separately disclosed where they make up more than 10% of its revenue or non-current assets.

Revenue in € thousands	2018	2017	2016
United States	41,919	17,861	10,176
France	17,148	17,859	12,655
United Kingdom	9,210	8,803	7,153
Germany	3,106	3,764	5,326
Other countries	33,168	37,350	38,181
	104,551	85,637	73,491
Non-current assets in € thousands			
United States	25,816	25,814	—
France	2,266	6,459	8,329
Germany	7,034	4,733	1,790
Other countries	185	212	—
	35,301	37,218	10,119

Non-current assets exclude financial instruments and deferred tax assets.

Major customers

Given the nature of the business, there is no one single customer that is significant to the Group.

4.2 Discontinued operations

On December 29, 2016, the Group sold its interest in Top 10. Management committed to a plan to sell this operation in 2016, following a strategic decision to place greater focus on the Group's key competencies.

During the year ended December 31, 2016, Affinitas supplied employees to Top 10 and Top 10 provided direct marketing services to Affinitas. All intra-group transactions and balances have been fully eliminated in the consolidated financial statements.

Results of discontinued operations

(in € thousands)	Note	2018	2017	2016
Revenue		—	—	3,667
Expenses		—	—	(5,168)
Results from operating activities		—	—	(1,501)
Income tax		—	—	488
Results from operating activities, net of tax		—	—	(1,013)
Gain on sale of discontinued operation		—	—	381
Profit (loss) from discontinued operations, net of tax		—	—	(632)
Earnings per share - discontinued operations				
Basic loss per share (€)	4.15	—	—	(25.28)
Diluted loss per share (€)	4.15	—	—	(25.28)

Cash flows from discontinued operations

(in € thousands)	Note	2018	2017	2016
Net cash from operating activities		—	—	(635)
Net cash from investing activities		—	250	18
Net cash flows for the year		—	250	(617)

Effects of disposal on the consolidated balance sheet of the Group

(in € thousands)	Note	2016
Property, plant and equipment		(7)
Trade and other receivables		(402)
Cash and cash equivalents		(232)
Current trade and other payables		768
Provisions		4
Net assets and liabilities		131
Consideration received, satisfied in cash		250
Cash and cash equivalents disposed of		(232)
Net cash inflows		18

4.3 Seasonality of operations

The Group's business underlies a certain degree of seasonality. Higher operating profits are usually expected in the second half of the year rather than in the first six months as there are usually higher marketing expenses in the first six months, while revenue is at a similar level in the first and second half of the year. This information is provided to allow for a better understanding of the results; however, management has concluded that this is not "highly seasonal" in accordance with IAS 34.

4.4 Revenue

For the years ended December 31, 2018, 2017 and 2016, revenue was as follows:

in € thousands	Years Ended December 31,		
	2018	2017	2016
Subscription revenue	103,658	85,251	73,491
Advertising revenue	893	386	—
Total Revenue	104,551	85,637	73,491

The vast majority of Spark Networks' revenue is derived from subscription fees. Only one separate performance obligation, the grant of a right to access the Group's intellectual property during the contract period, arises from each contract. As such, revenue is initially deferred and is recognized using the straight-line method over the terms of the applicable subscription period, which primarily range from one to twelve months. For more information regarding Spark Networks' revenue recognition policy, refer to Note 3.2.

The increase in revenue from 2016 to 2018 was mainly due to the addition of Jdate, JSwipe and Christian Mingle following the Affinitas / Spark merger in November 2017. No revenue was realized during the year ended December 31, 2018 from performance obligations satisfied in prior periods.

For information regarding trade receivables and contract liabilities from contracts with customers, refer to Notes 5.3 and 5.15, respectively.

4.5 Cost of revenue

For the years ended December 31, 2018, 2017 and 2016, cost of revenue was as follows:

(in € thousands)	2018	2017	2016
Direct marketing expenses	59,888	53,469	48,370
Credit card fees	2,187	1,549	1,471
Data center expenses	3,311	1,964	726
Mobile application processing fees	4,104	1,794	635
Total cost of revenue	69,490	58,776	51,202

Cost of revenue consists primarily of direct marketing costs, data center expenses, credit card fees and mobile application processing fees. The increase in cost of revenue from 2016 to 2018 was primarily attributable to increases in direct marketing costs within the North America segment. Additionally, mobile application processing fees increased as a result of the addition of Jdate, JSwipe and Christian Mingle, which generates a higher proportion of revenue from the Apple App Store and the Google Play Store. Subscriptions sold through these app stores incur a commission equal to 30% of revenue. The increase in cost of revenue from 2017 to 2018 was also attributable to €12,839 thousand of direct marketing investment in SilverSingles in 2018 following its December 2017 launch.

4.6 Other income

For the years ended December 31, 2018, 2017 and 2016, other income was as follows:

(in € thousands)	2018	2017	2016
Repayments and reimbursements	—	—	74
Other income	240	54	52
Total other income	240	54	126

4.7 Sales and marketing expenses

For the years ended December 31, 2018, 2017 and 2016, the following table shows the types of expenses recorded as sales and marketing:

(in € thousands)	2018	2017	2016
Personnel	3,183	2,921	2,795
Depreciation and amortization	1,176	1,723	741
Other	480	705	260
Office expenses	99	191	123
Total sales and marketing expenses	4,938	5,540	3,919

Sales and marketing expenses consist primarily of salaries for Spark Networks' sales and marketing personnel, expenses for market research, and amortization of sales related intangible assets. The decrease in sales and marketing expenses from 2017 to 2018 was primarily attributable to reductions in amortization expense, marketing research, and marketing TV production costs. The increase in sales and marketing expenses from 2016 to 2017 was primarily attributable to higher personnel expenses caused by hiring to grow the sales and marketing team and termination costs. The increase was also attributable to increased amortization expenses resulting from the amortization of acquired intangible assets resulting from the Affinitas / Spark Merger in November 2017.

4.8 Customer service expenses

For the years ended December 31, 2018, 2017 and 2016, the following table shows the types of expenses recorded as customer service:

(in € thousands)	2018	2017	2016
Personnel	2,459	2,153	1,651
Third party services	1,773	1,589	965
Office expenses	241	146	109
Depreciation and amortization	107	62	53
Other	46	21	13
Total customer service expenses	4,626	3,971	2,791

Customer service expenses consist primarily of personnel costs and third party service fees associated with Spark Networks' customer service centers. The increase in customer service expenses from 2017 to 2018 was primarily attributable to increased customer support staffing to support the newly acquired Spark brands and the December 2017 launch of SilverSingles. In late 2016, Spark Networks reduced its overall customer service personnel and engaged external service providers to improve its reaction to peaks in customer service requests. The net increase in customer service expenses from 2016 to 2017 was due to €276 thousand of expense from Spark following the Affinitas / Spark Merger in November 2017, or 23.4% of the 2017 increase, in conjunction with the addition of resources to support higher customer claim volumes within the North America segment.

4.9 Technical operations and development expenses

For the years ended December 31, 2018, 2017 and 2016, the following table shows the types of expenses recorded as technical operations and development:

(in € thousands)	2018	2017	2016
Personnel	6,386	5,712	3,531
Depreciation and amortization	2,224	1,259	445
Data processing costs	832	1,364	353
Office expenses	252	166	114
Other	68	63	48
Capitalized development costs	(2,567)	(2,136)	(1,186)
Total technical operations and development expenses	7,195	6,428	3,305

Technical operations and development expenses consist primarily of the personnel and systems necessary to support Spark Networks' corporate technology requirements as well as costs incurred in the development, enhancement and maintenance of Spark Networks' new and existing technology platforms. Technical operations and development increased from 2017 to 2018 primarily due to an increase in amortization expense on internally generated intangible assets and an increase in personnel expenses to insure the transition of technological oversight of the Spark tools and systems from the United States based development team to the development team in Berlin. Further, expenses also increased as a result of higher average salaries in the department. Technical operations and development increased from 2016 to 2017 due to an increase in personnel expenses stemming from the hiring of senior team members and retention and severance payments made to Spark personnel as a result of the Affinitas / Spark Merger in November 2017, and an increase in amortization on intangible assets identified in the Samadhi acquisition. Total research and development expenses for 2018, 2017, and 2016 were €2,441 thousand, €1,301 thousand, €566 thousand, respectively. For details of intangible assets and property, plant and equipment, see Note 5.1 and Note 5.2, respectively.

4.10 General and administrative expenses

The following table shows the different types of expenses allocated to general and administrative expenses:

(in € thousands)	2018	2017	2016
Personnel costs	7,447	4,120	3,365
Legal, consulting, bookkeeping and auditing costs	3,600	6,084	479
Provisions for bad debts, write-offs, and uncollectible amounts	1,203	4,102	4,073
Goodwill impairment	3,324	—	—
Third party services	860	319	238
Licenses	798	24	12
Insurance	640	214	29
Office expenses	499	264	120
Recruiting costs	458	323	182
Travel costs	361	233	62
Other expenses	350	408	363
Acquisition related costs	—	—	162
Restructuring costs	—	—	642
Total general and administrative expenses	19,540	16,091	9,727

General and administrative expenses consist primarily of corporate personnel-related costs, professional fees, occupancy and other overhead costs. The increase in general and administrative expenses from 2017 to 2018 was due to Samadhi goodwill impairment and an increase in personnel expenses and related overhead, partially offset by a year over year decrease in legal and consulting costs that related to the Affinitas / Spark Merger in November 2017. The increases in general and administrative expenses from 2016 to 2017 was due to an increase in legal, consulting, bookkeeping and auditing costs, primarily due to consulting and transaction costs related to the Affinitas / Spark Merger and subsequent listing on the New York Stock Exchange in November 2017, and an increase in personnel expenses and related overhead resulting from the Affinitas / Spark Merger.

4.11 Net finance expenses

During the years ended December 31, 2018, 2017 and 2016, net finance expenses were as follows:

(in € thousands)	2018	2017	2016
Currency translation gains	257	213	157
Interest income and similar income	221	26	—
Interest expense for non-current liabilities	(426)	(516)	(129)
Currency translation losses	(645)	(266)	(296)
Other finance costs	(365)	—	—
Total net finance expenses	(958)	(543)	(268)

Net finance expenses consist primarily of interest income and expenses, foreign exchange gains and losses, and other related finance costs. The increases in net finance expenses from 2017 to 2018 was mainly due to the early termination fee of €307 thousand that was paid in March 2018 pursuant to the Termination Agreement and net foreign exchange losses of €388 thousand during 2018 compared to €53 thousand during 2017. The increase in net finance expense was partially offset by income of €220 thousand related to the repayment on a related party loan receivable in August 2018. Net finance expenses in 2018 include expense of €241 thousand from Spark related to net foreign exchange losses. The increases in net finance expenses from 2016 to 2017 was primarily due to higher interest expenses relating to a loan facility drawn in September 2016, offset by reduced net foreign exchange losses of €53 thousand in 2017 compared to €139 thousand in 2016.

4.12 Employee benefits

The following table shows the different types of employee benefits expenses:

(in € thousands)	2018	2017	2016
Wages and salaries	12,451	11,367	8,684
Social security contribution	2,329	2,016	1,763
Equity-settled share-based payments	4,091	1,166	991
Termination benefits	283	430	765
Other employee benefits	786	447	64
Total employee benefits expenses	19,940	15,426	12,267

Personnel expenses increased mainly due to the Affinitas / Spark Merger in 2017.

During the years ended December 31, 2018, 2017 and 2016, termination benefits of €283 thousand, €430 thousand, and €765 thousand, respectively, were expensed, of which €564 thousand, €1,238 thousand, and €123 thousand, respectively, were paid out in 2018, 2017 and 2016. Severance agreements with Spark employees were paid by Spark Networks following the close of the Affinitas / Spark Merger in 2017. Contributions to the defined contribution retirement funds presented as social security contributions amounted to €973 thousand, €845 thousand and €628 thousand for the years ended December 31, 2018, 2017 and 2016, respectively.

Employee benefits are allocated to costs and expenses as follows:

(in € thousands)	2018	2017	2016
Cost of sales	465	520	283
Sales and marketing expenses	3,183	2,921	2,795
Customer service expenses	2,459	2,153	1,651
Technical operations and development expenses	6,386	5,712	3,531
General and administrative expenses	7,447	4,120	4,007
Total employee benefits	19,940	15,426	12,267

4.13 Share-based payment arrangements

Share-based compensation expense reflected in the Company's consolidated financial statements consists of expense related to the Affinitas virtual employee share option plan (the "Affinitas VESOP"), the Spark 2007 Omnibus Incentive Plan ("Spark 2007 Plan"), the Spark Networks 2017 virtual stock option plan (the "Spark Networks 2017 VSOP") and the Spark Networks 2018 virtual stock option plan (the "Spark Networks 2018 VSOP"). The Affinitas VESOP was independently established by Affinitas in 2013 and the Spark 2007 Plan was independently established by Spark in 2007, in each case prior to the Affinitas / Spark Merger. In connection with the Affinitas / Spark Merger, the Affinitas VESOP was terminated and replaced by the Spark Networks 2017 VSOP. The Spark Networks 2017 VSOP was subsequently replaced by the Spark Networks 2018 VSOP in 2018. Share-based compensation expense incurred in periods prior to the close of the Affinitas / Spark Merger resulted solely from share-based compensation granted by Affinitas.

Description of share-based payment arrangements operated by Affinitas prior to the Affinitas / Spark Merger

Options to acquire ordinary shares of Affinitas ("Options") were granted in 2013 pursuant to the Affinitas VESOP with an exercise price of €1 and vest three years from the grant date. These equity-settled Options are exercisable after vesting.

Pursuant to the Affinitas VESOP, Options have been granted since 2015 on a discretionary basis to eligible and selected employees. Under the Affinitas VESOP, Affinitas had a choice of settlement, whereby the cash amount or equal value in shares to be received for a single vested Option shall equal the price or proceeds per common share in case of a change in control event ("Share Sale") or an IPO ("a Liquidity Event") minus the exercise price.

The Affinitas / Spark Merger was considered a Liquidity Event under the terms of the Affinitas VESOP. It was decided by the shareholders of Affinitas to settle all the Options outstanding at the merger date at a fixed valuation of €3,839 thousand, which was equivalent to a total equity value of €90 million for Affinitas. This equity value of Affinitas was determined based on the Spark share price and the exchange ratio that Affinitas and Spark agreed on in relation to the merger. As the settlement amount is based on the fair value of the underlying shares at the merger date, the valuation of the outstanding Options did not result in an incremental fair value being granted to the participants.

Subsequent to the Affinitas / Spark Merger, in 2017, Options to purchase 192 shares with a value of €78 thousand were settled in cash and a prepayment of €600 thousand was paid to selected participants. The remaining value of the outstanding Options, amounting to €3,161 thousand, was deferred and settled in cash in November 2018, subject to the participants being employed by the Group at the settlement date. These transactions were accounted for as the repurchase of equity interests.

Reconciliation of outstanding share Options

The movements in the number of Options outstanding and their related weighted average exercise prices (in €) are as follows:

	2018		2017		2016	
	Weighted Average Exercise Price	Number of Options	Weighted Average Exercise Price	Number of Options	Weighted Average Exercise Price	Number of Options
Outstanding at January 1	€ 1,019	6,166	€ 1,014	5,454	€ 878	3,507
Granted during the year	€ —	—	€ 1,091	932	€ 1,260	1,947
Forfeited during the year	€ —	—	€ 1,091	(28)	€ —	—
Settled during the year	€ 1,019	(6,166)	€ 1,228	(192)	€ —	—
Outstanding at December 31	€ —	—	€ 1,019	6,166	€ 1,014	5,454

In the table above, Options are presented as granted in the period that the service commencement and expense recognition started. As all of the outstanding Options were settled in cash in November 2018, no Options are outstanding or exercisable as of the reporting date.

Options outstanding at the end of the period have the following expiry dates and exercise prices (in €):

Expiry date	2018		2017		2016	
	Exercise Price	Number of Options	Exercise Price	Number of Options	Exercise Price	Number of Options
Not defined (grant in 2013)	€ —	—	€ 1	1,170	€ 1	1,170
September - October 2025	€ —	—	€ 917	825	€ 917	880
September - October 2025	€ —	—	€ 1,376	825	€ 1,376	880
September - October 2025	€ —	—	€ 1,835	550	€ 1,835	577
January-July 2026	€ —	—	€ 917	550	€ 917	550
January-July 2026	€ —	—	€ 1,091	404	€ 1,091	487
May 2026	€ —	—	€ 1,376	550	€ 1,376	550
May 2026	€ —	—	€ 1,835	360	€ 1,835	360
January - April 2027	€ —	—	€ 1,091	932	€ —	—
Outstanding at December 31		—		6,166		5,454

Measurement of fair values

In determining the fair values of its unlisted shares as of each grant date, Affinitas employed a market multiple approach to estimate the total enterprise value. The value per share was subsequently derived by assuming two potential exit scenarios (i.e., Share Sale/M&A or IPO).

Based on the essential features of the Options granted and the essential parameters for measuring the fair value of the Options, the fair value of the options in the case of an M&A scenario and IPO scenario have been measured separately to determine the (weighted) fair value of the options. For the option fair value in the case of an M&A scenario, the fair value of the underlying instrument has been applied. For the option fair value in the case of an IPO scenario, the Black Scholes Option Pricing Model has been applied to determine the fair value of the options. The probability of a Share Sale and an IPO scenario have been assessed, and these probabilities have been applied to compute the probability weighted fair value per Option. The fair values and the inputs used in the measurement of the fair values of these equity-settled Options at the date of grant are summarized below:

	2018	2017	2016
Share price M&A Scenario (€)	—	551	291 - 380
Share price IPO Scenario (€)	—	1,489	1,289 - 1,381
Weighted average option exercise price (€)	—	1,091	1,260
Volatility	—%	37.2 %	35.9% - 37.9%
Expected life	—	2.8 - 3.8 years	1.0 - 2.8 years
Dividend yield	—%	—%	—%
Risk-free rate	—%	(0.653)%	(0.743%) - (0.462%)
Weighted-average option fair value (€)	—	520	324
Fair value per Option (€)	—	481 - 572	271 - 383

Expected volatility was estimated by considering the historical average share price volatility of comparable companies. As the Options could only be exercised following a Share Sale or an IPO, applying an expected life based on the period from the grant date to the expected exit date was considered to be most appropriate for the Options granted during prior periods.

The vested Options could not be exercised until a Share Sale or an IPO, and this requirement was treated as a non-vesting condition. If the expected service period for the Options granted was shorter than the estimated period up to the exercise date, a discount to the fair value of the options was applied to allow for the non-transferability of the options in the period between the end of the service period and the estimated exercise date. For this purpose, the discount for lack of marketability (“DLOM”) was calculated as the cost of an “at-the-money” put option over the underlying share of the appropriate term using the Finnerty option model. The rationale is that the put option insures against the risk of not being able to exercise the option when the share price falls.

For the period ended December 31, 2018, the total share-based payment expense recognized for the equity-settled Options granted under the Affinitas VESOP prior to the merger amounted to €423 thousand (2017: €685 thousand).

Expense recognized in profit or loss

The fair value of the Options granted has been expensed on a straight-line basis over the estimated vesting period, based on management’s estimate of a future Share Sale/IPO date and the number of Options that will eventually vest. As a result of the graded-vesting features of the Options granted, each installment of the award is treated as a separate grant. This means that each installment is separately expensed over the related vesting period. As the Affinitas / Spark Merger was considered a Liquidity Event, all unvested Options as of the merger date vested in November 2018.

Estimated forfeitures are revised if the number of Options expected to vest differs from previous estimates. Differences between the estimated and actual forfeitures are accounted for in the period they occur.

Description of share-based payment arrangements operated by Spark Networks following the Affinitas / Spark Merger

During the year ended December 31, 2017, Spark Networks established the Spark Networks 2017 VSOP for selected executives and employees of Spark Networks and its subsidiaries, which entitles Spark Networks to a choice of settlement whereby the cash amount or equal value in ADSs to be received by the beneficiaries for a single vested option shall equal the market price per Spark Networks ADS minus the exercise price. Spark Networks' policy is to avoid cash payments to participants if possible, which means that settlement of the outstanding options is expected to be made in Spark Networks ADSs. Based on this stated policy, the arrangement is classified as equity-settled unless settlement in cash is most probable. During the year ended December 31, 2017, Spark Networks granted 908,608 virtual stock options to executives and employees, of which one-third of the Options vest on the first year anniversary of the grant and the remaining Options vest every three months thereafter such that all Options are vested within three years.

During the year ended December 31, 2018, Spark Networks replaced the Spark Networks 2017 VSOP by establishing the Spark Networks 2018 VSOP for selected executives and employees of Spark Networks and its subsidiaries if and to the extent that the plan participants under the Spark Networks 2017 VSOP have agreed to such replacement. Under the Spark Networks 2018 VSOP, Spark Networks granted participants a certain number of virtual stock options in exchange for options granted under the Spark Networks 2017 VSOP and/or a certain number of new virtual stock options, and can grant additional options in the future. During the year ended December 31, 2018, Spark Networks granted 513,026 virtual stock options to executives and employees. The Spark Networks 2017 VSOP Options which were exchanged for the Spark Networks 2018 VSOP Options vest over a period of three years from the grant date, whereby one-third of the Options vest on the first year anniversary of the grant and the remaining Options vest every six months thereafter. The new Spark Networks 2018 VSOP Options vest over a period of four years from the grant date, whereby one-fourth of the Options vest on the first year anniversary of the grant and the remaining Options vest every six months thereafter. The contractual life of the options is 85 months.

The Spark Networks 2018 VSOP entitles Spark Networks to a choice of settlement whereby the cash amount or equal value in shares to be received by the beneficiaries for a single vested option shall equal the market price per Spark Networks ADS minus the exercise price. Based on Spark Networks' policy, the Spark Networks 2018 VSOP is classified as equity-settled.

Options outstanding at the end of the period have the following expiry dates and weighted average exercise prices (in \$):

	2018		2017	
	Weighted Average Exercise Price	Number of Options	Exercise Price	Number of Options
Outstanding at January 1	\$ 10.62	908,608	\$ —	—
Granted during the year	\$ 14.47	513,026	\$ 10.62	908,608
Forfeited during the year	\$ 12.49	(128,564)	\$ —	—
Outstanding at December 31	\$ 11.96	1,293,070	\$ 10.62	908,608

Expiry date	2018		2017	
	Weighted Average Exercise Price	Number of Options	Exercise Price	Number of Options
December 2024	\$ 10.62	840,044	\$ 10.62	908,608
April 2025	\$ 14.63	433,026	\$ —	—
June 2025	\$ 11.51	10,000	\$ —	—
January 2026	\$ 9.38	10,000	\$ —	—
Outstanding at December 31	\$ 11.96	1,293,070	\$ 10.62	908,608
Exercisable at December 31	\$ 10.62	297,474	\$ —	—

Measurement of fair values

The fair value of the employee share options has been measured using a binomial option-pricing model.

The fair values and the inputs used in the measurement of the fair values of these equity-settled Options at the date of grant and at the date of replacement of Spark Networks 2017 VSOP Options with Spark Networks 2018 VSOP Options are summarized below:

	2018	2017
Share price (\$)	9.47 - 14.63	10.21
Exercise price (\$)	9.38 - 14.63	10.62
Option life (months)	85	48.5
Volatility	36.4 - 38.2 %	55.0 %
Dividend yield	—%	—%
Risk-free rate	2.67 - 2.84 %	1.98%
Fair value per Option (\$)	4.82 - 7.38	3.87
Fair value per Option (€)	4.25 - 5.99	3.27

Expected volatility is estimated by considering historical average share price volatility of the company, including the historical share price volatility of Spark Networks, Inc.

Expense recognized in profit or loss

Since the Options are subject to a graded vesting schedule, the grant date fair value for each tranche (vesting period) is expensed separately over the related vesting period. The replacement of Spark Networks 2017 VSOP Options by Spark Networks 2018 VSOP Options resulted in an incremental fair value of €1,504 thousand, which is recognized as share-based payment expense over the remainder of the amended vesting period.

Estimated forfeitures are revised if the number of Options expected to vest differ from previous estimates, and any differences between the estimated and actual forfeitures are accounted for in the period they occur.

In 2018, the total share-based payment expense recognized for the equity-settled Options granted under the virtual stock option plans amounted to €3,610 thousand (2017: €313 thousand).

Description of share-based payment arrangements operated by Spark prior to the merger

Spark granted share-based payment awards under the 2007 Omnibus Incentive Plan (the “Spark 2007 Plan”), including incentive stock options, nonqualified stock options, stock appreciation rights (“SARs”), restricted shares of common stock, restricted stock units, performance stock or unit awards, and other stock-based awards and cash-based incentive awards.

In connection with the Affinitas / Spark Merger, Spark established the Chardonnay Trust, with the purpose of holding such number of shares of Spark Networks SE ADSs as shall be necessary to satisfy the obligations under all unexercised Spark stock options awarded under the Spark 2007 Plan. Following the completion of the Affinitas / Spark Merger, Spark no longer has any rights to revoke or amend the Chardonnay Trust in a manner that is detrimental to Spark 2007 Plan participants.

In connection with the Affinitas / Spark Merger, each Spark stock option was converted into an award to acquire ADSs from the Chardonnay Trust, on the same terms and conditions as were applicable under the Spark stock option, and subject to adjustment based on the exchange ratio stipulated in the merger agreement. The shares underlying the ADSs held in the Chardonnay Trust are recognized as treasury stock within the Consolidated Statement of Shareholders' Equity. See Note 5.8 Shareholder's Equity for details on the movements in equity components.

Only nonqualified stock options were outstanding as of the merger date, which are vested and exercisable as of December 31, 2018.

Reconciliation of outstanding share options

The movements in the number of Spark options outstanding and their related weighted average exercise prices are as follows:

	2018	
	Weighted Average Exercise Price	Number of Options
Outstanding at January 1	\$ 16.88	163,270
Exercised during the year	\$ 10.10	(55,975)
Expired during the year	\$ 35.07	(42,245)
Outstanding at December 31	\$ 10.91	65,050

	2017	
	Weighted Average Exercise Price	Number of Options
Outstanding at November 3	\$ 37.47	236,670
Expired during the year	\$ 83.75	(72,900)
Forfeited during the year	\$ 14.50	(500)
Outstanding at December 31	\$ 16.88	163,270

In the tables above, all options were granted in the period prior to the merger. As of December 31, 2018, all of the outstanding options have vested (2017: 50,150 Options).

Options outstanding at the end of the period have the following expiry dates and exercise prices:

Expiry date	2018		2017	
	Exercise Price	Number of Options	Exercise Price	Number of Options
March 2018	\$ —	—	\$ 20.87	1,750
July 2018	\$ —	—	\$ 10.10	24,735
November 2018	\$ —	—	\$ 10.00	12,000
November 2018	\$ —	—	\$ 53.70	20,000
November 2018	\$ —	—	\$ 34.50	5,000
March 2023	\$ 30.70	1,500	\$ 30.70	3,750
August 2023	\$ 14.50	5,000	\$ 14.50	5,000
September 2023	\$ —	—	\$ 18.60	250
March 2024	\$ 10.00	2,400	\$ 10.00	2,400
March 2024	\$ 10.10	56,150	\$ 10.10	88,385
Outstanding at December 31	\$ 10.91	65,050	\$ 16.88	163,270

Measurement of fair values

Spark calculates the fair value of stock-based compensation using the Black-Scholes option-pricing model. The determination of the fair value of stock-based awards at the grant date requires judgment in developing assumptions, which involve a number of variables. These variables include, but are not limited to, the expected stock price volatility over the term of the awards, the expected dividend yield and the expected stock option exercise behavior.

Spark's computation of expected volatility is based on a combination of historical and market-based implied volatility. The volatility rate was derived by examining historical stock price behavior and assessing management's expectations of stock price behavior during the term of the option. The term of the options was derived based on the "simplified method" calculation. The simplified method allows companies that do not have sufficient historical experience to provide a reasonable basis for an estimate to instead estimate the expected term of a "plain vanilla" option by averaging the time to vesting and the full term of the option. ("Plain vanilla" options are options with the following characteristics: (i) the options are granted at-the-money; (ii) exercisability is conditional only upon performing service through the vesting date; (iii) if an employee terminates service prior to vesting, the employee would forfeit the options; (iv) if an employee terminates service after vesting, the employee would have a limited time to exercise the options (typically less than 90 days); and (v) the options are nontransferable and non-hedgeable.)

Expense recognized in profit or loss

Compensation expense for Spark options is recognized over the requisite service period. As the Affinitas / Spark Merger was considered a change in control, all unvested Spark options vested by May 2018 to the extent outstanding at such time.

For the period ended December 31, 2018, the total share-based payment expense recognized for the equity-settled options granted under the plans operated by Spark prior to the merger amounted to €58 thousand (2017: €175 thousand).

4.14 Income Taxes

The major components of income taxes are broken down as follows:

(in € thousands)	Years Ended December 31,		
	2018	2017	2016
Current income tax	(219)	(67)	(752)
Current income tax expenses (-) / income (+)	(155)	(57)	(752)
Adjustments for current income tax from prior periods	(64)	(10)	—
Deferred tax	(928)	151	(330)
Deferred taxes from the origination and reversal of temporary differences	(531)	(8)	211
Deferred taxes on tax losses carryforward	(397)	159	(541)
Total	(1,147)	84	(1,082)

Based on the consolidated income before taxes, the reconciliation of the effective tax expense is the following:

(in € thousands)	Years Ended December 31,		
	2018	2017	2016
Income before tax from continuous operations	(1,956)	(5,658)	2,405
<i>Tax rate of the Group in %</i>	<i>30%</i>	<i>32%</i>	<i>30%</i>
Expected tax expense (-) / income (+)	590	1,811	(728)
Tax effect of:			
Differences in applicable tax rate	229	(108)	50
Recognition of previously unrecognized tax losses	850	573	—
Current-year losses and for which no deferred tax is recognized	(1,997)	(2,009)	—
Share-based payment arrangements	(263)	(139)	(297)
Non-deductible expenses for tax purpose	4	(5)	—
Taxes from prior years	(604)	(10)	—
Tax rate changes	167	—	—
Trade tax additions and deductions	(53)	(29)	(9)
Sundry items	(70)	—	(98)
Effective tax expense	(1,147)	84	(1,082)

During the year ended December 31, 2017, the corporate income tax rate in the United Kingdom was reduced to 17% with effect from April 1, 2020. During the year ended December 31, 2016, corporate income tax rates in the United Kingdom were reduced from 20% to 19% with effect April 1, 2017 and 18% with effect from April 1, 2020. Additionally, the corporate income

tax rate in the United States was reduced from 35% to 21% with effect from January 1, 2018. The Israeli corporate tax rate was reduced from 24% to 23% in 2018. The French corporate tax rate was reduced in 2018 from 33% to 28% up to the profit limit of €500 thousand, effective for the year ended December 31, 2018. Over this limit, the French corporate tax rate remains at 33% for 2018. These rates are reflected in the deferred tax calculations as appropriate. The impact of the change in tax rate has been recognized in tax expense in profit or loss, except to the extent that it relates to items previously recognized outside profit or loss.

At the balance sheet date, no assessable temporary difference exists associated with undistributed earnings of subsidiaries. The parent entity is able to control the timing of distributions from its subsidiaries and there are no profits expected to be distributed in the foreseeable future.

As of December 31, 2018 and 2017, the following deferred tax assets and liabilities were recognized:

(in € thousands)	December 31,	
	2018	2017
Deferred tax assets (DTA)	9,404	9,907
Deferred tax liabilities (DTL)	1,132	725

A breakdown of deferred tax assets and liabilities is presented in the following table:

(in € thousands)	2018		2017	
	DTA	DTL	DTA	DTL
Intangible assets	—	2,439	—	2,150
Property, plant and equipment	—	—	—	—
Financial assets	—	—	—	—
Receivables and other assets	202	—	125	—
Cash	73	—	61	—
Liabilities	17	19	2	—
Provisions	4	—	4	—
Deferred income	—	—	—	—
Other	—	—	—	—
Income tax credits	—	—	295	—
Tax losses carryforward	10,434	—	10,845	—
Total, gross	10,730	2,458	11,332	2,150
Set off of deferred tax	1,326	1,326	1,425	1,425
Total, net	9,404	1,132	9,907	725

The deferred tax liabilities on intangible assets as of December 31, 2018 and December 31, 2017 of €2,439 thousand and €2,150 thousand, respectively, are attributable to intangible assets acquired as part of the Samadhi Acquisition in 2016 and the Affinitas / Spark Merger in 2017, and the capitalization of internally generated software.

The deferred taxes recorded on cash and cash equivalents relate to differences in the treatment of unrealized foreign currency exchange effects that are not deductible for tax purposes.

In Germany, the Group has tax loss carryforwards for corporate taxes amounting to €42,175 thousand as of December 31, 2018 (December 31, 2017: €39,002 thousand) and €41,463 thousand for trade taxes (December 31, 2017: €38,629 thousand). Of these tax loss carryforwards, €14,841 thousand were unused.

In general, the net operating loss carry-forwards in Germany do not expire. They are subject to review and possible adjustment by the German tax authorities. Furthermore, under current German tax laws, certain substantial changes in the Group's ownership and business may further limit the amount of net operating loss carry forwards, which could be utilized annually to offset future taxable income.

In March 2017, the Federal Constitutional Court released a court order to declare that forfeiture of tax losses due to certain substantial changes in a company's ownership are unconstitutional.

The restrictions on the utilization of tax losses were mitigated through Economic Growth Acceleration Act ("*Wachstumsbeschleunigungsgesetz*"). According to the provisions of this act, unused tax losses of a corporation are preserved to the extent they are compensated by an excess of the fair value of equity for tax purposes above its carrying amount of the Group.

At December 31, 2018, Spark has gross net operating loss carry-forwards for U.S. income tax purposes of approximately €16,056 thousand (December 31, 2017: €22,733 thousand) and €14,660 thousand (December 31, 2017: €16,356 thousand) available to reduce future federal and state taxable income, respectively, which expire beginning in the years 2025 for federal purposes and in 2019 for state purposes. Under Section 382 of the U.S. Internal Revenue Code, the utilization of the net operating loss carry-forwards may be limited based on changes in the percentage ownership of the Group. Of these unused tax losses, there was no deferred tax asset recognized.

At December 31, 2018, Spark has U.S. federal income tax carry-forwards for income tax purposes of approximately €314 thousand (December 31, 2017: €295 thousand), which if not previously utilized, are allowable as refundable credits under the Tax Cuts and Job Act through 2022. However, the refundability of the credit will be determined through additional guidance to properly interpret the interaction between Internal Revenue Code Section 383 with the Tax Cuts and Jobs Act.

In addition, as of December 31, 2018, the Group had tax losses carryforward in France of €176 thousand (December 31, 2017: €1,084 thousand), for which deferred tax assets were recognized. There was also approximately €8,860 thousand in net operating loss carry-forwards for Israeli tax purposes at December 31, 2018 (December 31, 2017: €8,688 thousand), which do not expire, and for which no deferred tax asset was recognized.

Spark Networks capitalizes deferred tax assets on loss carry-forwards to the extent that it is probable that those can be used to reduce future taxable income. Following Spark Networks' evaluation, deferred tax assets of €10,434 thousand and €10,845 thousand were capitalized as of December 31, 2018 and December 31, 2017, respectively.

No deferred taxes on the aggregate amount of temporary differences associated with investments in subsidiaries of €2,690 thousand as of December 31, 2018 (December 31, 2017: €0 thousand) were recognized.

4.15 Earnings per share

Basic earnings per share

The Group presents earnings per share data for its common shares. Earnings per share is calculated by dividing the net (loss) income of the period by the weighted average number of common shares outstanding during the period.

Dilutive net (loss) earnings per share includes any dilutive impact of stock options. For the years ended December 31, 2018, 2017, and 2016, all stock options outstanding during the period were excluded from the calculation of diluted net (loss) earnings per share because they would have been anti-dilutive.

(in € thousands, except per share amounts)	Years Ended December 31,		
	2018	2017	2016
Net (loss)/income	€ (3,103)	€ (5,574)	€ 691
Weighted average shares outstanding - basic and diluted	1,296	230	25
Net (loss)/income per share - basic and diluted	€ (2.39)	€ (24.23)	€ 27.64

Note 5. Notes on the Consolidated Balance Sheets

5.1 Intangible assets

The following table shows the reconciliation of intangible assets for the year ended December 31, 2018:

(in € thousands)	Internally generated software	Licenses and domains	Brands and trademarks	Purchased software	Other intangible assets	Intangible assets under development	Goodwill	Total
Purchase costs								
January 1, 2017	1,186	122	2,642	—	3,448	—	3,324	10,722
Acquired	1,984	—	2,525	—	1,735	—	20,453	26,697
Additions	261	110	—	—	323	1,768	—	2,462
Disposals	(179)	—	—	—	—	—	—	(179)
Reclassification	678	—	—	—	—	(678)	—	—
Currency translation	(61)	—	(74)	—	(48)	—	(593)	(776)
December 31, 2017	3,869	232	5,093	—	5,458	1,090	23,184	38,926
Acquired	—	—	—	—	—	—	—	—
Additions	102	101	—	23	345	2,615	—	3,186
Disposals	(633)	—	—	—	—	—	—	(633)
Reclassifications	—	14	—	—	—	(14)	—	—
Currency translation	84	—	117	1	51	—	944	1,197
December 31, 2018	3,422	347	5,210	24	5,854	3,691	24,128	42,676
Accumulated amortization and impairment								
January 1, 2017	179	85	37	—	787	—	—	1,088
Additions	366	19	139	—	2,357	—	—	2,881
Impairment	—	—	—	—	—	—	—	—
Disposals	(179)	—	—	—	—	—	—	(179)
Reclassification	—	—	—	—	—	—	—	—
December 31, 2017	366	104	176	—	3,144	—	—	3,790
Additions	1,468	34	140	1	1,537	—	—	3,180
Impairment	—	—	—	—	—	—	3,324	3,324
Disposals	(633)	—	—	—	—	—	—	(633)
Currency translation	—	—	—	—	—	—	—	—
December 31, 2018	1,201	138	316	1	4,681	—	3,324	9,661
Remaining carrying amount								
January 1, 2017	1,007	37	2,605	—	2,661	—	3,324	9,634
December 31, 2017	3,503	128	4,917	—	2,314	1,090	23,184	35,136
December 31, 2018	2,221	209	4,894	23	1,173	3,691	20,804	33,015

During the year ended December 31, 2018, intangible assets mainly decreased in the reporting period due to the impairment of Samadhi goodwill, and the amortization of internally generated software and other intangible assets, offset by the addition of intangible assets under development. Other intangible assets mainly comprise TV productions of Affinitas and the customer base and research and development costs recognized in connection with the Samadhi Acquisition and Affinitas / Spark Merger. The useful lives of other intangible assets identified as part of the acquisition are 1 to 4 years and of the brands and trademarks is 20 years or indefinite. The remaining useful life of the other brands and trademarks is 10 years; that of the other intangible assets is 1.5 years. The useful life of the licenses and domains is 2 to 5 years.

Intangible assets under development as of December 31, 2018 and 2017 amounted to €3,691 thousand and €1,090 thousand, respectively. This increase results from capitalizing of personnel-related development costs for a unified technology platform and the development of new software to allow dynamic psychology tests of potential subscribers before they log on to the platform.

In the course of the acquisition of Spark during the year ended December 31, 2017, goodwill of €20,453 thousand was recognized for the first time.

Expenses for amortization of intangible assets were recognized in cost and expenses.

Impairment Test of Goodwill

The Group performed its annual impairment test for goodwill as of October 31, 2018. Goodwill is allocated to cash-generating units that represent the lowest level at which the goodwill is monitored for internal management purposes, which is the operating segment. The existing goodwill of €20,804 thousand was allocated to the cash-generating units within the North America and International segments: Samadhi (International), Christian Networks (North America), Jdate USA (North America), Jdate (International), JSwipe (North America), and Other Networks (North America).

The impairment test was performed following the procedures and the guidance outlined in IAS 36 Impairment of Assets. For impairment test purposes under IFRS, the value concept of fair value less cost of disposal was applied. The impairment test was performed pursuant to the guidance of IAS 36 with a focus on:

- Derivation of an applicable discount rate
- Determination of the fair value less cost of disposal of the CGUs
- Approximate derivation of the carrying amount for each CGU, based on the IFRS balance sheets
- Calculation of the possible impairment for each CGU

Fair value is measured using a three-level hierarchy based on the inputs used in the valuation techniques as follows:

Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2: inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).

Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

We have applied the Level 3 data for the purposes of performing the impairment test.

The fair value less cost of disposal was determined based on the discounted cash flow method. The free cash flows (FCF) were derived based on the financial forecast for each CGU for the next five years. The cash flow plans are based on experience as well as on expected market trends in the future. For the CGU Samadhi, a finite life until financial year 2038 with a long-term growth rate of -10.0% was assumed. For the all other CGUs, a terminal value was assumed with growth rates of 3.0% for Christian Networks, 2.0% for Jdate USA, 1.5% for Jdate Israel, 1.5% for JSwipe and 0.5% for Other Networks.

For discounting the future cash flows, a post-tax weighted average cost of capital (WACC) was applied for each CGU. A WACC of 10.0% for Samadhi, 9.4% for Christian Networks, 9.4% for Jdate USA, 10.6% for Jdate Israel, 9.4% for JSwipe, and 9.4% for Other Networks was assumed.

An impairment according to IAS 36 is required if the carrying amount exceeds the recoverable amount. The recoverable amount is the higher of the CGU's fair value less cost of disposal or value in use. For Samadhi, as the recoverable amount was lower than the carrying amount, the annual impairment test resulted in an impairment loss of €3,324 thousand as of December 31, 2018. For all other CGUs, as the recoverable amount of each CGU was significantly higher than the carrying amount, the annual impairment test did not result in any impairment loss.

As part of the annual impairment testing, a sensitivity analysis was also conducted, in which EBITDA margins decline by 5.0% and the TV growth rates decline by 0.5%. The occurrences of those scenarios would not have resulted in an impairment.

5.2 Property, plant and equipment

The following table shows the reconciliation of property and equipment for the year ended December 31, 2018:

(in € thousands)	Leasehold improvement	Other and office equipment	Property, plant and equipment under construction	Total
Purchase costs				
January 1, 2017	304	853	—	1,157
Acquired	—	81	—	81
Additions	—	232	1,523	1,755
Disposals	—	(145)	—	(145)
Currency translation	—	(3)	—	(3)
December 31, 2017	304	1,018	1,523	2,845
Acquired	—	—	—	—
Additions	—	309	4	313
Disposals	—	(2)	—	(2)
Reclassifications	—	1,523	(1,523)	—
Currency translation	—	4	—	4
December 31, 2018	304	2,852	4	3,160
Accumulated depreciation and impairment				
January 1, 2017	59	613	—	672
Additions	59	144	—	203
Impairment	—	25	—	25
Disposals	—	(137)	—	(137)
December 31, 2017	118	645	—	763
Additions	59	326	—	385
Impairment	—	—	—	—
Disposals	—	(3)	—	(3)
December 31, 2018	177	968	—	1,145
Remaining carrying amount				
January 1, 2017	245	240	—	485
December 31, 2017	186	373	1,523	2,082
December 31, 2018	127	1,884	4	2,015

During the year ended December 31, 2017, Spark procured hardware and software to facilitate an upgrade of the Group's technological infrastructure. The addition of €1,523 thousand mainly related to the acquisition of IT hardware, the capitalization of third party expenses and personnel costs. As of December 31, 2018, this project is complete.

5.3 Trade receivables

The following table gives an overview of the Group's trade receivables as of December 31, 2018 and 2017:

(in € thousands)	December 31, 2018	December 31, 2017
Trade receivables (gross)	3,649	7,588
Allowance for bad debt	(607)	(774)
- thereof non-current	—	—
- thereof current	3,042	6,814
Total trade receivables	3,042	6,814

5.4 Other financial assets

(in € thousands)	December 31, 2018	December 31, 2017
Deposits	320	2,119
Other receivables	618	1,060
- thereof non-current	24	23
- thereof current	914	3,156
Other financial assets	938	3,179

Deposits within other financial assets mainly comprise deposits with payment providers.

5.5 Other assets

(in € thousands)	December 31, 2018	December 31, 2017
Prepaid expenses	2,170	2,637
VAT receivables and deposits	820	1,204
Receivables against tax authorities	237	—
Other receivables and assets	92	9
- thereof non-current	271	—
- thereof current	3,048	3,850
Other assets	3,319	3,850

Prepaid expenses mainly relate to prepaid marketing expenses.

5.6 Deferred tax assets

See Note 4.14 Income taxes for the presentation of deferred tax assets.

5.7 Cash and cash equivalents

As of December 31, 2018 and 2017, the Group held cash with bank and financial institution counterparties of €11,095 thousand and €8,214 thousand, respectively. Movements in cash and cash equivalents during the reporting periods are evident from the consolidated statement of cash flows.

5.8 Shareholders' Equity

Movements in equity components are presented in the consolidated statement of changes in equity.

Subscribed capital and capital reserve

There were no changes to subscribed capital, which was €1,317 thousand as of December 31, 2018 and December 31, 2017. Capital reserves increased from €48,901 thousand at December 31, 2017 to €49,383 thousand at December 31, 2018 due to the exercise of stock options.

As of December 31, 2018, the Company had 1,299 thousand common shares outstanding, which are presented within equity.

Subscribed Capital and capital reserve increased from €25 thousand as of December 31, 2016 to €1,317 thousand as of December 31, 2017 due to the following adjustments:

- An increase of €825 thousand to subscribed capital, €25,455 thousand to Capital Reserves and a decrease of €(26,280) thousand to Non-current liabilities to give effect to the exchange of historical preferred Affinitas shares for Spark Networks Ordinary Shares, which is accounted for as a balance sheet reclassification;
- A decrease of €(5,730) thousand to Capital Reserves immediately prior to the Affinitas / Spark Merger to give effect to the cash withdrawal to be received by Affinitas's shareholders;

- An increase of €120 thousand to subscribed capital to reflect the incremental shares of Spark Networks stock purchased by Affinitas's shareholders immediately prior to the Affinitas / Spark Merger in the Affinitas Share Transfer; and
- An increase of €347 thousand to subscribed capital and €29,152 thousand to Capital Reserves to give effect to the issuance of Spark Networks Ordinary Shares (equivalent to 0.1 Spark Networks ADSs) in exchange to acquire 100% of the outstanding shares of Spark.

Treasury shares

As of December 31, 2018, the Company held 18,070 (December 31, 2017: 23,667) ordinary shares as treasury shares, in accordance with local law. The treasury shares were exchanged without any consideration in the course of establishing the Chardonnay Trust in connection with the Affinitas / Spark Merger. The treasury shares are recognized at par value and deducted from the ordinary shares of subscribed capital outstanding at December 31, 2018.

5.9 Borrowings

On March 15, 2018, Spark Networks Services GmbH (f/k/a Affinitas GmbH), a limited liability company incorporated under the laws of Germany ("Affinitas"), and wholly-owned subsidiary of Spark Networks SE, entered into a termination agreement (the "Termination Agreement") to its Loan Agreement dated as of September 2016 (the "Loan Agreement"), by and among Affinitas and certain persons and entities, including certain of its stockholders and officers, named as lenders thereunder (the "Lenders"), pursuant to which the Lenders had granted Affinitas certain loans with an interest rate of 8% per annum maturing on June 30, 2018 (the "Type A Loans") and certain loans with an interest rate of 9% per annum maturing on March 31, 2019 (the "Type B Loans") in an aggregate principal amount of €5.850 million (€1.850 million of which is under the Type A Loans and €4.0 million of which is under the Type B Loans). Pursuant to the terms of the Termination Agreement, in exchange for the early termination of the loans under the Loan Agreement effective as of March 15, 2018 and the repayment in full of the then outstanding principal amount of the loans under the Loan Agreement of €5.850 million, the parties agreed to an early termination fee of €307 thousand, consisting of a 2% fee on the repaid principal amount of the Type A loans and a 6.75% fee on the repaid principal amount of the Type B loans. In addition, the parties agreed that interest on the loans of approximately €40 thousand under the Loan Agreement was paid in full for the month of March 2018. All payments under the Termination Agreement were made on or before March 31, 2018.

On March 28, 2018, Spark Networks and Silicon Valley Bank entered into a four-year €25 million Senior Facilities Agreement. The Senior Facilities Agreement provides for a multicurrency term loan facility in an aggregate amount equal to €15 million (the "Term Loan Facility") and a multicurrency revolving credit facility in an aggregate amount equal to €10 million (the "Revolving Credit Facility" and, together with the Term Loan Facility, the "Facilities"). In addition, subject to the terms and conditions of the Senior Facilities Agreement, including compliance with certain financial covenants, Spark Networks may incur additional incremental facilities in an aggregate amount of up to €35 million.

Borrowings under the Facilities bear interest at a rate equal to LIBOR for deposits in the applicable currency plus an applicable margin ranging from 2.5% to 3.0% to be determined based on the net leverage ratio (as defined in the Facilities) for the most recently completed 12 month period ending on the last day of the fiscal year or quarterly period as applicable. The applicable margin and interest rate in effect for borrowings under the Term Loan Facility as of December 31, 2018 is 2.5%.

In addition to paying interest on outstanding principal under the Facilities, Spark Networks is required to pay a commitment fee to the lenders under the Revolving Credit Facility in respect of the unutilized commitments thereunder. The commitment fee rate is 0.60% per annum, and the Revolving Credit Facility currently has €10 million of undrawn availability.

Upon closing, a one-time facility fee of €150 thousand was payable, of which €90 thousand was allocated to the Term Loan Facility and €60 thousand was allocated to the Revolving Credit Facility. The facility fee on the Term Loan Facility is reflected as a debt discount and is deducted from the carrying value of the borrowings and amortized using the effective interest method. The facility fee on the Revolving Credit Facility is capitalized as a prepayment and amortized through the maturity of the Facilities on March 31, 2022. The facility fee is amortized to Interest expense and similar charges in the Consolidated Statements of Operations and Comprehensive Loss/Income.

The Facilities contain a number of covenants that, among other things, restrict, subject to certain exceptions, the Company's ability and the ability of its subsidiaries to: incur additional indebtedness, create liens, engage in mergers or consolidations, sell or transfer assets, pay dividends and distributions and make share repurchases, make certain acquisitions, engage in certain transactions with affiliates, and change lines of business.

In addition, the Facilities require the following financial covenants to be maintained: (i) a fixed charge coverage ratio (as defined in the Facilities) of no less than 1:25 to 1:00 (other than for the first quarter of 2019 when it shall be no less than 1.10 to 1.00), (ii) a net leverage ratio of no greater than 2.50 to 1.00 (declining to 2.25 to 1.00 for 12-month periods ending June 30, 2019, September 30, 2019, December 31, 2019, and March 31, 2020, and declining further to 2.00 to 1.00 for 12-month periods ending June 30, 2020 and thereafter), and (iii) a minimum liquidity threshold of €5 million until March 31, 2019, consisting of available cash funds and availability under the Revolving Credit Facility. The Facilities also contain certain customary affirmative covenants and events of default, including a change of control. Spark Networks is in compliance with all of its debt covenants as of December 31, 2018.

The Term Loan Facility amortizes in equal quarterly installments of €938 thousand commencing on June 29, 2018, while principal amounts outstanding under the Revolving Credit Facility are due and payable in full at maturity. As of December 31, 2018, the outstanding principal balance of the Term Loan Facility is €12.098 million, and there were no outstanding borrowings under the Revolving Credit Facility.

5.10 Provisions

(in € thousands)	Provisions for refunds	Restructuring provisions	Other provisions	Total
January 1, 2017	128	642	53	823
- thereof non-current	—	—	17	17
- thereof current	128	642	36	806
Acquired	—	—	975	975
Utilization	(67)	(642)	(10)	(719)
Release	—	—	—	—
Addition	59	30	62	151
Reclassifications	—	—	(27)	(27)
Discounting effects	—	—	—	—
Currency translation	—	—	(27)	(27)
December 31, 2017	120	30	1,026	1,176
- thereof non-current	—	—	17	17
- thereof current	120	30	1,009	1,159
Acquired	—	—	—	—
Utilization	—	(30)	(89)	(119)
Release	—	—	(461)	(461)
Addition	—	—	237	237
Reclassifications	(120)	—	(437)	(557)
Discounting effects	—	—	—	—
Currency translation	—	—	45	45
December 31, 2018	—	—	321	321
- thereof non-current	—	—	16	16
- thereof current	—	—	305	305

On January 1, 2018, the provision for refunds within the financial statement caption other current provisions of €120 thousand was reclassified to refund liability within the financial statement caption other current financial liabilities. Also, on October 3, 2018, Spark received a final judgment for a legal settlement with the City of Santa Monica and offices of the District Attorney. The €437 thousand remaining provision balance related to the legal settlement was reclassified to the financial statement caption other current financial liabilities as of December 31, 2018. Additionally, a provision of €208 thousand was recorded to estimate United States state sales tax liability as of December 31, 2018.

In the course of the Samadhi Acquisition in the fourth quarter of 2016, the group initiated plans to restructure the business. A provision was recognized, which mainly relates to termination benefits payable to former employees. The group settled the obligations during the course of 2017.

5.11 Other financial liabilities

(in € thousands)	December 31, 2018	December 31, 2017
Payroll liabilities	49	206
Other liabilities	883	6,309
- thereof non-current	54	—
- thereof current	878	6,515
Other financial liabilities	932	6,515

Other liabilities as of December 31, 2018 mainly relates to an outstanding legal settlement payment of €502 thousand to the City of Santa Monica and offices of the District Attorney, and refund liabilities. Other liabilities as of December 31, 2017 mainly relates to the outstanding payment to former Affinitas' shareholders following the Affinitas / Spark Merger (see Note 5.8). As of December 31, 2018, the outstanding payment to former Affinitas' shareholders was fully repaid.

5.12 Other liabilities

(in € thousands)	December 31, 2018	December 31, 2017
VAT payables	590	98
Payroll liabilities	953	927
Other tax liabilities	276	2,262
- thereof non-current	—	—
- thereof current	1,819	3,287
Total other liabilities	1,819	3,287

At December 31, 2018, payroll liabilities primarily relate to vacation and bonus obligations, as well as €68 thousand of employee-related social security obligations.

5.13 Deferred tax liabilities

See Note 4.14 for the presentation of deferred tax liabilities.

5.14 Income tax liabilities

See Note 4.14 for the presentation of income tax liabilities

5.15 Contract liabilities

The maturity structure of contract liabilities as of December 31, 2018 and 2017 is broken down as follows:

(in € thousands)	December 31, 2018	December 31, 2017
Non-current	5	23
Current	16,604	20,354
Total contract liabilities	16,609	20,377

The contract liabilities balance relates to the Group's receipt of advance consideration from customers for subscription services, in which revenue is recognized over the subscription period. The contract liabilities balance decreased by €3,768 thousand, because subscription sales were lower than subscription revenue recognized in the period due to the multi-month nature of our subscription offerings. During the year ended December 31, 2018, revenue of €20,330 thousand was realized, which was included in the beginning contract liabilities balance at January 1, 2018.

Note 6. Notes on the Consolidated Statements of Cash Flows

The consolidated statement of cash flows was prepared in accordance with IAS 7 and shows the inflow and outflow of cash flows during the reporting year. Cash flows are broken down into cash flows from operating activities, cash flows from investing activities and cash flows from financing activities. The cash flows arising from operating activities are determined by using the indirect method according to IAS 7.18 (b).

Note 7. Financial Instruments and Risk Management

7.1 Financial instruments

The following table shows the carrying amounts and fair values of financial assets and financial liabilities and classifies these into measurement categories pursuant to IFRS 9.

December 31, 2018 in € thousands	Classification pursuant to IFRS 9	Carrying amount	Measurement Categories		Fair Value			Total
			At amortized cost	At fair value	Level 1	Level 2	Level 3	
Deposits	AC	21	21	—	—	—	—	—
Other receivables	AC	3	3	—	—	—	—	—
Other non-current financial assets		24	24	—	—	—	—	—
Trade receivables	AC	3,042	3,042	—	—	—	—	—
Deposits	AC	299	299	—	—	—	—	—
Other receivables	AC	615	615	—	—	—	—	—
Other current financial assets		914	914	—	—	—	—	—
Cash and cash equivalents	AC	11,095	11,095	—	—	—	—	—
Total financial assets		15,075	15,075	—	—	—	—	—
Borrowings	AC	12,125	12,125	12,259	—	12,259	—	12,259
Other non-current financial liabilities	AC	54	54	—	—	—	—	—
Trade payables	AC	10,166	10,166	—	—	—	—	—
Refund liabilities	AC	135	135	—	—	—	—	—
Other liabilities	AC	743	743	—	—	—	—	—
Other current financial liabilities		878	878	—	—	—	—	—
Total financial liabilities		23,223	23,223	12,259	—	12,259	—	12,259

The fair value of borrowings was determined using observable inputs (Level 2). The valuation considers the present value of expected future repayments, discounted using a market interest rate equal to the interest margin on the borrowings plus a three month euro LIBOR interest rate.

The following table shows the carrying amounts and fair values of financial assets and financial liabilities and classifies these into measurement categories pursuant to IAS 39.

December 31, 2017 in € thousands	Classification pursuant to IAS 39	Carrying amount	Measurement Categories		Fair Value			Total
			At amortized cost	At fair value	Level 1	Level 2	Level 3	
Deposits	LaR	20	20	—	—	—	—	—
Other receivables	LaR	3	3	—	—	—	—	—
Other non-current financial assets		23	23	—	—	—	—	—
Trade receivables	LaR	6,814	6,814	—	—	—	—	—
Deposits	LaR	2,099	2,099	—	—	—	—	—
Other receivables	LaR	1,057	1,057	—	—	—	—	—
Other current financial assets		3,156	3,156	—	—	—	—	—
Cash and cash equivalents	LaR	8,214	8,214	—	—	—	—	—
Total financial assets		18,207	18,207	—	—	—	—	—
Borrowings	OFL	5,850	5,850	6,284	—	6,284	—	6,284
Trade payables	OFL	11,489	11,489	—	—	—	—	—
Other liabilities	OFL	6,515	6,515	—	—	—	—	—
Other current financial liabilities		6,515	6,515	—	—	—	—	—
Total financial liabilities		23,854	23,854	6,284	—	6,284	—	6,284

The fair value of borrowings was determined based on the settlement agreement with the lenders dated March 15, 2018.

The following table shows the movements of financial liabilities:

in € thousands	January 1, 2018	Cash related changes from operating activities	Cash related changes from financing activities	Non-Cash related changes		December 31, 2018
				Changes in interest expenses	Other changes	
Borrowings	5,850	(423)	6,248	450	—	12,125
Other non-current financial liabilities	—	—	—	—	54	54
Refund liabilities	—	—	—	—	135	135
Other liabilities	6,515	(559)	(5,730)	—	517	743
Other current financial liabilities	6,515	(559)	(5,730)	—	652	878
Total financial liabilities	12,365	(982)	518	450	706	13,057

Measurement of fair values

The majority of the Group's financial instruments, including cash and cash equivalents, restricted cash, deposits, trade receivable, and accounts payable are carried at cost, which approximates their fair value due to the short-term maturity of these instruments.

Financial instruments not measured at fair value

Borrowings

The fair value of borrowings has been measured using discounted cash flows, i.e. the present value of expected payments, discounted using a risk-adjusted discount rate. For this, the Group's weighted average cost of capital has been used.

7.2 Financial risk management

The Group has exposure to the following risks arising from financial instruments:

- credit risk;
- liquidity risk; and
- market risk

Risk management framework

The Group's management has overall responsibility for the establishment and oversight of the Group's risk management. The Group's risk management procedures are established to identify and to analyze the risks faced by the Group, to set appropriate risk limits and controls and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities. The Group aims to maintain a disciplined and constructive control environment in which all employees understand their roles and obligations.

Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Group's receivables from subscribers.

The Credit risk exists for all financial assets, in particular, for cash and cash equivalents, trade receivables and other financial assets. The Group's receivables are unsecured. The carrying amount of financial assets represents the maximum credit exposure.

The credit risk relating to trade receivables is the risk that the subscribers are unable to fulfill their payment obligations. The Group does not regard itself as being exposed to a major default risk from any single individual customer. The concentration of the credit risk is limited due to the broad and heterogeneous customer base.

Credit risk relating to other financial assets mainly relates to cash deposits to payment processors. If the payment processors incur financial difficulties, then the Group may incur losses. Management monitors the creditworthiness of payment processors closely. In the past, there were no indications that the payment processors would not meet their obligations.

The following table presents the maturity structure of the financial assets that are not impaired and not past due as well as those due and impaired as of the reporting date. In respect of receivables that are neither impaired nor past due, there was no indication on the reporting date that the debtors would not meet their payment obligations. All receivables past due by 60 days are written off in its entirety.

(in € thousands)	Carrying amount	Thereof neither past due nor impaired	Thereof past due as of the reporting date and impaired
December 31, 2018			
Deposits	320	320	—
Other receivables	618	618	—
Other financial assets	938	938	—
Trade receivables	3,042	2,435	607
Total	3,980	3,373	607
December 31, 2017			
Deposits	2,119	2,119	—
Other receivables	1,060	1,060	—
Other financial assets	3,179	3,179	—
Trade receivables	6,814	6,040	774
Total	9,993	9,219	774

The movement in the allowance for impairment in respect of trade receivables during the year was as follows. The bad debt allowance includes all receivables that are overdue and are not expected to be recovered.

(in € thousands)	Impairments
Balance at December 31, 2016	1,066
Impairment loss recognized	4,102
Amounts written off	(4,394)
Balance at December 31, 2017	774
Impairment loss recognized	1,203
Amounts written off	(1,370)
Balance at December 31, 2018	607

As of December 31, 2018 and 2017, the Group held cash and cash equivalents of €11,095 thousand and €8,214 thousand, respectively. The cash and cash equivalents are held with bank and financial institution counterparties, which hold at least an A-level credit rating.

Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Group's approach to managing liquidity is to ensure, as far as possible, that it will have sufficient liquidity to meet its liabilities when they are due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation.

Management monitors its cash inflows and outflows on a daily basis and through proper budget planning, the Group's liquidity management makes sure that sufficient funds are available to meet financial obligations. Additionally, many customers pay in advance for subscription services at the commencement of the subscription period. Therefore, the Group maintains high cash and cash equivalents levels.

Exposure to liquidity risk

The following are the remaining contractual maturities of financial liabilities at the reporting date. The amounts are gross and undiscounted, and include contractual interest payments and exclude the impact of netting agreements.

December 31, 2018 in € thousands	Carrying amount	Contractual cash flows			
		Total	< 1 year	1-5 years	More than 5 years
Borrowings	12,125	12,125	3,750	8,375	—
Other non-current financial liabilities	54	54	—	54	—
Trade payables	10,166	10,166	10,166	—	—
Refund liabilities	135	135	135	—	—
Other liabilities	743	743	743	—	—
Other current financial liabilities	878	878	878	—	—
Total financial liabilities	23,223	23,223	14,794	8,429	—

December 31, 2017 in € thousands	Carrying amount	Contractual cash flows			
		Total	< 1 year	1-5 years	More than 5 years
Borrowings	5,850	6,284	6,284	—	—
Trade payables	11,489	11,489	11,489	—	—
Other current financial liabilities	6,515	6,515	6,515	—	—
Total financial liabilities	23,854	24,288	24,288	—	—

Market risk

Market risk is the potential loss from adverse changes in foreign exchange rates, interest rates, and market prices. The Group's exposure to market risk includes the Group's cash, accounts receivable, other financial assets, accounts payable, and other financial liabilities. The Group manages its exposure to these risks through established policies and procedures. The Group's objective is to mitigate potential income statement, cash flow and market exposures from changes in interest and foreign exchange rates.

Currency risk

The Group is exposed to currency risk to the extent that there is a mismatch between the currencies in which sales, purchases and borrowings are denominated and the functional currency of the Group's subsidiaries. The presentation currency of all Group subsidiaries is the euro.

The Group transacts business globally and is subject to risks associated with fluctuating foreign exchange rates. The Group intends to naturally hedge foreign exchange fluctuations by settling all transactions in their respective transaction currencies. The Group's policy is to ensure that its net exposure is kept to an acceptable level by buying or selling foreign currencies at spot rates when necessary to address short-term obligations. When foreign currency reserves are more than the short-term obligations, then the Group converts the amount to functional currency. The currencies in which these transactions are primarily denominated are euro, United States dollar, Great British Pound, Australian dollar, Canadian dollar, and Israeli New Shekel ("ILS").

Future net transaction gains and losses are inherently difficult to predict, as they are reliant on how the multiple currencies in which the Group transacts fluctuate in relation to the functional currency of the Group's subsidiaries, the relative composition and denomination of current assets and liabilities for each period, and the Group's effectiveness at forecasting and managing such exposures.

Exposure to currency risk

The summary quantitative data about the Group's exposure to currency risk as reported to the management of the Group is as follows:

December 31, 2018 in thousands in local currency	EUR	USD	GBP	AUD	CAD	ILS
Financial assets						
Trade receivables	1,841	985	132	154	147	19
Other financial assets	759	196	—	—	—	19
Cash and cash equivalents	3,993	6,767	218	264	448	2,136
Financial liabilities						
Borrowings	(12,125)	—	—	—	—	—
Trade payables	(8,140)	(1,971)	(210)	(54)	(13)	(124)
Other financial liabilities	(385)	(627)	—	—	—	—
Net statement of financial position exposure	(14,057)	5,350	140	364	582	2,050

December 31, 2017 in thousands in local currency	EUR	USD	GBP	AUD	CAD	ILS
Financial assets						
Trade receivables	5,738	924	110	132	143	—
Other financial assets	2,355	240	—	—	—	2,500
Cash and cash equivalents	1,838	6,568	47	247	450	1,605
Financial liabilities						
Borrowings	(5,850)	—	—	—	—	—
Trade payables	(6,711)	(4,883)	(80)	(178)	(620)	(343)
Other financial liabilities	(5,905)	(415)	—	—	—	(1,099)
Net statement of financial position exposure	(8,535)	2,434	77	201	(27)	2,663

Sensitivity analysis

A reasonably possible strengthening (weakening) of the euro, United States dollar or sterling, determined by the gross currency fluctuation of the previous year, against all other currencies at December 31 would have affected the measurement of financial instruments denominated in a foreign currency profit or loss by the amounts shown below. The effect of intercompany transactions with the Spark Networks (Israel) Limited subsidiary that are treated as net investments are remeasured through other comprehensive income. This analysis assumes that all other variables, in particular interest rates, remain constant and ignores any impact of forecast sales and purchases.

Effect in euro	Profit or loss	
	Strengthening	Weakening
December 31, 2018		
EUR (0% movement)	—	—
USD (5% movement)	(242)	242
GBP (1% movement)	(1)	1
AUD (6% movement)	(21)	21
CAD (4% movement)	(22)	22
ILS (3% movement)	(66)	66
December 31, 2017		
EUR (0% movement)	—	—
USD (12% movement)	(335)	335
GBP (4% movement)	(3)	3
AUD (5% movement)	(10)	10
CAD (6% movement)	2	(2)
ILS (3% movement)	(76)	76
December 31, 2016		
EUR (0% movement)	—	—
USD (3% movement)	62	34
GBP (14% movement)	(77)	(254)

Interest rate risk

Borrowings under the Facilities bear interest at a rate equal to LIBOR plus a specified margin. Refer to Note 5.9. As of December 31, 2018, the outstanding principal balance of the Term Loan Facility is €12.098 million. These borrowings expose us to interest rate risk due to the potential variability in market interest rates. Assuming our outstanding aggregate borrowings under the Term Loan Facility at December 31, 2018 as described above, a one-percentage point increase in applicable interest rates would have increased our interest expense for 2018 by €107 thousand. This amount is determined by calculating the effect of a hypothetical interest rate change on the Group's floating rate debt. This estimate does not include the effects of other potential actions to mitigate this risk or changes in the Group's financial structure. During previous years, the Group only had borrowings with fixed interest rates outstanding and therefore was not exposed to interest rate risk.

Fair value sensitivity analysis for fixed-rate instruments

As of December 31, 2018 and 2017, the Group does not account for any fixed-rate financial assets or financial liabilities at fair value through profit or loss. Therefore, a change in interest rates at the reporting date would not affect profit or loss.

Other market price risk

The Group does not hold any equity securities or financial assets or liabilities that are dependent on the price of equity instruments. The Group is therefore not exposed to market price risks.

Note 8. Other Information

8.1 Balances and transactions with related parties

Parent and ultimate controlling party

The ultimate controlling party of the group is Spark Networks SE. The shares in the Group are publicly traded on the New York Stock Exchange. Rocket Internet SE holds more than 25% of Spark Networks shares outstanding, and was represented on the Affinitas Board in 2015, 2016, and the pre-Merger period of 2017.

Transactions with shareholders

Consultation services

In 2008 and 2009, Affinitas and Rocket Internet SE (“Rocket”) entered into two agreements. Under these agreements Rocket is obliged to render consulting services to Affinitas in business, professional and/or technical areas and programming services. Affinitas is obliged to pay Rocket fees for the services rendered under the agreements, which are calculated on the basis of the incurred costs of Rocket plus expenses. For the years ended December 31, 2018, 2017 and 2016, respectively, Spark Networks recorded costs of €25 thousand, €36 thousand and €22 thousand, respectively. There was €0 thousand payable to Rocket as of December 31, 2018 and €5 thousand as of December 31, 2017.

Shareholder loans

During the year ended December 31, 2016, the Company entered into loans with some of its shareholders as described in more detail in Note 5.9. The total amount outstanding as of December 31, 2018 and 2017 was €0 thousand and €5,850 thousand respectively, and the amount of interest incurred during the years then ended December 31, 2018, 2017, and 2016 was €127 thousand, €508 thousand and €130 thousand, respectively. The loan was fully repaid in March 2018.

Shareholder payments

Per the terms of the Affinitas / Spark Merger, Affinitas’ shareholders received an aggregate cash payout of €5,730 thousand. This payout included payments to Affinitas Phantom Share GmbH, Rocket, and David Khalil of €1,641 thousand, €1,377 thousand and €25 thousand, respectively.

Affinitas Phantom Share GmbH

On April 20, 2012, eHarmony, Inc. (“eH”) in its capacity as a shareholder of Affinitas GmbH, granted a shareholder loan to Affinitas Phantom Share GmbH (“APS”) in the amount of €213 thousand (the “eH Shareholder Loan”) for the purpose of financing certain payments made by APS in connection with the formation of APS. On March 3, 2013, eH assigned the eH Shareholder Loan to Affinitas GmbH. The eH Shareholder Loan and all interest was fully repaid by APS on August 23, 2018. As of December 31, 2018, APS beneficially owned approximately 14% of the ordinary shares of the Company and was jointly controlled by David Khalil and Lukas Brosseder.

MLLNNL, LLC

The acquired subsidiary Spark had multiple, ongoing engagements with MLLNNL, LLC (“Mllnnl”), a marketing agency that employs, and was co-founded by, an employee of the Group’s wholly-owned subsidiary, Smooch Labs. Expenses related to Mllnnl appear in the consolidated results following the Affinitas / Spark Merger in November 2017. For the years ended December 31, 2018 and 2017, the Company has expensed €313 thousand and €50 thousand, respectively, for services performed by Mllnnl.

Union Square Media Group, LLC

In December 2017, the Group entered into an advertising agreement with Union Square Media Group, LLC, a full-service digital advertising agency. Joshua Keller, the President of Union Square Media Group, LLC, was a member of the Group's Administrative Board from November 3, 2017 until June 5, 2018, the effective date of Mr. Keller's resignation from the Administrative Board. For the year ended December 31, 2018, the Group expensed €739 thousand for services performed by Union Square Media Group, LLC. There was a €223 thousand payable to Union Square Media Group, LLC as of December 31, 2018.

Management Services Agreement with PEAK6

In August 2016, Spark entered into a purchase agreement with PEAK6 pursuant to which Spark issued and sold to PEAK6 an aggregate of 5,000,000 shares of common stock of Spark at a purchase price of \$1.55 per share. Spark also issued the Spark Warrant to PEAK6 to purchase up to 7,500,000 shares of common stock of Spark at an exercise price of \$1.74 per share pursuant to the terms of a warrant agreement. Upon consummation of the merger between Affinitas and Spark, all of the shares subject to the Spark Warrant vested immediately prior to the closing of the merger, and the Spark Warrant expired upon the closing of the merger.

In connection with the execution of the PEAK6 purchase agreement, Spark entered into a management services agreement dated as of August 9, 2016 with PEAK6 (the "Management Services Agreement"), pursuant to which PEAK6 provides certain marketing, technology, strategy, development and other services to Spark over a five-year term, for a cash fee of \$1.5 million per year (the "Management Fee"), which was paid on a quarterly basis in an amount of \$375 thousand per quarter. On November 2, 2017, in connection with the consummation of the merger between Affinitas and Spark, Spark and PEAK6 mutually agreed to terminate the Management Services Agreement effective December 31, 2017. As consideration for the termination, Spark paid PEAK6 an amount equal to \$2.4 million (€2.0 million) in January 2018 in full satisfaction of any obligation or liability of Spark to PEAK6 for payments due to PEAK6 under the termination agreement.

Consulting Agreement with PEAK6

In March 2018, Spark Networks entered into a consulting agreement dated as of March 9, 2018 with PEAK6 (the "Consulting Agreement"), pursuant to which PEAK6 provides certain technology and infrastructure advice and information gathering services and other services to Spark Networks. The Consulting Agreement can be terminated by either party upon 30 days' notice. Under the Consulting Agreement, PEAK6 is not entitled to any fees or other amounts.

Managing director compensation

During the years ended December 31, 2018, 2017 and 2016, managing director compensation was comprised of the following:

(in € thousands)	2018	2017	2016
Short-term benefits	970	693	481
Other employment benefits	—	—	25
Share-based payments	5,120	1,522	884
Total compensation	6,090	2,215	1,390

During the year ended December 31, 2016, one of Spark Networks' executives transferred to Spark Networks €25 thousand. Such amount was fully repaid by Spark Networks to the executive within days. No interest was accrued and the transaction did not have any effect on the consolidated statements of operations and comprehensive loss/income. There was no balance outstanding as of December 31, 2018 and 2017.

8.2 Contingent Liabilities

Virtual employee share option plan

For the description of the virtual employee share option plan refer to Note 4.13.

Pending legal proceedings

Stephanie J. Benabu vs. Videotron Ltee and Affinitas GmbH, et al.

On August 1, 2016, Affinitas was served with a copy of an application to bring a class action lawsuit and to appoint the status of representative plaintiff filed with the Superior Court of the District of Montreal. The potential suit relates to the practice of automatically renewing the services provided to Canadian users of Affinitas' products at standard pricing after a discounted trial period without active consent by the consumer. Affinitas ceased engaging in these practices and entered into a settlement agreement with the plaintiffs. The settlement agreement was ratified by the Superior Court of the District of Montreal on May 8, 2018. The closing judgment was delivered by the Superior Court on November 2, 2018, declaring that Affinitas had complied with its obligations under the settlement agreement.

City of Santa Monica, California – City Attorney General Investigation

On May 16, 2016, representatives from Spark met with representatives from a cross-jurisdictional working group consisting of consumer fraud attorneys from the City of Santa Monica and offices of the District Attorney from the counties of Los Angeles, Santa Cruz, Santa Clara and San Diego ("Cross Jurisdictional Group"). This meeting was held at the request of the Cross Jurisdictional Group, as a "pre-filing" meeting to explain and potentially resolve issues over auto-renewal disclosures by the Spark websites. The Cross Jurisdictional Group alleges that the Spark websites violate California law on disclosure of auto-renewal terms and ability to cancel auto-renewal. They also claim that the Spark websites violate California dating contract statutes, which (where applicable) require a three day right to cancel. The Cross Jurisdictional Group sent a voluntary document request to the company on June 2, 2016. The company cooperated with the Cross Jurisdictional Group and provided information in response to the voluntary request. The Cross Jurisdictional Group has indicated that it would like the company to change its disclosures in certain respects, and that it intends to seek the payment of a penalty in an unspecified amount. In response to these disclosure requests, the company has made changes. On December 1, 2017, the company received a settlement communication from the City of Santa Monica and offices of the District Attorney, proposing settlement terms including payment of civil penalties, restitution to consumers, investigative costs and legal fees in a maximum amount of \$1.6 million (€1.3 million). The proposal was accepted by Spark and a final judgment was received on October 3, 2018. The Group made payments of \$76 thousand (€67 thousand) for restitution to consumers and administrative fees in 2018 and recognized a financial liability of \$575 thousand (€502 thousand) at December 31, 2018 for civil penalties and investigative costs to be paid per the terms of the final judgment. Management believes that this matter was fully resolved in the first quarter of 2019.

Upmarket vs. Spark Networks (Israel) Ltd.

On August 6, 2017, UpMarket Projects Ltd ("UpMarket") filed a civil action ("Complaint") for breach of contract and unjust enrichment against Spark Networks USA, LLC ("Spark USA") and against Spark Networks (Israel) LTD. ("Spark Israel") in Tel-Aviv District court. In the statement of claim, UpMarket alleges that Spark USA materially breached a commercial contract between the parties by terminating such contract in contravention to its terms. The parties executed a settlement agreement in January 2018, whereby Spark made settlement payments amounting to ILS 1.1 million (€0.3 million).

Trademarks

Trademarks are an important element in running online dating websites. Given the large number of markets and brands, Spark Networks is dealing with oppositions to its trademarks from time to time. As of December 31, 2018, there are several ongoing national procedures which affect trademarks within Germany, France, Finland, Sweden, the United Kingdom and Benelux. The procedures are expected to continue for more than 12 months. Outcome is unforeseeable as of the reporting date.

We have additional existing legal claims and may encounter future legal claims in the normal course of business. In our opinion, the resolutions of the existing legal claims are not expected to have a material impact on our financial position or results of operations.

We intend to defend vigorously against each of the above lawsuits. At this time, management does not believe the above matters, either individually or in the aggregate, will have a material adverse effect on the Group's results of operations or financial condition and believes the recorded legal provisions as of December 31, 2018 are adequate in light of the probable and estimable liabilities. However, no assurance can be given that these matters will be resolved in our favor.

8.3 Operating leases and other off-balance sheet contractual obligations

As of the reporting date, future minimum lease payments under non-cancellable operating lease agreements and future payments for contractual obligations are as follows:

(in € thousands)	December 31,	
	2018	2017
Less than one year	1,691	1,220
Between one and five years	1,089	1,371
More than five years	—	—
Total	2,780	2,591

Operating lease agreements and other contractual obligations relate to the Group's principal administrative office space and related premises in Berlin, Germany, as well as payments for office space within the United States, and the lease of certain office equipment. Amounts also reflect other non-cancelable commitments and obligations consisting of contracts with software licensing and marketing service providers. The Group does not have significant renewal or purchase options.

8.4 Events after the reporting date

Entry into definitive agreement to acquire Zoosk, Inc.

On March 21, 2019, Spark Networks entered into a definitive agreement to acquire Zoosk, Inc. ("Zoosk").

Zoosk is a global online dating platform, utilizing proprietary technology to connect members located in countries around the world both online and via its mobile apps.

Under the terms of the agreement, Spark Networks will acquire 100% of Zoosk's shares with a combination of cash and stock valuing the company at approximately \$255 million based on the closing price of Spark Networks stock on March 20, 2019.

Spark Networks will issue 12.98 million ADSs valued at approximately \$150 million based on the closing price of Spark Networks stock of \$11.53 on March 20, 2019. Additionally, Zoosk shareholders will receive net cash consideration of \$95 million at closing and \$10 million via a deferred cash payment in December 2020, which will be funded through a new \$120 million senior secured debt facility.

The transaction is expected to close early in the third quarter of 2019, subject to the approval of Spark Networks shareholders, receipt of a permit authorizing the issuance of the ADSs, and the satisfaction of other customary closing conditions. Over 75% of Spark Networks shareholders have committed to vote in favor of the transaction. The transaction was unanimously approved by both the Spark Networks and Zoosk boards of directors.

[Bindende deutsche Fassung.
Binding German version.]

[Englische Übersetzung nur zu
Informationszwecken. English translation for infor-
mation purposes only.]

**Dienstvertrag für
geschäftsführenden
Direktor**

**Managing Director
Service Agreement**

zwischen

between

Spark Networks SE

mit Sitz in München (künftig: Berlin), vertre-
ten durch den Verwaltungsrat, dieser vertreten
durch den Verwaltungsratsvorsitzenden

registered in Munich (in the future: Berlin),
represented by the administrative board (*Ver-
waltungsrat*), the latter represented by the
chairman of the administrative board

(nachfolgend die „Gesellschaft“)

(hereinafter the “Company”)

und

and

Jeronimo Folgueira

Forststrasse 26b, 12163 Berlin

(nachfolgend der
„Geschäftsführende Direktor“)

(hereinafter the
“Managing Director”)

(Gesellschaft und Geschäftsführender Direktor
nachfolgend zusammen die „Parteien“
und einzeln jeweils eine „Partei“).

(Company and Managing Director
collectively hereinafter
the “Parties”, and each a “Party”).

Präambel

Der Geschäftsführende Direktor ist durch Beschluss des Verwaltungsrats der Gesellschaft („Verwaltungsrat“) vom 12. April 2017 zeitlich unbefristet zum geschäftsführenden Direktor der Gesellschaft bestellt worden. Der Geschäftsführende Direktor war ferner bis zum 17. Oktober 2017 Geschäftsführer der Affinitas GmbH mit Sitz in Berlin („Affinitas“). Zwischen dem Geschäftsführenden Direktor und der Affinitas besteht ein Geschäftsführerdienstvertrag vom 6. Oktober 2015 (in seiner geltenden Fassung samt Nachträgen und Änderungsvereinbarungen der „Geschäftsführerdienstvertrag Affinitas“). Zur Regelung des Anstellungsverhältnisses als geschäftsführender Direktor der Gesellschaft wird der nachfolgende Dienstvertrag geschlossen werden. Er soll zum Zeitpunkt seines Inkrafttretens an die Stelle des Geschäftsführerdienstvertrags Affinitas treten, der durch gesonderten Aufhebungsvertrag aufgehoben werden wird. Dies vorausgeschickt, vereinbaren die Parteien das Folgende:

1. Aufgaben und Pflichten

- 1.1 Der Geschäftsführende Direktor ist berechtigt und verpflichtet, die Gesellschaft nach Maßgabe der nachfolgenden Ziffern zu vertreten und die Geschäfte der Gesellschaft zu führen. Die Gesellschaft ist berechtigt, die Vertretungsbefugnis des Geschäftsführenden Direktors jederzeit zu ändern.
- 1.2 Der Geschäftsführende Direktor führt die Geschäfte der Gesellschaft nach Maßgabe der Gesetze, der Satzung der Gesellschaft, etwaiger Geschäftsordnungen für den Verwaltungsrat sowie für die geschäftsführenden Direktoren in ihrer jeweils gültigen Fassung, den Empfehlungen des Deutschen Corporate Governance Kodex in seiner jeweils geltenden Fassung (soweit diese

Preamble

The Managing Director has been appointed as managing director of the Company by resolution of the Company's administrative board (“Administrative Board”) dated April 12, 2017 for an indefinite period of time. The Managing Director was also managing director of Affinitas GmbH with seat in Berlin („Affinitas“) until October 17, 2017. The Managing Director and Affinitas entered into a managing director service agreement dated October 6, 2015 (as amended from time to time, the “Affinitas Managing Director Service Agreement”). In order to govern the employment as managing director of the Company, the following service agreement will be concluded. It shall replace the Affinitas Managing Director Service Agreement which will be terminated by way of a separate termination agreement as of the effective date of this service agreement. Now, therefore, the Parties hereby agree as follows:

1. Responsibilities and Duties

- 1.1 The Managing Director shall be entitled and obligated to represent the Company in accordance with the following provisions and to manage the Company's business. The Company may change the authority of the Managing Director to represent the Company at any time.
- 1.2 The Managing Director shall manage the Company's business in compliance with statutory law, the Company's articles of association, the rules of procedure (*Geschäftsordnung*) for the Administrative Board and for the managing directors as amended from time to time, the recommendations of the German Corporate Governance Codex as amended from time to time (to

jeweils von der Gesellschaft befolgt werden) sowie dieses Dienstvertrages.

- 1.3 Der Geschäftsführende Direktor hat die ihm obliegenden Pflichten mit der Sorgfalt eines ordentlichen und gewissenhaften Kaufmanns wahrzunehmen.
- 1.4 Auf Wunsch der Gesellschaft übernimmt der Geschäftsführende Direktor auch Organstellungen und ähnliche Ämter in Gesellschaften, an denen die Gesellschaft unmittelbar oder mittelbar beteiligt oder mit denen sie im Sinne der §§ 15 ff. AktG verbunden ist (zusammen die „Gruppe“), sowie Ämter in Verbänden und ähnlichen Zusammenschlüssen, soweit hieran ein Interesse der Gesellschaft besteht. Die Übernahme solcher Aufgaben begründet keine weiteren Anstellungsverhältnisse. Sämtliche solche Tätigkeiten sind mit der Vergütung nach diesem Dienstvertrag abgegolten. Der Geschäftsführende Direktor ist verpflichtet, sämtliche solcher Organstellungen und Ämter jederzeit auf Verlangen der Gesellschaft oder spätestens bei Beendigung dieses Dienstvertrags niederzulegen.
- 1.5 Der Arbeitsplatz des Geschäftsführenden Direktors ist Berlin, Deutschland, es sei denn, der Verwaltungsrat stimmt zu oder verlangt, jeweils unter Berücksichtigung der Interessen der Gesellschaft, dass der Geschäftsführende Direktor seine Arbeit an einem anderen Ort verrichtet.

2. Treuepflichten / Betriebsgeheimnisse

- 2.1 Der Geschäftsführende Direktor ist verpflichtet, Dritten gegenüber strengstes Stillschweigen über alle ihm im Rahmen seiner Tätigkeit anvertrauten oder sonst bekannt gewordenen geschäftlichen, betrieblichen oder technischen Information und Vorgänge zu

the extent complied with by the Company), and this service agreement.

- 1.3 The Managing Director shall carry out the duties incumbent upon him with the due care and diligence of a prudent businessman.
- 1.4 At the request of the Company, the Managing Director will also assume office in executive bodies and similar offices in companies in which the Company directly or indirectly holds an interest, or in affiliated companies within the meaning of Sec. 15 *et seq.* of the German Stock Corporation Act (*Aktiengesetz*) (jointly the “Group”), as well as offices in associations and similar organisations if the Company has an interest therein. The assumption of any of the aforementioned responsibilities does not constitute any separate service relationship. Any of the aforementioned activities are compensated by the remuneration stipulated under this service agreement. The Managing Director shall, upon request by the Company, at the latest, however, upon expiry or termination of this service agreement, resign from all of the aforementioned offices.

- 1.5 The Managing Director's place of work shall be Berlin, Germany, unless otherwise required or approved by the Administrative Board taking into account the Company's interests and business.

2. Fiduciary Duties / Company Secrets

- 2.1 The Managing Director is obliged to strictly maintain confidentiality *vis-à-vis* third parties regarding all business, operational or technical information and processes with which he is entrusted or of which he may otherwise become aware in the context of his

wahren, die internen oder vertraulichen Charakter haben, jeweils sofern und soweit nicht nach zwingendem Recht etwas anderes angeordnet ist. Nach Beendigung des Dienstverhältnisses besteht diese Pflicht dauerhaft fort, auch im Falle einer Kündigung oder eines Eintritts in den Ruhestand.

2.2 Geschäftliche und betriebliche Unterlagen aller Art, auch in elektronischer Form, einschließlich persönlicher Aufzeichnungen über dienstliche Angelegenheiten, dürfen nur zu geschäftlichen Zwecken verwandt werden. Insbesondere ist untersagt, Kostenberechnungen, Statistiken, technische Einzelheiten und Ähnliches in Abschriften, Fotokopien oder Auszügen außerbetrieblich zu fertigen, zu benutzen oder an dritte Personen weiterzugeben.

2.3 Unterlagen im Sinne der Ziff. 2.2, die der Geschäftsführende Direktor im Rahmen seines Dienstverhältnisses in Besitz hat, sind sorgfältig aufzubewahren und auf Verlangen der Gesellschaft jederzeit, spätestens bei Beendigung des Dienstverhältnisses, der Gesellschaft auszuhändigen. Gleiches gilt für sonstige Gegenstände, die sich im Eigentum oder Besitz der Gesellschaft befinden. Gleiches gilt auch für die Rückgabe elektronisch gespeicherter Daten. Die Rückgabe von elektronisch gespeicherten Daten hat auf einem geeigneten Speichermedium zu erfolgen; der Geschäftsführende Direktor wird zugleich die Löschung dieser Daten auf allen Speichermedien bestätigen, auf die die Gesellschaft keinen Zugriff hat. Zurückbehaltungsrechte können durch den Geschäftsführenden Direktor nicht geltend gemacht werden.

3. Arbeitszeit / Nebentätigkeit

work insofar as they are of an internal or confidential nature, in each case unless and to the extent otherwise required from time to time under mandatory law. This obligation shall continue beyond the end of his service relationship, also in case of termination of this service agreement or retirement.

2.2 Business and operational documents of any kind, also electronic data, including personal notes regarding business matters, may only be used for business purposes. In particular, it is prohibited to produce or make use of any transcripts, photocopies or excerpts of cost calculations, statistics, technical details and the like externally or to pass on such documents to third parties.

2.3 All documents as defined under Sec. 2.2 above, which the Managing Director has in his possession in the course of the performance of his duties, must be stored in a secure place and handed back to the Company upon request by the Company at any time, no later, however, than upon termination of the service relationship. The aforesaid shall also apply for any other materials that are property of the Company. The same applies to the return of electronically stored data. The return of electronically stored data shall be effected by a proper storage device; the Managing Director will confirm at the same time the deletion of all data on any storage devices, which are not accessible by the Company. The Managing Director may not assert any rights of retention.

3. Hours of work / Secondary Activity

3.1 Der Geschäftsführende Direktor hat seine volle Arbeitskraft und seine gesamten Kenntnisse und Erfahrungen der Gruppe (d.h. der Gesellschaft und denjenigen weiteren Gesellschaften, bei denen der Geschäftsführende Direktor gem. Ziff. 1.4 Aufgaben oder Ämter wahrnimmt) zur Verfügung zu stellen.

3.2 An bestimmte Arbeitszeiten ist der Geschäftsführende Direktor nicht gebunden. Der Geschäftsführende Direktor ist verpflichtet, jederzeit, wenn und soweit das Wohl der Gesellschaft es verlangt, zur Dienstleistung zur Verfügung zu stehen.

4. Vergütung

4.1 Die Vergütung des Geschäftsführenden Direktors setzt sich zusammen aus (i) einer jährlichen Festvergütung (Ziff. 4.2), (ii) einer jährlichen variablen Tantieme (Ziff. 4.3) sowie (iii) der Teilnahme am Virtual Stock Option Program (VSOP) der Gesellschaft (Ziff. 4.4).

4.2 Der Geschäftsführende Direktor erhält ab Vertragsbeginn als Vergütung für seine Tätigkeit ein Brutto-Jahresgehalt in Höhe von EUR 180.000,00, das in zwölf (12) gleichen monatlichen Raten jeweils am Monatsende unter Einbehalt der gesetzlichen Abzüge bezahlt wird.

4.3 Der Geschäftsführende Direktor erhält – erstmals für das am 1. Januar 2018 beginnende Geschäftsjahr – zudem eine variable jährliche Tantieme in Höhe von maximal EUR 120.000,00, deren Höhe der Verwaltungsrat für jedes Geschäftsjahr jeweils vor Feststellung des Jahresabschlusses für das betreffende Geschäftsjahr festsetzt. Bei der Festsetzung hat der Verwaltungsrat zu berücksichtigen, bis zu welchem Grad

3.1 The Managing Director shall devote his entire working capacity and his entire knowledge and experience to the Group (i.e. the Company and such other companies of the Group in which the Managing Director assumes functions in accordance with Sec. 1.4 above).

3.2 The Managing Director shall not be bound to fixed working hours. However, the Managing Director shall be at the Company's service at any time if and to the extent required by the Company's interests.

4. Remuneration

4.1 The remuneration of the Managing Directors shall be composed of (i) an annual fixed salary (Sec. 4.2), (ii) an annual variable bonus (Sec. 4.3) and (iii) the participation in the Virtual Stock Option Program (VSOP) of the Company (Sec. 4.4).

4.2 As of the commencement of this service agreement, the Managing Director shall receive an annual gross salary of EUR 180,000.00 as remuneration, which shall be paid in twelve (12) prorated monthly payments after statutory deductions are withheld at the end of each month.

4.3 Furthermore, starting with the business year commencing on January 1, 2018, the Managing Director shall receive a variable annual bonus of up to EUR 120,000.00, to be determined by the Administrative Board for each respective business year prior to the approval of the annual accounts of the respective business year. When determining the variable annual bonus, the Administrative Board shall take into account the extent to which the Company has achieved the business

die Gesellschaft im betreffenden Geschäftsjahr Unternehmensziele erreicht hat, die spätestens zum Beginn eines jeden Geschäftsjahres oder eines anderen Planungszeitraums zwischen dem Geschäftsführenden Direktor und dem Verwaltungsrat in einer Zielvereinbarung vereinbart worden sind. Diese Tantieme ist zeitgleich mit der nächsten monatlichen Gehaltszahlung gem. Ziff. 4.2 nach ihrer Festsetzung fällig. Der Geschäftsführende Direktor muss zu dem Zeitpunkt, zu dem die Tantieme festgesetzt wird, in einem Anstellungsverhältnis mit der Gesellschaft stehen, um die Tantieme in Anspruch nehmen zu können. Für das volle Geschäftsjahr 2017 erhält der Geschäftsführer eine Tantieme auf Grundlage des Geschäftsführerdienstvertrags Affinitas.

- 4.4 Der Geschäftsführende Direktor nimmt nach Maßgabe eines gesonderten Zuteilungsschreibens und den anwendbaren Planbedingungen an einem Virtual Stock Option Plan (VSOP) der Gesellschaft teil. Diese Vergütungskomponente setzt dem Geschäftsführenden Direktor langfristige Anreize.
- 4.5 Beginnt bzw. endet das Dienstverhältnis während bzw. vor Ablauf eines Kalenderjahres, so wird das jährliche Brutto-Jahresgehalt nach Ziff. 4.2 sowie die Tantieme nach Ziff. 4.3 zeitanteilig gezahlt. Hiervon abweichend ist die variable jährliche Tantieme nach Ziff. 4.3 erstmals für das am 1. Januar 2018 beginnende Geschäftsjahr geschuldet.
- 4.6 Für den Fall, dass sich der Geschäftsführende Direktor privat kranken- und pflegeversichert, zahlt die Gesellschaft dem Geschäftsführenden Direktor einen Zuschuss zur privaten Kranken- und Pflegeversicherung in Höhe des Arbeitgeberanteils, wie er bei Versicherungspflicht in der gesetzlichen Kranken- und Pflegeversicherung bestünde, höchstens jedoch in Höhe der Hälfte des

goals and objectives in the respective business year which have been agreed upon between the Managing Director and the Administrative Board in a target agreement at the latest at the beginning of each respective business year or any other planning period agreed upon. The variable annual bonus payment shall be due and payable together with the next monthly salary payment in accordance with Sec. 4.2 after having been determined. The Managing Director must be employed by the Company on the date on which the bonus is determined in order to be eligible to receive such bonus. For the full business year 2017, the Managing Director will receive a bonus payment on the basis of the Affinitas Managing Director Service Agreement.

- 4.4 In accordance with a separate letter of grant and the applicable plan terms and conditions, the Managing Director participates in a Virtual Stock Option Plan (VSOP) of the Company. This component of the Managing Director's remuneration package provides long-term incentives.
- 4.5 If this service agreement commences or ends during or before the end of a calendar year, the remuneration according to Sec 4.2 as well as the bonus according to Sec. 4.3 shall be paid on a pro rata basis. Deviating hereof, the variable annual bonus according to Sec. 4.3 shall be payable for the first time for the business year commencing on January 1, 2018.
- 4.6 In case the Managing Director chooses a private health insurance and private nursing care insurance instead of the statutory insurance the Company pays a contribution to a private health insurance and a private nursing care insurance up to the amount which it would have to bear as its contribution to statutory health insurance and nursing care insurance for the Managing Director, but limited to half of

Betrags, den der Geschäftsführende Direktor tatsächlich für seine private Kranken- bzw. Pflegeversicherung aufzuwenden hat.

- 4.7 Ein Anspruch auf Vergütung von Überstunden, Sonntags-, Feiertags- oder sonstiger Mehrarbeit besteht nicht.

5. Krankheit, Tod

- 5.1 Im Falle unverschuldeter Arbeitsverhinderung durch Krankheit oder Unfall bleibt der Vergütungsanspruch für die Dauer von drei (3) Monaten bestehen. Die Bezüge vermindern sich allerdings um diejenigen Beträge, die der Geschäftsführende Direktor für diesen Zeitraum von Dritten erhält, insbesondere aus einer Krankenversicherung oder Krankentagegeldversicherung. Der Geschäftsführende Direktor ist verpflichtet, der Gesellschaft unverzüglich und vollständig von derartigen Zahlungen Kenntnis zu geben.

- 5.2 Im Falle des Todes des Geschäftsführenden Direktors während der Dauer dieses Dienstvertrages ist die Vergütung gemäß Ziff. 4.2 für den Sterbemonat und die sechs (6) folgenden Kalendermonate, längstens aber bis zur Beendigung dieses Dienstvertrages, an den Ehegatten des Geschäftsführenden Direktors, ersatzweise an die unterhaltsberechtigten Kinder des Geschäftsführenden Direktors (letztere als Gesamtgläubiger), fortzuzahlen.

6. Urlaub

- 6.1 Dem Geschäftsführenden Direktor steht ein Jahresurlaub von 25 Arbeitstagen zu, wobei Samstage nicht als Arbeitstage zählen. Die Urlaubszeiten sind im Einvernehmen mit den übrigen geschäftsführenden Direktoren und dem Verwaltungsratsvorsitzenden festzulegen. Beginnt oder endet dieser Dienst-

the expenses actually incurred by the Managing Director.

- 4.7 There shall be no entitlement to remuneration for overtime, work on Sundays and statutory holidays or other additional work.

5. Illness, Death

- 5.1 In case of involuntary incapability to work due to illness or accident, the Managing Director's entitlement to remuneration shall continue for three (3) months. However, any amounts received by the Managing Director from third parties, in particular from his health insurance, shall be deducted from remuneration. The Managing Director is obliged to immediately inform the Company of such payments.

- 5.2 In the event of the Managing Director's death during the term of this service agreement, the remuneration must continue to be paid pursuant to Sec. 4.2 of this service agreement for the month of death and the six (6) subsequent months to the Managing Director's spouse, alternatively to the Managing Director's dependent children (the latter as the owner of joint rights), for the longest, however, until the expiration of this service agreement

6. Vacation

- 6.1 The Managing Director shall be entitled to 25 working days of annual vacation. Saturdays are not considered as working days. The vacation shall be determined in consultation with the other managing directors of the Company and the chairman of the Administrative Board. If this service agreement commences or ends during a calendar year, the Managing

vertrag während des Kalenderjahres unterjährig, so besteht der Urlaubsanspruch in anteiliger Höhe.

6.2 Kann der Geschäftsführende Direktor aus geschäftlichen Gründen den Urlaub im laufenden Kalenderjahr nicht oder nicht vollständig nehmen, so ist der Urlaub bis zum 31. März des Folgejahres zu nehmen, ansonsten verfällt er ersatzlos. Ein Anspruch auf Abgeltung des Urlaubsanspruchs besteht nicht.

6.3 Offenstehende Urlaubsansprüche, die der Geschäftsführende Direktor wegen der Beendigung des Dienstverhältnisses ganz oder teilweise nicht in Anspruch nehmen konnte, werden mit der letzten Gehaltsabrechnung abgegolten. Die Abgeltung erfolgt auf Basis der jährlichen Festvergütung gemäß Ziff. 4.2.

7. Arbeitsverhinderung

Der Geschäftsführende Direktor ist verpflichtet, jede Arbeitsverhinderung und deren voraussichtliche Dauer unverzüglich anzuzeigen. Auf Verlangen sind die Gründe der Arbeitsverhinderung mitzuteilen. Die Mitteilung hat an einen anderen geschäftsführenden Direktor, wenn ein solcher nicht vorhanden ist, an den Verwaltungsratsvorsitzenden zu erfolgen. Im Falle der Erkrankung ist der Geschäftsführende Direktor darüber hinaus verpflichtet, vor Ablauf des dritten Kalendertages seit Eintritt der Arbeitsunfähigkeit eine ärztliche Bescheinigung über die Arbeitsunfähigkeit sowie deren voraussichtliche Dauer vorzulegen.

8. D&O Versicherung

Die Gesellschaft wird für den Geschäftsführenden Direktor eine Vermögensschadenhaftpflichtversicherung (D&O Versicherung) abschließen. Die

Director will have a *pro rata* vacation entitlement.

6.2 If the Managing Director is unable to take his full annual vacation in a running calendar year for operational reasons, the entitlement to the remaining days of vacation leave shall be forfeited, unless taken by the Managing Director prior to 31 March of the following year. The Managing Director shall not be entitled to compensation for his vacation entitlement.

6.3 As far as remaining vacation entitlements cannot be taken completely or partly by the Managing Director due to the termination of this service agreement, compensation will be paid through the last payroll. The calculation of the compensation will be based on the annual fixed salary according to Sec. 4.2.

7. Work Impediment

The Managing Director shall be obligated to inform the Company of any impediment to work and its expected duration without undue delay. The reasons for the work impediment shall be disclosed upon request. The notice shall be given to a fellow managing director or, as the case may be, to the chairman of the administrative board. In the event of illness, the Managing Director shall also be obligated to present a doctor's certificate relating to the incapacity for work and its expected duration before the expiry of the third calendar day since the occurrence of the incapacity for work.

8. D&O insurance

The Company will take out a D&O insurance for the benefit of the Managing Director. The Company is entitled to amend the policy at its equitable discretion without the Managing Director's

Gesellschaft ist berechtigt, die Versicherung ohne Zustimmung des Geschäftsführenden Direktors nach billigem Ermessen zu ändern, wenn die Deckungssumme den Risiken des Geschäftsbetriebs der Gesellschaft nicht mehr angemessen ist. Für diese Versicherung wird ein Selbstbehalt in Höhe von 10% des Schadens begrenzt je Kalenderjahr auf das Eineinhalbfache des festen Jahresbruttogehaltes gemäß Ziff. 4.2 vereinbart (§ 40 Abs. 8 SEAG, § 93 Abs. 2 Satz 3 AktG).

9. Auslagen

Dem Geschäftsführenden Direktor werden die von ihm bei dienstlichen Reisen und für Repräsentationszwecke im Interesse der Gesellschaft gemachten tatsächlichen Aufwendungen im Rahmen der vom Finanzamt anerkannten steuerlichen Höchstsätze ersetzt, soweit diese erforderlich und angemessen waren und der jeweils anwendbaren compliance policy der Gesellschaft entsprechen. Die Abrechnung erfolgt monatlich oder nach Anfall aufgrund solcher Belege, wie sie von den Finanzämtern als hinreichend für die Abzugsfähigkeit von Auslagen anerkannt werden.

10. Vertragsdauer, Beendigung

- 10.1 Der Dienstvertrag tritt am 1. Dezember 2017 in Kraft und wird für die Zeit bis zum Ablauf des 30. November 2021 geschlossen. Über eine Vertragsverlängerung sollen die Parteien im Zeitraum von zwölf bis sechs Monaten vor Ablauf der Vertragsdauer verhandeln und entscheiden.
- 10.2 Der Anstellungsvertrag ist jederzeit, auch vor Ablauf der in Ziff. 10.1 geregelten Vertragslaufzeit, mit einer Kündigungsfrist von sechs (6) Monaten zum Monatsende ordentlich kündbar.

consent if the coverage of the Company's business risks is no longer sufficient. The Parties agree on a deductible of 10% of the damage, limited to one and a half times the amount of the annual gross salary pursuant to Sec. 4.2 (Sec. 40(8) German SE Implementation Act (SEAG), Sec. 93(2) sentence 3 German Stock Corporation Act (*Aktiengesetz*)).

9. Expenses

The Managing Director shall be reimbursed within the maximum tax rates recognized by the tax authorities for any expenses which were actually incurred on business trips or due to representation purposes in the Company's interest, as long as they were necessary and reasonable and in accordance with any compliance policy of the company as applicable from time to time. The expenses shall be balanced monthly or dependent on the accrual by means of such receipts acknowledged by the revenue offices as sufficient for the deduction of costs.

10. Term of Agreement, Termination

- 10.1 This service agreement shall take effect as of December 1, 2017 and is concluded for the period until the end of November 30, 2021. The parties shall negotiate and decide upon the extension of the service agreement within a period of twelve to six months prior to the expiration of the term of agreement.
- 10.2 Either Party has the right to terminate this service agreement any time, also prior to the term pursuant to Sec. 10.1, by giving six (6) months prior notice to the end of a calendar month.

- 10.3 Der Widerruf der Bestellung zum geschäftsführenden Direktor gilt als Kündigung des Anstellungsvertrages zum nächstzulässigen Zeitpunkt. Beruht der Widerruf auf einem Grund, der nicht zugleich ein wichtiger Grund für die fristlose Kündigung des Dienstvertrags nach § 626 BGB ist (in diesem Fall endet dieser Anstellungsvertrag mit sofortiger Wirkung), so endet der Dienstvertrag erst mit Ablauf der in Ziff. 10.2 genannten Frist. Gleiches gilt bei Amtsniederlegung durch den Geschäftsführenden Direktor.
- 10.4 Der Dienstvertrag ist jederzeit aus wichtigem Grund fristlos kündbar.
- 10.5 Jede Kündigung bedarf zu ihrer Wirksamkeit der Schriftform.
- 10.6 Dieser Dienstvertrag endet automatisch, ohne dass es einer Kündigung bedarf, am Ende des Monats, in dem der Geschäftsführende Direktor die Regelaltersgrenze der gesetzlichen Rentenversicherung erreicht.
- 10.7 Zum Ablauf der Vertragsdauer wird der Geschäftsführende Direktor auf Verlangen sein Amt als geschäftsführender Direktor der Gesellschaft niederlegen.
- 11. Abfindung; Change of Control**
- 11.1 Bei einer vorzeitigen Beendigung dieses Dienstvertrags, die nicht auf (i)(a) einer berechtigten Kündigung aus wichtigem Grund durch die Gesellschaft oder (b) der Abberufung des Geschäftsführenden Direktors von der Position als geschäftsführender Direktor mit wichtigem Grund, (ii)(a) einer ordentlichen Kündigung des Geschäftsführenden Direktors gem. Ziff. 10.2, (b) auf einer außerordentlichen Kündigung des
- 10.3 The revocation of the appointment as managing director shall be deemed notice of termination effective as of the earliest possible date. If this revocation is for a reason which does not constitute good cause for terminating this service agreement without notice according to Sec. 626 of the German Civil Code (*Bürgerliches Gesetzbuch – BGB*) (in this case this service agreement will end with immediate effect), this service agreement will not end until expiry of the notice period set forth in Sec. 10.2 above. The same shall apply if the Managing Director resigns from his office.
- 10.4 The service agreement may be terminated for good cause without notice at any time.
- 10.5 Each notice of termination must be in writing.
- 10.6 This service agreement will end, without any formal notice of termination, at the end of the month in which the Managing Director has reached the regular retirement age in the statutory pension scheme.
- 10.7 As of the expiry of the term of this agreement, the Managing Director will withdraw from the office as managing director of the Company upon request.
- 11. Severance Payment; Change of Control**
- 11.1 If this service agreement is prematurely terminated, other than by way of (i)(a) a termination by the Company for cause, or (b) the Administrative Board revoking the appointment of the Managing Director to the office as managing director with cause; or (ii)(a) a termination by the Managing Director without cause in accordance with Sec. 10.2, (b) a termination by the Managing Director for cause of a Change of Control pursuant to

Geschäftsführenden Direktors gemäß Ziff. 11.4 im Falle eines Change of Control oder (c) auf einer Amtsniederlegung des Geschäftsführenden Direktors ohne wichtigen Grund, oder (iii) auf dem Tod des Geschäftsführenden Direktors beruht, erhält der Geschäftsführende Direktor eine einmalige Barabfindung in Höhe der Vergütungsansprüche für die verbleibende Vertragslaufzeit gemäß Ziff. 10.1 (Festvergütung und variable Tantieme auf Basis einer 100 %-Zielerreichung), insgesamt jedoch höchstens zwei (2) Brutto-Jahresvergütungen gemäß Ziff. 4.2 und 4.3, die nach der Brutto-Jahresvergütung des abgelaufenen Geschäftsjahres zu bemessen sind. Die Abfindung ist mit der letzten Vergütungsabrechnung zur Zahlung fällig.

- 11.2 Im Falle eines Change of Control im Sinne von Ziff. 11.3 stehen dem Geschäftsführenden Direktor die unter Ziff. 11.4 näher beschriebenen Rechte zu.
- 11.3 Ein „Change of Control“ ist (i) der Verkauf, Austausch, die Einbringung, die Übertragung oder anderweitige Verfügung über mehr als 50% der Aktien der Gesellschaft, gleich ob in einer einheitlichen Transaktion oder in einer Abfolge mit einander verbundener oder in engem zeitlichem Zusammenhang miteinander stehender Transaktionen; (ii) der Verkauf, die Übertragung (einschließlich der Übertragung wirtschaftlichen Eigentums, z.B. durch Gewährung einer exklusiven Lizenz) oder jede sonstige Verfügung über sämtliche oder im Wesentlichen sämtliche Vermögensgegenstände der Gesellschaft; oder (iii) jegliche Form von Konsolidierung, Verschmelzung, Geschäftszusammenschlusses oder sonstigen umwandlungsrechtlichen Maßnahmen (mit Ausnahme des bloßen Formwechsels, der keine Veränderungen der Aktionärsstruktur der Gesellschaft mit sich bringt),

Sec. 11.4, or (c) the Managing Director stepping down from his office without cause, or (iii) the death of the Managing Director, the Managing Director shall be entitled to a cash lump-sum severance payment equal to the amount of his remuneration entitlement for the remainder of the term of this service agreement pursuant to Sec. 10.1 (fixed base salary plus variable annual bonus on the basis of a 100%-performance), however, the severance payment shall in no event exceed the amount of two times (2x) the Managing Director's gross annual salary pursuant to Sec. 4.2 and 4.3, which shall be determined on the basis of the preceding business year. The severance payment shall be due and payable together with the last salary payment.

- 11.2 In case of a Change of Control as defined in Sec. 11.3, the Managing Director shall have the rights set forth in Sec. 11.4.
- 11.3 A “Change of Control” shall be (i) a sale, exchange, contribution, transfer or other disposition of more than 50 % of the shares issued by the Company, whether in one transaction or in a series of connected transactions or in a series of transactions with a close temporal relation; (ii) the sale, transfer (including the transfer of beneficial or economic ownership, e.g., through an exclusive licensing) or other disposition of all or substantially all of the Company's assets; or (iii) any form of consolidation, merger, or business combination, or any other form of transformation (except for a mere transformation of legal form which does not entail changes in the shareholder structure of the Company), irrespective of the applicable law regime, provided that upon consummation of such measure the shareholders holding shares in the Company prior to such measure, together, possess 50 % or less

unabhängig davon, nach welchem nationalen Recht eine solche Maßnahme umgesetzt wird, sofern im Anschluss an eine solche Maßnahme die Aktionäre, die vor der Maßnahme Aktien der Gesellschaft gehalten haben, weniger als 50% der Aktien, Eigentumsrechte, Stimmrechte oder sonstigen wirtschaftlichen Rechte an der Gesellschaft halten. Soweit Aktien der Gesellschaft durch American Depositary Shares („ADS“) repräsentiert werden, ist für diese Bestimmung anstatt auf eine Transaktion in Aktien auf eine Transaktion in ADSs abzustellen.

- 11.4 Im Falle eines Change of Control ist der Geschäftsführende Direktor berechtigt, mit einer Ankündigungsfrist von zwei (2) Monaten zum Monatsende sein Amt als geschäftsführender Direktor der Gesellschaft niederzulegen und diesen Dienstvertrag außerordentlich mit einer Auslauffrist von zwei (2) Monaten zum Monatsende zu kündigen. Macht der Geschäftsführende Direktor von diesem Sonderkündigungsrecht Gebrauch, so endet seine Bestellung zum Geschäftsführenden Direktor und dieser Dienstvertrag mit Ablauf der vorgenannten Frist.

Der Geschäftsführende Direktor erhält in diesem Fall eine Abfindung in Höhe der Vergütungsansprüche für die verbleibende Vertragslaufzeit Ziff. 10.1 (Festvergütung und variable Tantieme auf Basis einer 100 %-Zielerreichung), insgesamt jedoch höchstens zwei (2) Brutto-Jahresvergütungen gemäß Ziff. 4.2 und 4.3, die nach der Brutto-Jahresvergütung des abgelaufenen Geschäftsjahres zu bemessen sind. Die Abfindung ist mit der letzten Vergütungsabrechnung zur Zahlung fällig.

Der Abfindungsanspruch nach dieser Ziff. 11.4 entsteht nicht, wenn dieser Dienstvertrag unabhängig von dem

of the shares, equity rights or voting power or other economic interests of the relevant surviving entity. To the extent the shares of the Company are represented by American Depositary Shares („ADS“), instead of transactions in shares, transactions in ADSs shall be decisive when applying this provision.

- 11.4 In case of a Change of Control the Managing Director shall in such case be entitled with a two (2) months' prior notice to the end of a month to step down from office as managing director of the Company and extraordinarily terminate this service agreement with a phasing-out period of two (2) months to the end of a month. If the Managing Director terminates this service agreement pursuant to the foregoing sentence, the Managing Director's appointment as managing director of the Company shall be deemed revoked and this service agreement shall terminate with effect as of the expiry of the aforementioned phasing-out period.

The Managing Director shall be entitled to a severance payment equal to the amount of his remuneration entitlement for the remainder of the term of this service agreement Sec. 10.1 (fixed base salary plus variable annual bonus on the basis of a 100%-performance), however, the severance payment shall in no event exceed the amount of two times (2x) the Managing Director's gross annual salary pursuant to Sec. 4.2 and 4.3, which shall be determined on the basis of the preceding business year. The severance payment shall be due and payable together with the last salary payment.

The Managing Director shall not be entitled to any severance payment pursuant to this Sec. 11.4 if this service agreement

Change of Control innerhalb der darauffolgenden sechs (6) Monate durch Fristablauf geendet hätte.

12. Freistellung

Im Falle der Kündigung behält sich die Gesellschaft das Recht vor, den Geschäftsführenden Direktor bis zum Ablauf der Befristung bzw. Kündigungsfrist von der Verpflichtung zur Dienstleistung unwiderruflich freizustellen; sind Urlaubsansprüche offen, sind diese auf den Freistellungszeitraum anzurechnen. In der Zeit der Freistellung gilt § 615 BGB entsprechend mit der Folge, dass sich der Geschäftsführende Direktor einen in der Zeit der Freistellung durch Verwendung seiner Arbeitskraft erzielten Verdienst auf den Vergütungsanspruch gegenüber der Gesellschaft anrechnen lassen muss. Über derartige Einnahmen hat der Geschäftsführende Direktor die Gesellschaft unverzüglich zu informieren.

13. Wettbewerbsverbot / Abwerbverbot

- 13.1 Dem Geschäftsführenden Direktor ist es untersagt, für die Dauer dieses Dienstvertrags und für die Dauer von zwölf (12) Monaten nach Beendigung dieses Dienstvertrags in selbständiger, unselbständiger oder sonstiger Weise Geschäfte im Geschäftsbereich der Gesellschaft zu tätigen oder für ein Unternehmen tätig zu werden oder es auf andere Weise zu unterstützen, welches Geschäfte im Geschäftsbereich der Gesellschaft betreibt (hiernach „Wettbewerbsunternehmen“) oder mit einem Wettbewerbsunternehmen i.S.d.§§ 15ff. AktG verbunden ist. In gleicher Weise ist es dem Geschäftsführenden Direktor für die Dauer dieses Dienstvertrags und für die Dauer von zwölf (12) Monaten nach Beendigung dieses Dienstvertrags untersagt, ein solches Unternehmen zu errichten, zu er-

would have expired irrespective of the Change of Control within six (6) months following the Change of Control.

12. Release from Duties

In case of termination, the Company reserves the right to irrevocably discharge the Managing Director from his duties until expiry of the notice period; should there be any outstanding holiday entitlements, these shall be set off against the period of discharge. During the period of being released from duties Sec. 615 of the German Civil Code (*Bürgerliches Gesetzbuch*) shall apply accordingly, with the consequence that any earnings of the Managing Director generated by using his working capacity during the period of being released from duties shall be offset against his claim for remuneration vis-à-vis the Company. The Managing Director shall inform the Company of such earnings without undue delay.

13. Non-compete / non-solicitation covenant

- 13.1 For the duration of this service agreement and for a period of twelve (12) months after expiration/termination of this service agreement, the Managing Director undertakes not to engage in any activity whether self-employed, as employee or in any other capacity in the business field of the Company or to work for or otherwise support an enterprise that competes with the Company (“Competitor”) or is affiliated with a Competitor according to Sec.15 *et seq.* of the German Stock Corporation Act (*Aktengesetz*). Likewise, for the duration of this service agreement and for a period of twelve (12) months after expiration/termination of this service agreement, the Managing Director may not establish or acquire a Competitor, or directly or indirectly hold an interest in any Competitor, other than an interest of less than 5% in the registered capital

werben oder sich hieran unmittelbar oder mittelbar zu beteiligen. Dies gilt nicht bei Beteiligungen in Höhe von weniger als 5% am Aktienkapital börsennotierter Unternehmen (insgesamt das „Wettbewerbsverbot“).

- 13.2 Das nachvertragliche Wettbewerbsverbot ist räumlich auf solche Länder beschränkt, in denen die Gruppe bei Ausscheiden des Geschäftsführenden Direktors geschäftlich tätig ist.
- 13.3 Dem Geschäftsführenden Direktor ist es untersagt, während der Dauer dieses Dienstvertrags und für die Dauer von zwölf (12) Monaten nach Beendigung des Dienstvertrags, Arbeitnehmer der Gesellschaft oder mit ihr verbundener Unternehmen für eigene oder fremde Zwecke abzuwerben, dritte Personen zur Abwerbung zu veranlassen oder diese bei Abwerbungsaktivitäten zu unterstützen. In demselben Zeitraum ist es dem Geschäftsführenden Direktor ebenfalls untersagt, direkt oder indirekt vertragliche Beziehungen zu Kunden der Gesellschaft, der von ihr beherrschten Unternehmen sowie der sonst mit ihr verbundenen Unternehmen, für die der Geschäftsführende Direktor tätig geworden ist, einzugehen oder dies zu versuchen. Dieses Verbot ist auf Kunden der Gesellschaft beschränkt, die in den letzten drei Jahren in Geschäftsbeziehungen mit der Gesellschaft bzw. der mit ihr verbundenen Unternehmen standen (insgesamt das „Abwerbverbot“).
- 13.4 Die Gesellschaft zahlt dem Geschäftsführenden Direktor für die Dauer des nachvertraglichen Wettbewerbs- und Abwerbverbots eine Entschädigung in Höhe von 50 % der zuletzt bezogenen Festvergütung gemäß Ziff. 4.2. Auf die Entschädigung werden Einkünfte angerechnet, die der Geschäftsführende Direktor während der Dauer des nachvertraglichen Wettbewerbs- und Abwerbverbots durch anderweitige

stock of listed stock corporations (altogether the “Non-Compete Obligation”).

- 13.2 The post-contractual Non-Compete Obligation shall only apply for such countries in which the Group is active on the date of the expiration/termination of this service agreement becoming effective.
- 13.3 For the duration of this service agreement and for a period of twelve (12) months after the expiry/termination of this service agreement, the Managing Director undertakes not to solicit any other person employed by the Company or its affiliated companies for his own purpose or the purpose of any third party or motivate or support a third party to solicit such an employee. For the same period of time the Managing Director will not, neither directly nor indirectly, enter into or try to enter into an agreement with customers of the Company or its affiliated companies, for which the Managing Director has been acting for. This prohibition shall only be applicable for customers which have had business relations with the Company or its affiliated companies in the respective previous three years (altogether the “Non-Solicitation Obligation”).
- 13.4 For the duration of the post-contractual Non-Compete Obligation and the post-contractual Non-Solicitation Obligation, the Company shall pay to the Managing Director a compensation of 50% of the fixed gross monthly salary pursuant to Sec. 4.2. Any other remuneration received by the Managing Director during the term of the post-contractual Non-Compete Ob-

Verwendung seiner Arbeitskraft bezieht.

13.5 Die Gesellschaft kann durch schriftliche Erklärung jederzeit, sowohl vor Beendigung des Dienstvertrages als auch danach, auf das nachvertragliche Wettbewerbsverbot und Abwerbeverbot verzichten mit der Folge, dass sie nach Ablauf von sechs (6) Monaten von der Zahlung der Entschädigung befreit ist. Endet das Anstellungsverhältnis, weil der Geschäftsführende Direktor die Regelaltersgrenze in der gesetzlichen Rentenversicherung erreicht hat oder dauerhaft dienstunfähig ist, tritt das nachvertragliche Wettbewerbs- und Abwerbeverbot nicht in Kraft. Im Fall einer Kündigung aus wichtigem Grund steht dem kündigungsberechtigten Vertragsteil das Recht zu, innerhalb eines (1) Monats nach Ausspruch der Kündigung aus wichtigem Grund durch schriftliche Erklärung gegenüber dem anderen Teil das nachvertragliche Wettbewerbs- und Abwerbeverbot mit sofortiger Wirkung entschädigungslos aufzuheben.

13.6 Für jede Handlung, durch die der Geschäftsführende Direktor das (nachvertragliche) Wettbewerbs- und/oder Abwerbeverbot gemäß vorstehenden Ziff. 13.1 bis 13.2 schuldhaft verletzt, hat er eine Vertragsstrafe in Höhe eines Bruttomonatsgehalts nach Ziff. 4.2 zu zahlen. Besteht die Verletzungshandlung in der kapitalmäßigen Beteiligung an einem Wettbewerbsunternehmen oder der Eingehung eines Dauerschuldverhältnisses (z.B. Arbeits-, Dienst-, Handelsvertreter oder Geschäftsführerverhältnis), wird die Vertragsstrafe für jeden angefangenen Monat, in dem die kapitalmäßige Beteiligung oder das Dauerschuldverhältnis besteht, neu ver-

ligation and the post-contractual Non-Solicitation Obligation shall be credited against the compensation payment.

13.5 The Company may at any time by written declaration, prior to or after the termination of this service agreement, waive the post-contractual Non-Compete Obligation and the post-contractual Non-Solicitation Obligation, whereupon the Company, as of the expiry of a notice period of six (6) months, is relieved from its obligation to the compensation payments. In the event this service agreement expires because the Managing Director reaches the standard retirement age under the statutory retirement pension scheme or is permanently unfit for service (*dauerhaft dienstunfähig*), the post-contractual Non-Compete Obligation and the post-contractual Non-Solicitation Obligation shall not apply. In the event of a termination for cause (*Kündigung aus wichtigem Grund*) the relevant terminating Party may, within one (1) month after the announcement of the termination for cause, cancel the post-contractual Non-Compete Obligation and the post-contractual Non-Solicitation Obligation by written notice *vis-à-vis* the relevant other party with immediate effect and without any compensation.

13.6 For each culpable breach of the (post-contractual) Non-Compete Obligation and/or (post-contractual) Non-Solicitation Covenant pursuant to preceding Sec. 13.1 through Sec. 13.2, the Managing Director shall pay a contractual penalty equal to the gross monthly salary pursuant to Sec. 4.2. Should the breach consist of participating in the capital of a Competitor or entering into a contract for the performance of a continuing obligation (e.g. an employment, service, commercial agency or consultancy contract), the contractual penalty shall be imposed anew for each full or partial month in which the capital participation or the contract for the performance of a continuing obligation exists (ongoing

wirkt (Dauerverletzung). Mehrere Verletzungshandlungen lösen jeweils gesonderte Vertragsstrafen aus, gegebenenfalls auch mehrfach innerhalb eines Monats. Erfolgen dagegen einzelne Verletzungshandlungen im Rahmen einer Dauerverletzung, sind sie von der für die Dauerverletzung verwirkten Vertragsstrafe mit umfasst. Bei Verwirkung mehrerer Vertragsstrafen ist der Gesamtbetrag der zu zahlenden Vertragsstrafen auf das Sechsfache (6) eines Bruttomonatsgehalts begrenzt. Die Geltendmachung von Schäden, die über die verwirkte Vertragsstrafe hinausgehen, sowie die Geltendmachung sonstiger Rechte, z.B. Unterlassungsansprüche, bleiben vorbehalten.

- 13.7 Soweit in diesem Dienstvertrag nichts anderes geregelt ist, gelten die §§ 74 ff. HGB entsprechend. Dies gilt insbesondere für die geltungserhaltende Reduktion nach § 74a HGB.

14. Rechte an Arbeitsergebnissen

- 14.1 Der Geschäftsführende Direktor verpflichtet sich dazu, sämtliche Materialien, Daten, Informationen, Schöpfungen, Erfindungen, Erkenntnisse, Werke und sonstige Arbeitsergebnisse, die er während der Dauer dieses Anstellungsverhältnisses erstellt, sei es während der Tätigkeit oder – sofern ein Bezug zur Tätigkeit aufgrund dieses Dienstvertrags besteht – außerhalb der Tätigkeit (die „Arbeitsergebnisse“), zu dokumentieren und umgehend gegenüber der Gesellschaft offenzulegen und diese Arbeitsergebnisse gegenüber Dritten gemäß Ziff. 2 dieses Dienstvertrags geheim zu halten.
- 14.2 Der Geschäftsführende Direktor verpflichtet sich darüber hinaus, der Gesellschaft alle Originale und Kopien jeglicher Arbeitsergebnisse, unabhän-

breach). Multiple breaches shall each trigger a separate contractual penalty, possibly also more than once within one month. However, if individual breaches occur within the scope of an ongoing breach, they shall be covered by the contractual penalty owed for the ongoing breach. If several contractual penalties are incurred, the total amount payable is limited to an aggregate amount of six (6) gross monthly salaries. The Company reserves the right to assert damages over and above the contractual penalty imposed, as well as other rights, e.g. the right to claim injunctive relief.

- 13.7 If not stipulated otherwise in this service agreement, Sec. 74 et seq. of the German Commercial Code (*Handelsgesetzbuch*), shall apply accordingly. In particular, this applies to the provision on blue-pencilling (*geltungserhaltende Reduktion*) pursuant to Sec. 74a German Commercial Code.

14. Rights to Work Results

- 14.1 The Managing Director undertakes to document and disclose immediately vis-à-vis the Company all materials, data, information, creations, inventions, findings, works and other work results, in the creation of which he is involved in during his service relationship, be it during working hours or – provided that a connection to his activity pursuant to this agreement exists – outside of working hours (the “Work Results”), and to keep these Work Results confidential vis-à-vis third parties in accordance with Sec. 2 of this service agreement.
- 14.2 Upon request by the Company, the Managing Director, moreover, undertakes to forward all and any original Work Results

gig von ihrer Form oder ihrem Speichermedium, jederzeit auf Verlangen zu übergeben.

14.3 Der Geschäftsführende Direktor erkennt an, dass sämtliche Geistigen Eigentumsrechte (wie nachfolgend definiert) und alle sonstigen Rechte, die an den Arbeitsergebnissen bestehen, aus ihrer Nutzung entstehen und/oder in ihnen verkörpert sind (insgesamt die „Rechte an den Arbeitsergebnissen“), im Zeitpunkt ihrer Entstehung vollständig und ohne Einschränkung auf die Gesellschaft übergehen. Der Geschäftsführende Direktor überträgt bereits hiermit sämtliche Rechte an den Arbeitsergebnissen auf die Gesellschaft. Die Gesellschaft nimmt diese Übertragung hiermit an.

14.4 „Geistige Eigentumsrechte“ meint alle registrierten oder unregistrierten, angemeldeten oder (noch) nicht angemeldeten, schutzrechtsfähigen oder nicht schutzrechtsfähigen geistigen Eigentumsrechte und gewerblichen Schutzrechte, insbesondere (ohne hierauf beschränkt zu sein) (A) alle Rechte an (i) Computerprogrammen bzw. Computersoftware, (ii) jeder Form von Quellcode, Objektcode und jeder anderen Form von Code einschließlich von dem Code zugrunde liegenden Algorithmen, (iii) Datenbanken, APIs, Applikationen, Hardware oder Halbleitertopographien, (iv) Patenten, Gebrauchs- oder Geschmacksmustern, Designrechten und Urheberrechten (so weit nicht schon von vorstehenden Ziffern (i) bis (iii) erfasst), (v) Geschäftsgeheimnissen und Know-How (im Sinne von nicht öffentlich zugänglichem Wissen, das z.B. für die Nutzung oder Weiterentwicklung von Soft- oder Hardwarekomponenten nützlich oder erforderlich ist), sowie (B) alle anderen Rechte an Informationen, Zeichnungen, Plänen, technischen Notizen, Pro-

and copies thereof to the Company, regardless of form or storage media at any time.

14.3 The Managing Director acknowledges that all Intellectual Property Rights (as defined hereinafter) and all other rights which exist with respect to Work Results or result from their usage and/or are embodied within them (collectively the “Rights to the Work Results”) are passed on to the Company, in their entirety and without limitation, at the time of their development. The Managing Director hereby transfers all Rights to the Work Results to the Company. The Company accepts such transfer.

14.4 “Intellectual Property Rights” means all registered or unregistered, filed or not (yet) filed, protectable or non-protectable intellectual property rights and commercial proprietary rights, in particular (without limitation) (A) all rights to (i) computer programs or computer software, (ii) any form of source code, object code, and any other form of code including algorithms underlying code, (iii) databases, APIs, applications, hardware, or semiconductor topographies, (iv) patents, utility patents, design patents, design rights and copyrights (to the extent not already included in digits (i) through (iii) above), (v) business secrets and know-how (in the sense of not publicly-accessible knowledge, which is useful or required, e.g., for the use or further development of soft- or hardware components), as well as (B) all other rights to information, drawings, plans, technical notes, prototypes, methods, algorithms, any technology-related documentation whatsoever, ideas, concepts, irrespective of whether these fall into the scope of application of the German Copyright Act (*Urhebergesetz*), Patent Act (*Patentgesetz*), Utility Patent

totypen, Prozessen, Methoden, Algorithmen, jedweder technikbezogener Dokumentation, Ideen, Konzepten und sonstigen Arbeitsergebnissen, sei es, dass diese dem Anwendungsbereich des UrhG, PatentG, GebrMG, GeschmMG oder anderer (in- oder ausländische) Gesetze unterfallen.

14.5 Für den Fall, dass die unter der vorstehenden Ziff.14.3 vorgesehene Rechtsübertragung nicht wirksam nach zwingend anwendbarem Recht bewirkt werden kann, insbesondere im Hinblick auf das Urheberpersönlichkeitsrecht, räumt der Geschäftsführende Direktor der Gesellschaft hiermit ein umfassendes, ausschließliches, räumlich und zeitlich unbegrenztes und für alle, auch neuen Nutzungsarten uneingeschränkt geltendes Nutzungsrecht an den Rechten an den Arbeitsergebnissen ein. Zu den übertragenen Rechten gehören insbesondere, aber nicht ausschließlich, das räumlich, zeitlich und inhaltlich unbeschränkte und frei übertragbare Veröffentlichungsrecht (§ 12 UrhG), Vervielfältigungsrecht (§ 16 UrhG), Verbreitungsrecht (§ 17 UrhG), Ausstellungsrecht (§ 18 UrhG), das Vortrags-, Aufführungs- und Vorführungsrecht (§ 19 UrhG), das Recht der öffentlichen Zugänglichmachung (§ 19a UrhG), das Senderecht (§ 20 UrhG), das Recht der Wiedergabe durch Bild- und Tonträger (§ 21 UrhG), die Rechte nach § 22 UrhG sowie das Recht zur Bearbeitung und Umgestaltung der Arbeitsergebnisse (§ 23 UrhG).

14.6 Der Geschäftsführende Direktor verpflichtet sich, auf Verlangen der Gesellschaft umgehend alle Dokumente zur Verfügung zu stellen und jede Unterstützung zu leisten, die erforderlich ist, damit die Gesellschaft die Rechte an den Arbeitsergebnissen erlangt.

Act (*Gebrauchsmustergesetz*), Design Patent Act (*Geschmacksmustergesetz*) or any other (domestic or foreign) laws.

14.5 In case that the intended transfer of rights pursuant to Sec. 14.3 is not effected due to applicable compulsory law, particularly with respect to the moral right (*Urheberpersönlichkeitsrecht*), the Managing Director hereby transfers to the Company irrevocably an exclusive usage and exploitation right with respect to the Rights to the Work Results that is unlimited from a temporal and territorial perspective and comprises all types of usage including new types of usage. This transfer includes, but is not limited to publicity rights (Sec. 12 German Copyright Act), reproduction rights (Sec. 16 German Copyright Act), distribution rights (Sec. 17 German Copyright Act), exhibition rights (Sec. 18 German Copyright Act), the right of recital, performance and presentation (Sec. 19 German Copyright Act), the right to make available to the public (Sec. 19a German Copyright Act), broadcasting rights (Sec. 20 German Copyright Act), the right to reproduce through image carrier and sound storage medium (Sec. 21 German Copyright Act), the rights pursuant to Sec. 22 German Copyright Act and the right of processing and rearrangement of Work Products (Sec. 23 German Copyright Act), which are unlimited from a temporal and territorial perspective and freely transferable.

14.6 Upon request by the Company, the Managing Director undertakes to immediately make available all documents and to render any assistance necessary to enable the Company to obtain the Rights to the Work Results.

- 14.7 Die Parteien sind sich einig, dass eine zukünftige Beendigung dieses Dienstvertrags keine Auswirkungen auf die Weitergeltung der erfolgten Rechteübertragung bzw. -einräumung hat.
- 14.8 Die Übertragung der Rechte an den Arbeitsergebnissen und die weiteren unterstützenden Handlungen sind durch die Vergütung nach Ziff.4 abgegolten.
- 15. Aufhebung bestehender Verträge; Ausschlussklausel**
- 15.1 Die Parteien sind sich einig, dass der Geschäftsführerdienstvertrag Affinitas mit Wirkung zum Ablauf des 30. November 2017 mit der Maßgabe beendet werden soll, dass (i) der Geschäftsführende Direktor die im Geschäftsführerdienstvertrag Affinitas geregelte Tantieme noch für das volle Geschäftsjahr 2017 erhält und (ii) die Vereinbarung zwischen dem Geschäftsführenden Direktor und Affinitas zur Abwicklung seiner Rechte aus dem bestehenden Virtual Share Incentive Plan Employees (VESOP) bei Affinitas sowie die in dieser Vereinbarung geregelten Rechte und Pflichten von der Beendigung unberührt bleiben. Die Beendigung erfolgt durch Abschluss eines gesonderten Aufhebungsvertrags.
- 15.2 Ansprüche des Geschäftsführenden Direktors und der Gesellschaft aus dem Dienstverhältnis verfallen, wenn sie nicht innerhalb von drei Monaten nach ihrer Fälligkeit gegenüber der anderen Partei in Textform (§ 126b BGB; z.B. per Brief, Fax, E-Mail) geltend gemacht werden.
- 15.3 Lehnt die andere Partei den Anspruch ab oder erklärt sie sich nicht innerhalb von zwei Wochen nach der Geltendmachung des Anspruchs, verfällt dieser, wenn er nicht innerhalb von drei Monaten nach Ablehnung oder Fristablauf gerichtlich geltend gemacht wird.
- 14.7 The Parties agree that a future termination of this agreement shall not affect the continuing validity of the transfer and grant of rights.
- 14.8 The transfer of the Rights to the Work Results and other supporting actions are entirely compensated by the remuneration pursuant to Sec. 4.
- 15. Termination of existing agreements; forfeiture of claims**
- 15.1 The parties agree that the Affinitas Managing Director Service Agreement shall be terminated with effect as of the end of November 30, 2017 provided that (i) the Managing Director shall receive the bonus payment as set out in the Affinitas Managing Director Service Agreement for the full financial year 2017 and (ii) the agreement between the Managing Director and Affinitas regarding the settlement of his rights under the current Virtual Share Incentive Plan Employees (VESOP) of Affinitas as well as the rights and obligations included in this agreement shall remain unaffected by the termination. The termination shall be effected by way of conclusion of a separate termination agreement.
- 15.2 All claims of the Managing Director and the Company arising from the service relationship must be asserted in text form (Sec. 126b of the German Civil Code, e.g. letter, fax, e-mail) within three months as of their due date; otherwise they shall be deemed forfeited.
- 15.3 If the other party rejects such claim or does not react within two weeks of such claim having been asserted, it shall be deemed forfeited if not pursued by the claiming party through court action within three months after the said rejection or expiry of the two-week period.

15.4 Die vorstehenden Bestimmungen unter Ziff. 15.2 und 15.3 gelten nicht bei einer Haftung wegen Vorsatzes und grober Fahrlässigkeit, bei einer Haftung wegen fahrlässiger Verletzung des Lebens, des Körpers oder der Gesundheit, für Ansprüche aus unerlaubter Handlung, für Ansprüche, auf die nur mit Zustimmung Dritter verzichtet werden kann, für Ansprüche auf ein gesetzliches Mindestentgelt sowie für andere unverzichtbare Ansprüche.

16. Schlussbestimmungen

16.1 Dieser Dienstvertrag unterliegt deutschem Sachrecht.

16.2 Der Gerichtsstand für alle Ansprüche aus und im Zusammenhang mit diesem Dienstvertrag ist, soweit gesetzlich zulässig, Berlin.

16.3 Nebenabreden zu diesem Dienstvertrag bestehen nicht. Sämtliche Änderungen oder Ergänzungen dieses Dienstvertrages bedürfen der Schriftform. Dieses Schriftformerfordernis gilt auch für die Aufhebung dieser Schriftformklausel. Unberührt bleiben Individualabreden im Sinne des § 305b BGB.

16.4 Falls einzelne Bestimmungen dieses Anstellungsvertrages unwirksam sein oder werden sollten oder dieser Dienstvertrag Lücken enthält, wird dadurch die Wirksamkeit der übrigen Bestimmungen nicht berührt. Anstelle der unwirksamen Bestimmung gilt diejenige wirksame Bestimmung als vereinbart, welche dem Sinn und Zweck der unwirksamen Bestimmung entspricht. Im Falle von Lücken gilt diejenige Bestimmung als vereinbart, die dem entspricht, was nach Sinn und Zweck dieses Anstellungsvertrages vernünftigerweise vereinbart worden wäre, hätten die Parteien die Angelegenheit von vornherein bedacht. Die

15.4 The foregoing provisions under Sec. 15.2 and 15.3 shall not apply to claims based on liability for intentional acts or gross negligence, in case of liability for negligent injury to life, body and/or health, to claims arising out of tort, to claims that can only be waived with third party consent, to claims to a statutory minimum wage as well as to other claims that may not be waived.

16. Final Provisions

16.1 This contract is governed exclusively by the substantive laws of Germany.

16.2 The place of jurisdiction for all disputes arising from or in connection with this service agreement is – to the extent permissible under applicable statutory law – Berlin (Germany).

16.3 No side agreements are in place between the Parties. Changes, side letters and amendments must be in writing. This also applies to a cancellation of the written-form requirement. The only exceptions are individual agreements stipulated in Sec. 305b of the German Civil Code (*Bürgerliches Gesetzbuch*).

16.4 If any provision of this service agreement or any part of such provision is or becomes invalid or unenforceable or is missing, the other provisions of this service agreement shall not be affected thereby. The invalid or unenforceable or missing provision shall be replaced by a valid and enforceable provision, the effect of which comes as close as possible to the intended economical effect of the invalid or unenforceable or missing provision. The Parties agree that Sec. 139 German Civil Code is completely excluded by this Sec. 16.4 and, therefore, does not apply.

Parteien sind sich darüber einig, dass § 139 BGB durch diese Ziff. 16.4 vollständig abbedungen wird und keine Anwendung findet.

16.5 Im Falle eines Konflikts zwischen dem Inhalt der deutschen und der englischen Fassung dieses Anstellungsvertrages ist die deutsche Fassung maßgebend.

16.5 In case of a conflict between the German and the English version of this service agreement the German version shall prevail.

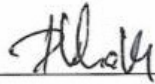
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[*Unterschriftenseite // Signature Page*]

Für die Gesellschaft // For the Company:

Name: **David Khalil**
Position // Capacity: **Vorsitzender des Verwaltungsrats // Chairperson of the Company's administrative board**
Ort, Datum // City, Date: _____



(*Unterschrift // Signature*)

Der Geschäftsführende Direktor // The Managing Director:

Name: **Jeronimo Folgueira**
Ort, Datum // City, Date: _____



(*Unterschrift // Signature*)

[Bindende deutsche Fassung.
Binding German version.]

[Englische Übersetzung nur zu
Informationszwecken. English translation for infor-
mation purposes only.]

Änderungsvereinbarung

Amendment Agreement

zwischen

between

Spark Networks SE

mit Sitz in München (künftig: Berlin), vertre-
ten durch den Verwaltungsrat, dieser vertreten
durch den Verwaltungsratsvorsitzenden

registered in Munich (in the future: Berlin),
represented by the administrative board (*Ver-
waltungsrat*), the latter represented by the
chairman of the administrative board

(nachfolgend die „Gesellschaft“)

(hereinafter the “Company”)

und

and

Jeronimo Folgueira

Forststraße 26b, 12163 Berlin

(nachfolgend der
„Geschäftsführende Direktor“)

(hereinafter the
“Managing Director”)

(Gesellschaft und Geschäftsführender Direktor
nachfolgend zusammen die „Parteien“
und einzeln jeweils eine „Partei“).

(Company and Managing Director
collectively hereinafter
the “Parties”, and each a “Party”).

Präambel

Der Geschäftsführende Direktor ist durch
Beschluss des Verwaltungsrats der Gesell-

Preamble

The Managing Director has been appointed
as managing director of the Company by



schaft („Verwaltungsrat“) zum geschäftsführenden Direktor der Gesellschaft bestellt und als geschäftsführender Direktor in das Handelsregister eingetragen worden.

Die Parteien sind sich einig, den bestehenden, undatierten Geschäftsführerdienstvertrag, der zum 1. Dezember 2017 in Kraft getreten ist, (nachfolgend „Dienstvertrag“) wie nachfolgend vereinbart zu ändern. Diese Änderungsvereinbarung tritt zum 1. April 2018 in Kraft.

1. Vergütung

Ziffer 4.2 Dienstvertrag wird wie folgt geändert:

Der Geschäftsführende Direktor erhält für seine Tätigkeit ein Brutto-Jahresgehalt in Höhe von EUR 240.000,00, das in zwölf (12) gleichen monatlichen Raten jeweils am Monatsende unter Einbehalt der gesetzlichen Abzüge bezahlt wird.

2. Abfindung; Change of Control

Ziffer 11.3 Dienstvertrag wird durch folgenden Satz am Ende ergänzt:

Zur Vermeidung von Zweifeln wird klargestellt, dass ein „Change of Control“ in diesem Sinne stets auch dann vorliegt, wenn ein „Liquidity Event“ im Sinne des „Virtual Share Option Plan, Stand März 2018“ (im Folgenden: „VSOP“) vorliegt.

3. Ziffer 11.4 Dienstvertrag wird durch folgende Bestimmung ersetzt:

Im Falle eines Change of Control ist der Geschäftsführende Direktor berechtigt, nach Ablauf der Claw-Back-Period ge-

resolution of the Company's administrative board (“Administrative Board”) and has been registered as Managing Director in the German commercial register.

The Parties agree to amend the terms of the current, undated service agreement, which entered into force on December 1, 2017 (hereinafter: “**Service Agreement**”) as set forth, below. This Amendment Agreement shall become effective as of April 1st 2018.

1. Remuneration

Section 4.2 Service Agreement is amended as follows:

The Managing Director shall receive an annual gross salary of EUR 240,000.00, which shall be paid in twelve (12) pro-rated monthly payments after statutory deductions are withheld at the end of each month.

2. Severance Payment; Change of Control

Section 11.3 Service Agreement is supplemented by the following sentence (at the end of the paragraph):

For the avoidance of doubt, a “Change of Control” pursuant to this clause is always given, in the event of a “Liquidity Event” pursuant to the “Virtual Share Option Plan”, as of March 2018 (hereinafter: “**VSOP**”).

3. Section 11.4 Services Agreement is replaced as follows:

In the event of a Change of Control and after expiration of the Claw-Back Period pursuant to Section 3.5 (b) of the



mäß Ziffer 3.5 (b) des VSOP mit einer Ankündigungsfrist von zwei (2) Monaten zum Monatsende sein Amt als Geschäftsführender Direktor der Gesellschaft niederzulegen und diesen Dienstvertrag außerordentlich mit einer Auslaufrist von zwei (2) Monaten zum Monatsende zu kündigen. Macht der Geschäftsführende Direktor von diesem Sonderkündigungsrecht Gebrauch, so endet seine Bestellung zum Geschäftsführenden Direktor und dieser Dienstvertrag mit Ablauf der vorgenannten Frist.

Der Geschäftsführende Direktor erhält in diesem Fall eine Abfindung in Höhe der Vergütungsansprüche für die verbleibende Vertragslaufzeit (d.h. der Festvergütung und der variablen Tantieme auf Basis einer 100 %-Zielerreichung gemäß § 4 Dienstvertrag), insgesamt jedoch höchstens eine Brutto-Jahresvergütung gemäß Ziffer 4.2 und 4.3, die nach der Brutto-Jahresvergütung des abgelaufenen Geschäftsjahres zu bemessen ist. Die Abfindung ist mit der letzten Vergütungsabrechnung zur Zahlung fällig.

Der Abfindungsanspruch gemäß dieser Ziffer 11.4 entsteht nicht, wenn dieser Dienstvertrag unabhängig von dem Change of Control innerhalb von sechs Monaten nach Ablauf der Claw-Back-Period gemäß Ziffer 3.5 (b) des VSOP durch Fristablauf geendet hätte.

4. Wettbewerbsverbot/Abwerbeverbot

Ziffer 13.4 Dienstvertrag wird durch folgenden Satz nach dem ersten Satz er-

VSOP, the Managing Director shall be entitled with a two (2) months' prior notice to the end of a month to resign from his office as managing director of the Company and extraordinary terminate this Service Agreement with a phasing-out period of two (2) months to the end of a month. If the Managing Director exercises this right of an extraordinary termination, his office as a Managing Director and the Service Agreement shall expire upon expiration of the aforementioned notice period.

In such case the Managing Director shall be entitled to a severance payment equal to the amount of his remuneration entitlement for the remainder of the term of his service agreement (i.e., fixed base salary plus variable annual bonus on the basis of 100% target achievement pursuant to Section 4 Service Agreement), however, the severance payment shall in no event exceed the amount of the gross annual salary of the Managing Director pursuant to Section 4.2 and 4.3, for which the performance shall be determined on the basis of the performance of the preceding completed business year. The severance payment shall be due and payable together with the last salary payment.

The manager shall not be entitled to any severance payment pursuant to this section 11.4 if this Service Agreement would have been expired irrespective of the Change of Control within six months after expiration of the Claw-Back Period pursuant to Section 3.5 (b) of the VSOP.

4. Non-compete/non-solicitation covenant

Section 13.4 Service Agreement is supplemented by the following sentence



gänzt:

Ausschließlich im Fall einer Kündigung des Dienstvertrages und der Niederlegung des Amtes gemäß Ziffer 11.4 zahlt die Gesellschaft dem Geschäftsführenden Direktor eine Entschädigung in Höhe von 100 % der zuletzt bezogenen Festvergütung gemäß Ziffer 4.2 (pro-rata während der Laufzeit des Wettbewerbsverbots).

(after the first sentence of the paragraph):

Exclusively in the event of a termination of this Service Agreement and a resignation from office pursuant to Section 11.4, the Company shall pay to the Managing Director a compensation of 100 % of the fixed gross salary pursuant to Section 4.2 (pro-rated during the term of the non-compete covenant) .

5. Sonstiges

Im Übrigen bleibt es bei den Bestimmungen des Dienstvertrages.

5. Miscellaneous


With respect to all other regulations the Service Agreement remains determinative.

Für die Gesellschaft // For the Company:

Name: David Khalil

Position // Capacity: Vorsitzender des Verwaltungsrats // Chairperson of the Company's administrative board


Ort, Datum // City, Date: Berlin, 16.5.2019


(Unterschrift // Signature)

Geschäftsführender Direktor // The Managing Director:

Name: Jeronimo Folgueira

Ort, Datum // City, Date: Berlin 16.05.2019


(Unterschrift // Signature)



[Bindende deutsche Fassung.
Binding German version.]

[Englische Übersetzung nur zu
Informationszwecken. English translation for infor-
mation purposes only.]

**Dienstvertrag für
geschäftsführenden
Direktor**

**Managing Director
Service Agreement**

zwischen

between

Spark Networks SE

mit Sitz in München (künftig: Berlin),
vertreten durch den Verwaltungsrat, dieser
vertreten durch den
Verwaltungsratsvorsitzenden

registered in Munich (in the future: Berlin),
represented by the administrative board (*Ver-
waltungsrat*), the latter represented by the
chairman of the administrative board

(nachfolgend die „Gesellschaft“)

(hereinafter the “Company”)

und

and

Robert O'Hare

250 West Street
Apt 7H, New York, NY 10013

(nachfolgend der
„Geschäftsführende Direktor“)

(hereinafter the
“Managing Director”)

(Gesellschaft und Geschäftsführender Direktor nachfolgend zusammen die „Parteien“ und einzeln jeweils eine „Partei“).

(Company and Managing Director collectively hereinafter the “Parties”, and each a “Party”).

Präambel

Der Geschäftsführende Direktor ist durch Beschluss des Verwaltungsrats der Gesellschaft („Verwaltungsrat“) vom 01. November 2017 mit Wirkung auf den 3. November 2017 24 Uhr zeitlich unbefristet zum geschäftsführenden Direktor der Gesellschaft bestellt worden. Der Geschäftsführende Direktor ist ferner Director der Spark Networks, Inc., einer US-Tochtergesellschaft der Gesellschaft, und wird dort die Aufgabe des CEO von Spark Networks, Inc. übernehmen (die "Spark Inc. Tätigkeit“). Zur Regelung des Anstellungsverhältnisses als geschäftsführender Direktor der Gesellschaft wird der nachfolgende Dienstvertrag geschlossen. Die Spark Inc. Tätigkeit des Geschäftsführenden Direktors wird ausschließlich durch einen gesonderten Dienstvertrag zwischen dem Geschäftsführenden Direktor und der Spark Networks, Inc. geregelt.

Dies vorausgeschickt, vereinbaren die Parteien das Folgende:

1. Aufgaben und Pflichten

- 1.1 Der Geschäftsführende Direktor ist berechtigt und verpflichtet, die Gesellschaft nach Maßgabe der nachfolgenden Ziffern zu vertreten und die Geschäfte der Gesellschaft zu führen. Die Gesellschaft ist berechtigt, die Vertretungsbefugnis des Geschäftsführenden Direktors jederzeit zu ändern.
- 1.2 Der Geschäftsführende Direktor führt die Geschäfte der Gesellschaft nach

Preamble

The Managing Director has been appointed as managing director of the Company by resolution of the Company's administrative board (“Administrative Board”) dated November 1, 2017, with the effective date November 3, 2017 at midnight for an indefinite period of time. The Managing Director is also director of Spark Networks, Inc., a U.S. subsidiary of the Company, and will assume the office of a chief executive officer (CEO) of Spark Networks, Inc. (the "Spark Inc. Services"). In order to govern the employment as managing director of the Company, the following service agreement will be concluded. The Spark Inc. Services of the Managing Director are solely governed by a separate service agreement between the Managing Director and Spark Networks, Inc.

Now, therefore, the Parties hereby agree as follows:

1. Responsibilities and Duties

- 1.1 The Managing Director shall be entitled and obligated to represent the Company in accordance with the following provisions and to manage the Company's business. The Company may change the authority of the Managing Director to represent the Company at any time.
- 1.2 The Managing Director shall manage the Company's business in compliance

Maßgabe der Gesetze, der Satzung der Gesellschaft, etwaiger Geschäftsordnungen für den Verwaltungsrat sowie für die geschäftsführenden Direktoren in ihrer jeweils gültigen Fassung, den Empfehlungen des Deutschen Corporate Governance Kodex in seiner jeweils geltenden Fassung (soweit diese jeweils von der Gesellschaft befolgt werden) sowie dieses Dienstvertrages.

- 1.3 Der Geschäftsführende Direktor hat die ihm obliegenden Pflichten mit der Sorgfalt eines ordentlichen und gewissenhaften Kaufmanns wahrzunehmen.
- 1.4 Auf Wunsch der Gesellschaft übernimmt der Geschäftsführende Direktor auch Organstellungen und ähnliche Ämter in Gesellschaften, an denen die Gesellschaft unmittelbar oder mittelbar beteiligt oder mit denen sie im Sinne der §§ 15 ff. AktG verbunden ist (zusammen die „Gruppe“), sowie Ämter in Verbänden und ähnlichen Zusammenschlüssen, soweit hieran ein Interesse der Gesellschaft besteht. Die Übernahme solcher Aufgaben begründet keine weiteren Anstellungsverhältnisse. Sämtliche solche Tätigkeiten sind mit der Vergütung nach diesem Dienstvertrag abgegolten. Der Geschäftsführende Direktor ist verpflichtet, sämtliche solcher Organstellungen und Ämter jederzeit auf Verlangen der Gesellschaft oder spätestens bei Beendigung dieses Dienstvertrags niederzulegen. Die Regelung dieser Ziff. 1.4 findet keine Anwendung auf die Spark Inc. Tätigkeit, die ausschließlich durch einen gesonderten Dienstvertrag zwischen dem Geschäftsführenden Direktor und der Spark Networks, Inc. geregelt wird.
- 1.5 Der Arbeitsplatz des Geschäftsführenden Direktors ist in Bezug auf seine Tätigkeit als geschäftsführender Direktor der

with statutory law, the Company's articles of association, the rules of procedure (*Geschäftsordnung*) for the Administrative Board and for the managing directors as amended from time to time, the recommendations of the German Corporate Governance Codex as amended from time to time (to the extent complied with by the Company), and this service agreement.

- 1.3 The Managing Director shall carry out the duties incumbent upon him with the due care and diligence of a prudent businessman.
- 1.4 At the request of the Company, the Managing Director will also assume office in executive bodies and similar offices in companies in which the Company directly or indirectly holds an interest, or in affiliated companies within the meaning of Sec. 15 *et seq.* of the German Stock Corporation Act (*Aktiengesetz*) (jointly the "Group"), as well as offices in associations and similar organisations if the Company has an interest therein. The assumption of any of the aforementioned responsibilities does not constitute any separate service relationship. Any of the aforementioned activities are compensated by the remuneration stipulated under this service agreement. The Managing Director shall upon request by the Company, at the latest, however, upon expiry or termination of this service agreement, resign from all of the aforementioned offices. This provision of Sec. 1.4 does not apply to the Spark Inc. Services which are solely governed by the provisions of a separate service agreement between the Managing Director and Spark Networks, Inc.
- 1.5 The Managing Director's place of work shall be, with respect to his position as managing director of the Company,

Gesellschaft Berlin, Deutschland, es sei denn, der Verwaltungsrat stimmt zu oder verlangt, jeweils unter Berücksichtigung der Interessen der Gesellschaft, dass der Geschäftsführende Direktor seine Arbeit an einem anderen Ort verrichtet.

2. Treuepflichten / Betriebsgeheimnisse

- 2.1 Der Geschäftsführende Direktor ist verpflichtet, Dritten gegenüber strengstes Stillschweigen über alle ihm im Rahmen seiner Tätigkeit anvertrauten oder sonst bekannt gewordenen geschäftlichen, betrieblichen oder technischen Information und Vorgänge zu wahren, die internen oder vertraulichen Charakter haben, jeweils sofern und soweit nicht nach zwingendem Recht etwas anderes angeordnet ist. Nach Beendigung des Dienstverhältnisses besteht diese Pflicht dauerhaft fort, auch im Falle einer Kündigung oder eines Eintritts in den Ruhestand.
- 2.2 Geschäftliche und betriebliche Unterlagen aller Art, auch in elektronischer Form, einschließlich persönlicher Aufzeichnungen über dienstliche Angelegenheiten, dürfen nur zu geschäftlichen Zwecken verwandt werden. Insbesondere ist untersagt, Kostenberechnungen, Statistiken, technische Einzelheiten und Ähnliches in Abschriften, Fotokopien oder Auszügen außerbetrieblich zu fertigen, zu benutzen oder an dritte Personen weiterzugeben.
- 2.3 Unterlagen im Sinne der Ziffer 2.2, die der Geschäftsführende Direktor im Rahmen seines Dienstverhältnisses in Besitz hat, sind sorgfältig aufzubewahren und auf Verlangen der Gesellschaft jederzeit, spätestens bei Beendigung des Dienstverhältnisses, der Gesellschaft auszuhändigen. Gleiches gilt für sonstige Gegenstände, die sich im Eigentum oder Besitz der

Berlin, Germany, unless otherwise required or approved by the Administrative Board taking into account the Company's interests and business.

2. Fiduciary Duties / Company Secrets

- 2.1 The Managing Director is obliged to strictly maintain confidentiality *vis-à-vis* third parties regarding all business, operational or technical information and processes with which he is entrusted or of which he may otherwise become aware in the context of his work insofar as they are of an internal or confidential nature, in each case unless and to the extent otherwise required from time to time under mandatory law. This obligation shall continue beyond the end of his service relationship, also in case of termination of this service agreement or retirement.
- 2.2 Business and operational documents of any kind, also electronic data, including personal notes regarding business matters, may only be used for business purposes. In particular, it is prohibited to produce or make use of any transcripts, photocopies or excerpts of cost calculations, statistics, technical details and the like externally or to pass on such documents to third parties.
- 2.3 All documents as defined under Sec. 2.2 above, which the Managing Director has in his possession in the course of the performance of his duties, must be stored in a secure place and handed back to the Company upon request by the Company at any time, no later, however, than upon termination of the service relationship. The aforesaid shall also apply

Gesellschaft befinden. Gleiches gilt auch für die Rückgabe elektronisch gespeicherter Daten. Die Rückgabe von elektronisch gespeicherten Daten hat auf einem geeigneten Speichermedium zu erfolgen; der Geschäftsführende Direktor wird zugleich die Löschung dieser Daten auf allen Speichermedien bestätigen, auf die die Gesellschaft keinen Zugriff hat. Zurückbehaltungsrechte können durch den Geschäftsführenden Direktor nicht geltend gemacht werden.

3. Arbeitszeit / Nebentätigkeit

- 3.1 Der Geschäftsführende Direktor hat seine volle Arbeitskraft und seine gesamten Kenntnisse und Erfahrungen der Gruppe zur Verfügung zu stellen. Die Parteien gehen dabei davon aus, dass der weit überwiegende Teil der Tätigkeit des Geschäftsführenden Direktor auf seine Spark Inc. Tätigkeit entfällt.
- 3.2 An bestimmte Arbeitszeiten ist der Geschäftsführende Direktor nicht gebunden. Der Geschäftsführende Direktor ist verpflichtet, unter Berücksichtigung seiner Pflichten im Rahmen der Spark Inc. Tätigkeit, jederzeit, wenn und soweit das Wohl der Gesellschaft es verlangt, zur Dienstleistung zur Verfügung zu stehen.

4. Vergütung

- 4.1 Der Geschäftsführende Direktor erhält ab Vertragsbeginn als Vergütung für seine Tätigkeit als geschäftsführender Direktor der Gesellschaft ein Brutto-Jahresgehalt in Höhe von EUR 60.000,00, das in zwölf (12) gleichen monatlichen Raten, jeweils am Monatsende unter Einbehalt der gesetzlichen Abzüge bezahlt wird. Beginnt bzw. endet das Dienstverhältnis während bzw. vor Ablauf eines Kalenderjahres, so wird das Brutto-Jahresgehalt zeitanteilig gezahlt.

ply for any other materials that are property of the Company. The same applies to the return of electronically stored data. The return of electronically stored data shall be effected by a proper storage device; the Managing Director will confirm at the same time the deletion of all data on any storage devices, which are not accessible by the Company. The Managing Director may not assert any rights of retention.

3. Hours of work / Secondary Activity

- 3.1 The Managing Director shall devote his entire working capacity and his entire knowledge and experience to the Group. The Parties, however, assume that the by far major part of the services of the Managing Director will be devoted to his Spark Inc. Services.
- 3.2 The Managing Director shall not be bound to fixed working hours. However, the Managing Director shall be at the Company's service at any time if and to the extent required by the Company's interests but taking into account also his duties in relation to his Spark Inc. Services.

4. Remuneration

- 4.1 As of the commencement of this service agreement, the Managing Director shall receive an annual gross salary of EUR 60,000.00 for his activities as managing director of the Company which shall be paid in twelve (12) pro-rated monthly payments after statutory deductions are withheld at the end of each month. If this service agreement commences or ends during or before the end of a calendar year, the annual gross salary shall be paid on a pro rata basis.

- 4.2 Für den Fall, dass sich der Geschäftsführende Direktor in Deutschland privat kranken- und pflegeversichert, zahlt die Gesellschaft dem Geschäftsführenden Direktor einen Zuschuss zur privaten Kranken- und Pflegeversicherung in Höhe des Arbeitgeberanteils, wie er bei Versicherungspflicht in der gesetzlichen Kranken- und Pflegeversicherung bestünde, höchstens jedoch in Höhe der Hälfte des Betrags, den der Geschäftsführende Direktor tatsächlich für seine private Kranken- bzw. Pflegeversicherung aufzuwenden hat.
- 4.2 In case the Managing Director chooses a private health insurance and private nursing care insurance in Germany instead of the statutory insurance the Company pays a contribution to a private health insurance and a private nursing care insurance up to the amount which it would have to bear as its contribution to statutory health insurance and nursing care insurance for the Managing Director, but limited to half of the expenses actually incurred by the Managing Director.
- 4.3 Ein Anspruch auf Vergütung von Überstunden, Sonntags-, Feiertags- oder sonstiger Mehrarbeit besteht nicht.
- 4.3 There shall be no entitlement to remuneration for overtime, work on Sundays and statutory holidays or other additional work.
- 5. Krankheit, Tod**
- 5. Illness, Death**
- 5.1 Im Falle unverschuldeter Arbeitsverhinderung durch Krankheit oder Unfall bleibt der Vergütungsanspruch für die Dauer von drei (3) Monaten bestehen. Die Bezüge vermindern sich allerdings um diejenigen Beträge, die der Geschäftsführende Direktor für diesen Zeitraum von Dritten erhält, insbesondere aus einer Krankenversicherung oder Krankentagegeldversicherung. Der Geschäftsführende Direktor ist verpflichtet, der Gesellschaft unverzüglich und vollständig von derartigen Zahlungen Kenntnis zu geben.
- 5.1 In case of involuntary incapability to work due to illness or accident, the Managing Director's entitlement to remuneration shall continue for three (3) months. However, any amounts received by the Managing Director from third parties, in particular from his health insurance, shall be deducted from remuneration. The Managing Director is obliged to immediately inform the Company of such payments.
- 5.2 Im Falle des Todes des Geschäftsführenden Direktors während der Dauer dieses Dienstvertrages ist die Vergütung gemäß Ziffer 4.1 für den Sterbemonat und die sechs folgenden Kalendermonate, längstens aber bis zur Beendigung dieses Dienstvertrags, an den Ehegatten des Geschäftsführenden Direktors, ersatzweise an die unterhaltsberechtigten Kinder des
- 5.2 In the event of the Managing Director's death during the term of this service agreement, the remuneration must continue to be paid pursuant to Sec. 4.1 of this service agreement for the month of death and the six subsequent months to the Managing Director's spouse, alternatively to the Managing Director's dependent children (the latter as the owner of

Geschäftsführenden Direktors (letztere als Gesamtgläubiger), fortzuzahlen.

joint rights), for the longest, however, until the expiration of this service agreement.

6. Urlaub

Der Urlaubsanspruch des Geschäftsführenden Direktors regelt sich nach dem Dienstvertrag mit der Spark Networks, Inc., und ist damit abgegolten.

6. Vacation

The annual vacation is governed by the leave arrangement under the service agreement with the Spark Networks, Inc.

7. Arbeitsverhinderung

Der Geschäftsführende Direktor ist verpflichtet, jede Arbeitsverhinderung und deren voraussichtliche Dauer unverzüglich anzuzeigen. Auf Verlangen sind die Gründe der Arbeitsverhinderung mitzuteilen. Die Mitteilung hat an einen anderen geschäftsführenden Direktor, wenn ein solcher nicht vorhanden ist, an den Verwaltungsratsvorsitzenden zu erfolgen. Im Falle der Erkrankung ist der Geschäftsführende Direktor darüber hinaus verpflichtet, vor Ablauf des dritten Kalendertages seit Eintritt der Arbeitsunfähigkeit eine ärztliche Bescheinigung über die Arbeitsunfähigkeit sowie deren voraussichtliche Dauer vorzulegen.

7. Work Impediment

The Managing Director shall be obligated to inform the Company of any impediment to work and its expected duration without undue delay. The reasons for the work impediment shall be disclosed upon request. The notice shall be given to a fellow managing director or, as the case may be, to the chairman of the Administrative Board. In the event of illness, the Managing Director shall also be obligated to present a doctor's certificate relating to the incapacity for work and its expected duration before the expiry of the third calendar day since the occurrence of the incapacity for work.

8. D&O Versicherung

Die Gesellschaft wird für den Geschäftsführenden Direktor eine Vermögensschadenhaftpflichtversicherung (D&O Versicherung) abschließen. Die Gesellschaft ist berechtigt, die Versicherung ohne Zustimmung des Geschäftsführenden Direktors nach billigem Ermessen zu ändern, wenn die Deckungssumme den Risiken des Geschäftsbetriebs der Gesellschaft nicht mehr angemessen ist. Für diese Versicherung wird ein Selbstbehalt in Höhe von 10% des Schadens begrenzt je Kalenderjahr auf das Eineinhalbfache des festen Jahresbruttogehaltes gemäß Ziffer

8. D&O insurance

The Company will take out a D&O insurance for the benefit of the Managing Director. The Company is entitled to amend the policy at its equitable discretion without the Managing Director's consent if the coverage of the Company's business risks is no longer sufficient. The Parties agree on a deductible of 10% of the damage, limited to one and a half times the amount of the annual gross salary pursuant to Sec. 3.2 (Sec. 40(8) German SE Implementation Act (*SEAG*), Sec. 93(2) sentence 3 German Stock Corporation Act (*Aktiengesetz*).

3.2 vereinbart (§ 40 Abs. 8 SEAG, § 93 Abs. 2 Satz 3 AktG).

9. Auslagen

Dem Geschäftsführenden Direktor werden die von ihm bei dienstlichen Reisen und für Repräsentationszwecke im Interesse der Gesellschaft gemachten tatsächlichen Aufwendungen im Rahmen der vom Finanzamt anerkannten steuerlichen Höchstsätze ersetzt, soweit diese erforderlich und angemessen waren und der jeweils anwendbaren compliance policy der Gesellschaft entsprechen. Die Abrechnung erfolgt monatlich oder nach Anfall aufgrund solcher Belege, wie sie von den Finanzämtern als hinreichend für die Abzugsfähigkeit von Auslagen anerkannt werden.

10. Vertragsdauer, Beendigung

- 10.1 Der Dienstvertrag tritt am 1. Dezember 2017 in Kraft und wird für die Zeit bis zum Ablauf des 30. November 2021 geschlossen. Über eine Vertragsverlängerung sollen die Parteien im Zeitraum von zwölf bis sechs Monaten vor Ablauf der Vertragsdauer verhandeln und entscheiden.
- 10.2 Der Anstellungsvertrag ist jederzeit, auch vor Ablauf der in Ziff. 10.1 geregelten Vertragslaufzeit ordentlich kündbar. Die Kündigungsfrist bestimmt sich nach der entsprechenden Regelung im Dienstvertrag mit der Spark Networks, Inc.
- 10.3 Der Widerruf der Bestellung zum geschäftsführenden Direktor gilt als Kündigung des Anstellungsvertrages zum nächstzulässigen Zeitpunkt. Beruht der Widerruf auf einem Grund, der nicht zugleich ein wichtiger Grund für die fristlose Kündigung des Dienstvertrags nach § 626 BGB ist (in diesem Fall endet dieser Anstellungsvertrag mit sofortiger Wirkung), so endet der Dienstvertrag erst mit Ablauf der in Ziffer 10.2 genannten

9. Expenses

The Managing Director shall be reimbursed within the maximum tax rates recognized by the tax authorities for any expenses which were actually incurred on business trips or due to representation purposes in the Company's interest, as long as they were necessary and reasonable and in accordance with any compliance policy of the company as applicable from time to time. The expenses shall be balanced monthly or dependent on the accrual by means of such receipts acknowledged by the revenue offices as sufficient for the deduction of costs.

10. Term of Agreement, Termination

- 10.1 This service agreement shall take effect as of December 1, 2017 and is concluded for the period until the end of November 30, 2021. The parties shall negotiate and decide upon the extension of the service agreement within a period of twelve to six months prior to the expiration of the term of agreement.
- 10.2 Either Party has the right to terminate this service agreement at any time, also prior to the term pursuant to Sec. 10.1. The notice period is governed by the relevant provisions of the service agreement with the Spark Networks, Inc.
- 10.3 The revocation of the appointment as managing director shall be deemed notice of termination effective as of the earliest possible date. If this revocation is for a reason which does not constitute good cause for terminating this service agreement without notice according to Sec. 626 of the German Civil Code (*Bürgerliches Gesetzbuch – BGB*) (in this case this service agreement will end with immediate effect), this service agreement will not

Frist. Gleiches gilt bei Amtsniederlegung durch den Geschäftsführenden Direktor.

end until expiry of the notice period set forth in Sec. 10.2 above. The same shall apply if the Managing Director resigns from his office.

10.4 Der Dienstvertrag ist jederzeit aus wichtigem Grund fristlos kündbar.

10.4 The service agreement may be terminated for good cause without notice at any time.

10.5 Jede Kündigung bedarf zu ihrer Wirksamkeit der Schriftform.

10.5 Each notice of termination must be in writing.

10.6 Dieser Dienstvertrag endet automatisch, ohne dass es einer Kündigung bedarf, am Ende des Monats, in dem der Geschäftsführende Direktor die Regelaltersgrenze der gesetzlichen Rentenversicherung erreicht.

10.6 This service agreement will end, without any formal notice of termination, at the end of the month in which the Managing Director has reached the regular retirement age in the statutory pension scheme.

10.7 Zum Ablauf der Vertragsdauer wird der Geschäftsführende Direktor auf Verlangen sein Amt als geschäftsführender Direktor der Gesellschaft niederlegen.

10.7 As of the expiry of the term of this agreement, the Managing Director will withdraw from the office as managing director of the Company upon request.

11. Freistellung

Im Falle der Kündigung behält sich die Gesellschaft das Recht vor, den Geschäftsführenden Direktor bis zum Ablauf der Befristung bzw. Kündigungsfrist von der Verpflichtung zur Dienstleistung unwiderruflich freizustellen; sind Urlaubsansprüche offen, sind diese auf den Freistellungszeitraum anzurechnen. In der Zeit der Freistellung gilt § 615 BGB entsprechend mit der Folge, dass sich der Geschäftsführende Direktor einen in der Zeit der Freistellung durch Verwendung seiner Arbeitskraft erzielten Verdienst auf den Vergütungsanspruch gegenüber der Gesellschaft anrechnen lassen muss. Über derartige Einnahmen hat der Geschäftsführende Direktor die Gesellschaft unverzüglich zu informieren.

11. Release from Duties

In case of termination, the Company reserves the right to irrevocably discharge the Managing Director from his duties until expiry of the notice period; should there be any outstanding holiday entitlements, these shall be set off against the period of discharge. During the period of being released from duties Sec. 615 of the German Civil Code (*Bürgerliches Gesetzbuch*) shall apply accordingly, with the consequence that any earnings of the Managing Director generated by using his working capacity during the period of being released from duties shall be offset against his claim for remuneration vis-à-vis the Company. The Managing Director shall inform the Company of such earnings without undue delay.

12. Wettbewerbsverbot / Abwerbverbot

12. Non-compete / non-solicitation covenant

- 12.1 Dem Geschäftsführenden Direktor ist es untersagt, für die Dauer dieses Dienstvertrags und für die Dauer von 12 Monaten nach Beendigung dieses Dienstvertrags in selbständiger, unselbständiger oder sonstiger Weise Geschäfte im Geschäftsbereich der Gesellschaft zu tätigen oder für ein Unternehmen tätig zu werden oder es auf andere Weise zu unterstützen, welches Geschäfte im Geschäftsbereich der Gesellschaft betreibt (hiernach „Wettbewerbsunternehmen“) oder mit einem Wettbewerbsunternehmen i.S.d.§§ 15ff. AktG verbunden ist. In gleicher Weise ist es dem Geschäftsführenden Direktor für die Dauer dieses Dienstvertrags und für die Dauer von 12 Monaten nach Beendigung dieses Dienstvertrags untersagt, ein solches Unternehmen zu errichten, zu erwerben oder sich hieran unmittelbar oder mittelbar zu beteiligen. Dies gilt nicht bei Beteiligungen in Höhe von weniger als 5% am Aktienkapital börsennotierter Unternehmen (insgesamt das „Wettbewerbsverbot“).
- 12.2 Das nachvertragliche Wettbewerbsverbot ist räumlich auf solche Länder beschränkt, in denen die Gruppe bei Ausscheiden des Geschäftsführenden Direktors geschäftlich tätig ist.
- 12.3 Dem Geschäftsführenden Direktor ist es untersagt, während der Dauer dieses Dienstvertrags und für die Dauer von 12 Monaten nach Beendigung des Dienstvertrags, Arbeitnehmer der Gesellschaft oder mit ihr verbundener Unternehmen für eigene oder fremde Zwecke abzuwerben, dritte Personen zur Abwerbung zu veranlassen oder diese bei Abwerbungsaktivitäten zu unterstützen. In demselben Zeitraum ist es dem Geschäftsführenden Direktor ebenfalls untersagt, direkt oder indirekt vertragliche Beziehungen zu Kunden der Gesellschaft, der von ihr beherrschten
- 12.1 For the duration of this service agreement and for a period of 12 months after expiration/termination of this service agreement, the Managing Director undertakes not to engage in any activity whether self-employed, as employee or in any other capacity in the business field of the Company or to work for or otherwise support an enterprise that competes with the Company (“Competitor”) or is affiliated with a Competitor according to Sec.15 *et seq.* of the German Stock Corporation Act (*Aktiengesetz*). Likewise, for the duration of this service agreement and for a period of 12 months after expiration/termination of this service agreement, the Managing Director may not establish or acquire a Competitor, or directly or indirectly hold an interest in any Competitor, other than an interest of less than 5% in the registered capital stock of listed stock corporations (altogether the “Non-Compete Obligation”).
- 12.2 The post-contractual Non-Compete Obligation shall only apply for such countries in which the Group is active on the date of the expiration/termination of this service agreement becoming effective.
- 12.3 For the duration of this service agreement and for a period of 12 months after the expiry/termination of this service agreement, the Managing Director undertakes not to solicit any other person employed by the Company or its affiliated companies for his own purpose or the purpose of any third party or motivate or support a third party to solicit such an employee. For the same period of time the Managing Director will not, neither directly nor indirectly, enter into or try to enter into an agreement with customers of the Company or its affiliated companies, for which the Managing Director has been acting

Unternehmen sowie der sonst mit ihr verbundenen Unternehmen, für die der Geschäftsführende Direktor tätig geworden ist, einzugehen oder dies zu versuchen. Dieses Verbot ist auf Kunden der Gesellschaft beschränkt, die in den letzten drei Jahren in Geschäftsbeziehungen mit der Gesellschaft bzw. der mit ihr verbundenen Unternehmen standen (insgesamt das „Abwerbeverbot“).

- 12.4 Die Gesellschaft zahlt dem Geschäftsführenden Direktor für die Dauer des nachvertraglichen Wettbewerbs- und Abwerbeverbots eine Entschädigung in Höhe von 50% der zuletzt bezogenen Festvergütung gemäß Ziffer 4.1. Auf die Entschädigung werden Einkünfte angerechnet, die der Geschäftsführende Direktor während der Dauer des nachvertraglichen Wettbewerbs- und Abwerbeverbots durch anderweitige Verwendung seiner Arbeitskraft bezieht.
- 12.5 Die Gesellschaft kann durch schriftliche Erklärung jederzeit, sowohl vor Beendigung des Dienstvertrages als auch danach, auf das nachvertragliche Wettbewerbsverbot und Abwerbeverbot verzichten mit der Folge, dass sie nach Ablauf von sechs (6) Monaten von der Zahlung der Entschädigung befreit ist. Endet das Anstellungsverhältnis, weil der Geschäftsführende Direktor die Regelaltersgrenze in der gesetzlichen Rentenversicherung erreicht hat oder dauerhaft dienstunfähig ist, tritt das nachvertragliche Wettbewerbs- und Abwerbeverbot nicht in Kraft. Im Fall einer Kündigung aus wichtigem Grund steht dem kündigungsberechtigten Vertragsteil das Recht zu, innerhalb eines (1) Monats nach Ausspruch der Kündigung aus wichtigem Grund durch schriftliche Erklärung gegenüber dem anderen Teil das nachvertragliche Wettbewerbs- und Abwerbeverbot mit

for. This prohibition shall only be applicable for customers which have had business relations with the Company or its affiliated companies in the respective previous three years (altogether the “Non-Solicitation Obligation”).

- 12.4 For the duration of the post-contractual Non-Compete Obligation and the post-contractual Non-Solicitation Obligation, the Company shall pay to the Managing Director a compensation of 50% of the fixed gross monthly salary pursuant to Sec. 4.1. Any other remuneration received by the Managing Director during the term of the post-contractual Non-Compete Obligation and the post-contractual Non-Solicitation Obligation shall be credited against the compensation payment.
- 12.5 The Company may at any time by written declaration, prior to or after the termination of this service agreement, waive the post-contractual Non-Compete Obligation and the post-contractual Non-Solicitation Obligation, whereupon the Company, as of the expiry of a notice period of six (6) months, is relieved from its obligation to the compensation payments. In the event this service agreement expires because the Managing Director reaches the standard retirement age under the statutory retirement pension scheme or is permanently unfit for service (*dauerhaft dienstunfähig*), the post-contractual Non-Compete Obligation and the post-contractual Non-Solicitation Obligation shall not apply. In the event of a termination for cause (*Kündigung aus wichtigem Grund*) the relevant terminating Party may, within one (1) month after the announcement of the termination for cause, cancel the post-contractual Non-Compete Obligation and

sofortiger Wirkung entschädigungslos aufzuheben.

12.6 Für jede Handlung, durch die der Geschäftsführende Direktor das (nachvertragliche) Wettbewerbs- und/oder Abwerbeverbot gemäß vorstehenden Ziffern 12.1 bis 12.2 schuldhaft verletzt, hat er eine Vertragsstrafe in Höhe eines Bruttomonatsgehalts nach Ziffer 4.1 zu zahlen. Besteht die Verletzungshandlung in der kapitalmäßigen Beteiligung an einem Wettbewerbsunternehmen oder der Eingehung eines Dauerschuldverhältnisses (z.B. Arbeits-, Dienst-, Handelsvertreter oder Geschäftsführerverhältnis), wird die Vertragsstrafe für jeden angefangenen Monat, in dem die kapitalmäßige Beteiligung oder das Dauerschuldverhältnis besteht, neu verwirkt (Dauerverletzung). Mehrere Verletzungshandlungen lösen jeweils gesonderte Vertragsstrafen aus, gegebenenfalls auch mehrfach innerhalb eines Monats. Erfolgen dagegen einzelne Verletzungshandlungen im Rahmen einer Dauerverletzung, sind sie von der für die Dauerverletzung verwirkten Vertragsstrafe mit umfasst. Bei Verwirkung mehrerer Vertragsstrafen ist der Gesamtbetrag der zu zahlenden Vertragsstrafen auf das Sechsfache (6) eines Bruttomonatsgehalts begrenzt. Die Geltendmachung von Schäden, die über die verwirkte Vertragsstrafe hinausgehen, sowie die Geltendmachung sonstiger Rechte, z.B. Unterlassungsansprüche, bleiben vorbehalten.

12.7 Soweit in diesem Dienstvertrag nichts anderes geregelt ist, gelten die §§ 74 ff. HGB entsprechend. Dies gilt insbesondere für die geltungserhaltende Reduktion nach § 74a HGB.

the post-contractual Non-Solicitation Obligation by written notice *vis-à-vis* the relevant other party with immediate effect and without any compensation.

12.6 For each culpable breach of the (post-contractual) Non-Compete Obligation and/or (post-contractual) Non-Solicitation Covenant pursuant to preceding Sec. 12.1 through Sec. 12.2, the Managing Director shall pay a contractual penalty equal to the gross monthly salary pursuant to Sec. 4.1. Should the breach consist of participating in the capital of a Competitor or entering into a contract for the performance of a continuing obligation (e.g. an employment, service, commercial agency or consultancy contract), the contractual penalty shall be imposed anew for each full or partial month in which the capital participation or the contract for the performance of a continuing obligation exists (ongoing breach). Multiple breaches shall each trigger a separate contractual penalty, possibly also more than once within one month. However, if individual breaches occur within the scope of an ongoing breach, they shall be covered by the contractual penalty owed for the ongoing breach. If several contractual penalties are incurred, the total amount payable is limited to an aggregate amount of six (6) gross monthly salaries. The Company reserves the right to assert damages over and above the contractual penalty imposed, as well as other rights, e.g. the right to claim injunctive relief.

12.7 If not stipulated otherwise in this service agreement, Sec. 74 et seq. of the German Commercial Code (*Handelsgesetzbuch*), shall apply accordingly. In particular, this applies to the provision on blue-pencilling

(*geltungserhaltende Reduktion*) pursuant to Sec. 74a German Commercial Code.

13. Rechte an Arbeitsergebnissen

- 13.1 Der Geschäftsführende Direktor verpflichtet sich dazu, sämtliche Materialien, Daten, Informationen, Schöpfungen, Erfindungen, Erkenntnisse, Werke und sonstige Arbeitsergebnisse, die er während der Dauer dieses Anstellungsverhältnisses erstellt, sei es während der Tätigkeit oder – sofern ein Bezug zur Tätigkeit aufgrund dieses Dienstvertrags besteht – außerhalb der Tätigkeit (die "Arbeitsergebnisse"), zu dokumentieren und umgehend gegenüber der Gesellschaft offenzulegen und diese Arbeitsergebnisse gegenüber Dritten gemäß Ziffer 2 dieser Vereinbarung geheim zu halten.
- 13.2 Der Geschäftsführende Direktor verpflichtet sich darüber hinaus, der Gesellschaft alle Originale und Kopien jeglicher Arbeitsergebnisse, unabhängig von ihrer Form oder ihrem Speichermedium, jederzeit auf Verlangen zu übergeben.
- 13.3 Der Geschäftsführende Direktor erkennt an, dass sämtliche Geistigen Eigentumsrechte (wie nachfolgend definiert) und alle sonstigen Rechte, die an den Arbeitsergebnissen bestehen, aus ihrer Nutzung entstehen und/oder in ihnen verkörpert sind (insgesamt die "Rechte an den Arbeitsergebnissen"), im Zeitpunkt ihrer Entstehung vollständig und ohne Einschränkung auf die Gesellschaft übergehen. Der Geschäftsführende Direktor überträgt bereits hiermit sämtliche Rechte an den Arbeitsergebnissen auf die Gesellschaft. Die Gesellschaft nimmt diese Übertragung hiermit an.
- 13.4 "Geistige Eigentumsrechte" meint alle registrierten oder unregistrierten, angemeldeten oder (noch) nicht angemeldeten, schutzrechtsfähigen oder

13. Rights to Work Results

- 13.1 The Managing Director undertakes to document and disclose immediately vis-à-vis the Company all materials, data, information, creations, inventions, findings, works and other work results, in the creation of which he is involved in during his service relationship, be it during working hours or – provided that a connection to his activity pursuant to this agreement exists – outside of working hours (the "Work Results"), and to keep these Work Results confidential vis-à-vis third parties in accordance with Sec. 2 of this agreement.
- 13.2 Upon request by the Company, the Managing Director, moreover, undertakes to forward all and any original Work Results and copies thereof to the Company, regardless of form or storage media at any time.
- 13.3 The Managing Director acknowledges that all Intellectual Property Rights (as defined hereinafter) and all other rights which exist with respect to Work Results or result from their usage and/or are embodied within them (collectively the "Rights to the Work Results") are passed on to the Company, in their entirety and without limitation, at the time of their development. The Managing Director hereby transfers all Rights to the Work Results to the Company. The Company accepts such transfer.
- 13.4 "Intellectual Property Rights" means all registered or unregistered, filed or not (yet) filed, protectable or non-protectable

nicht schutzrechtsfähigen geistigen Eigentumsrechte und gewerblichen Schutzrechte, insbesondere (ohne hierauf beschränkt zu sein) (A) alle Rechte an (i) Computerprogrammen bzw. Computersoftware, (ii) jeder Form von Quellcode, Objektcode und jeder anderen Form von Code einschließlich von dem Code zugrunde liegenden Algorithmen, (iii) Datenbanken, APIs, Applikationen, Hardware oder Halbleitertopographien, (iv) Patenten, Gebrauchs- oder Geschmacksmustern, Designrechten und Urheberrechten (soweit nicht schon von vorstehenden Ziffern (i) bis (iii) erfasst), (v) Geschäftsgeheimnissen und Know-How (im Sinne von nicht öffentlich zugänglichem Wissen, das z.B. für die Nutzung oder Weiterentwicklung von Soft- oder Hardwarekomponenten nützlich oder erforderlich ist), sowie (B) alle anderen Rechte an Informationen, Zeichnungen, Plänen, technischen Notizen, Prototypen, Prozessen, Methoden, Algorithmen, jedweder technikbezogener Dokumentation, Ideen, Konzepten und sonstigen Arbeitsergebnissen, sei es, dass diese dem Anwendungsbereich des UrhG, PatentG, GebrMG, GeschmMG oder anderer (in- oder ausländische) Gesetze unterfallen.

- 13.5 Für den Fall, dass die unter der vorstehenden Ziffer 13.3 vorgesehene Rechtsübertragung nicht wirksam nach zwingend anwendbarem Recht bewirkt werden kann, insbesondere im Hinblick auf das Urheberpersönlichkeitsrecht, räumt der Geschäftsführende Direktor der Gesellschaft hiermit ein umfassendes, ausschließliches, räumlich und zeitlich unbegrenztes und für alle, auch neuen Nutzungsarten uneingeschränkt geltendes Nutzungsrecht an den Rechten an den Arbeitsergebnissen ein. Zu den übertragenen Rechten gehören insbesondere, aber nicht ausschließlich, das räumlich, zeitlich und inhaltlich

intellectual property rights and commercial proprietary rights, in particular (without limitation) (A) all rights to (i) computer programs or computer software, (ii) any form of source code, object code, and any other form of code including algorithms underlying code, (iii) databases, APIs, applications, hardware, or semiconductor topographies, (iv) patents, utility patents, design patents, design rights and copyrights (to the extent not already included in digits (i) through (iii) above), (v) business secrets and know-how (in the sense of not publicly-accessible knowledge, which is useful or required, e.g., for the use or further development of soft- or hardware components), as well as (B) all other rights to information, drawings, plans, technical notes, prototypes, methods, algorithms, any technology-related documentation whatsoever, ideas, concepts, irrespective of whether these fall into the scope of application of the German Copyright Act (*Urhebergesetz*), Patent Act (*Patentgesetz*), Utility Patent Act (*Gebrauchsmustergesetz*), Design Patent Act (*Geschmacksmustergesetz*) or any other (domestic or foreign) laws.

- 13.5 In case that the intended transfer of rights pursuant to Sec. 13.3 is not effected due to applicable compulsory law, particularly with respect to the moral right (*Urheberpersönlichkeitsrecht*), the Managing Director hereby transfers to the Company irrevocably an exclusive usage and exploitation right with respect to the Rights to the Work Results that is unlimited from a temporal and territorial perspective and comprises all types of usage including new types of usage. This transfer includes, but is not limited to publicity rights (Sec. 12 German Copyright Act), reproduction rights (Sec. 16 German Copyright Act), distribution rights (Sec. 17 German Copyright Act), exhibition rights

- unbeschränkte und frei übertragbare Veröffentlichungsrecht (§ 12 UrhG), Vervielfältigungsrecht (§ 16 UrhG), Verbreitungsrecht (§ 17 UrhG), Ausstellungsrecht (§ 18 UrhG), das Vortrags-, Aufführungs- und Vorführungsrecht (§ 19 UrhG), das Recht der öffentlichen Zugänglichmachung (§ 19a UrhG), das Senderecht (§ 20 UrhG), das Recht der Wiedergabe durch Bild- und Tonträger (§ 21 UrhG), die Rechte nach § 22 UrhG sowie das Recht zur Bearbeitung und Umgestaltung der Arbeitsergebnisse (§ 23 UrhG).
- (Sec. 18 German Copyright Act), the right of recital, performance and presentation (Sec. 19 German Copyright Act), the right to make available to the public (Sec. 19a German Copyright Act), broadcasting rights (Sec. 20 German Copyright Act), the right to reproduce through image carrier and sound storage medium (Sec. 21 German Copyright Act), the rights pursuant to Sec. 22 German Copyright Act and the right of processing and rearrangement of Work Products (Sec. 23 German Copyright Act), which are unlimited from a temporal and territorial perspective and freely transferable.
- 13.6 Der Geschäftsführende Direktor verpflichtet sich, auf Verlangen der Gesellschaft umgehend alle Dokumente zur Verfügung zu stellen und jede Unterstützung zu leisten, die erforderlich ist, damit die Gesellschaft die Rechte an den Arbeitsergebnissen erlangt.
- 13.6 Upon request by the Company, the Managing Director undertakes to immediately make available all documents and to render any assistance necessary to enable the Company to obtain the Rights to the Work Results.
- 13.7 Die Parteien sind sich einig, dass eine zukünftige Beendigung dieses Dienstvertrags keine Auswirkungen auf die Weitergeltung der erfolgten Rechteübertragung bzw. -einräumung hat.
- 13.7 The Parties agree that a future termination of this agreement shall not affect the continuing validity of the transfer and grant of rights.
- 13.8 Die Übertragung der Rechte an den Arbeitsergebnissen und die weiteren unterstützenden Handlungen sind durch die Vergütung nach Ziffer 4 abgegolten.
- 13.8 The transfer of the Rights to the Work Results and other supporting actions are entirely compensated by the remuneration pursuant to Sec. 4.
- 14. Aufhebung bestehender Verträge; Ausschlussklausel**
- 14. Termination of existing agreements; forfeiture of claims**
- 14.1 Ansprüche des Geschäftsführenden Direktors und der Gesellschaft aus dem Dienstverhältnis verfallen, wenn sie nicht innerhalb von drei Monaten nach ihrer Fälligkeit gegenüber der anderen Partei in Textform (§ 126b BGB; z.B. per Brief, Fax, E-Mail) geltend gemacht werden.
- 14.1 All claims of the Managing Director and the Company arising from the service relationship must be asserted in text form (Sec. 126b of the German Civil Code, e.g. letter, fax, e-mail) within three months as of their due date; otherwise they shall be deemed forfeited.
- 14.2 Lehnt die andere Partei den Anspruch ab oder erklärt sie sich nicht innerhalb von zwei Wochen nach der Geltendmachung des Anspruchs, verfällt dieser, wenn er
- 14.2 If the other party rejects such claim or does not react within two weeks of such claim having been asserted, it shall be deemed forfeited if not pursued by the

nicht innerhalb von drei Monaten nach Ablehnung oder Fristablauf gerichtlich geltend gemacht wird.

- 14.3 Die vorstehenden Bestimmungen unter Abs. 1 und 2 gelten nicht bei einer Haftung wegen Vorsatzes und grober Fahrlässigkeit, bei einer Haftung wegen fahrlässiger Verletzung des Lebens, des Körpers oder der Gesundheit, für Ansprüche aus unerlaubter Handlung, für Ansprüche, auf die nur mit Zustimmung Dritter verzichtet werden kann, für Ansprüche auf ein gesetzliches Mindestentgelt sowie für andere unverzichtbare Ansprüche.

15. Schlussbestimmungen

- 15.1 Dieser Dienstvertrag unterliegt deutschem Sachrecht.
- 15.2 Der Gerichtsstand für alle Ansprüche aus und im Zusammenhang mit diesem Dienstvertrag ist, soweit gesetzlich zulässig, Berlin.
- 15.3 Nebenabreden zu diesem Dienstvertrag bestehen – außer der in diesem Dienstvertrag ausdrücklich aufgeführten Vereinbarungen – nicht. Sämtliche Änderungen oder Ergänzungen dieses Dienstvertrages bedürfen der Schriftform. Dieses Schriftformerfordernis gilt auch für die Aufhebung dieser Schriftformklausel. Unberührt bleiben Individualabreden im Sinne des § 305b BGB.
- 15.4 Falls einzelne Bestimmungen dieses Anstellungsvertrages unwirksam sein oder werden sollten oder dieser Dienstvertrag Lücken enthält, wird dadurch die Wirksamkeit der übrigen Bestimmungen nicht berührt. Anstelle der unwirksamen Bestimmung gilt diejenige wirksame Bestimmung als vereinbart, welche dem Sinn und Zweck der unwirksamen Bestimmung entspricht. Im Falle von Lücken gilt diejenige Bestimmung als

claiming party through court action within three months after the said rejection or expiry of the two-week period.

- 14.3 The foregoing provisions under paras. (1) and (2) shall not apply to claims based on liability for intentional acts or gross negligence, in case of liability for negligent injury to life, body and/or health, to claims arising out of tort, to claims that can only be waived with third party consent, to claims to a statutory minimum wage as well as to other claims that may not be waived.

15. Final Provisions

- 15.1 This contract is governed exclusively by the substantive laws of Germany.
- 15.2 The place of jurisdiction for all disputes arising from or in connection with this service agreement is – to the extent permissible under applicable statutory law – Berlin (Germany).
- 15.3 No side agreements are in place between the Parties (unless explicitly referred to herein). Changes, side letters and amendments must be in writing. This also applies to a cancellation of the written-form requirement. The only exceptions are individual agreements stipulated in Sec. 305b of the German Civil Code (*Bürgerliches Gesetzbuch*).
- 15.4 If any provision of this service agreement or any part of such provision is or becomes invalid or unenforceable or is missing, the other provisions of this service agreement shall not be affected thereby. The invalid or unenforceable or missing provision shall be replaced by a valid and enforceable provision, the effect of which comes as close as possible to the intended economical effect of the invalid or unen-



vereinbart, die dem entspricht, was nach Sinn und Zweck dieses Anstellungsvertrages vernünftigerweise vereinbart worden wäre, hätten die Parteien die Angelegenheit von vornherein bedacht. Die Parteien sind sich darüber einig, dass § 139 BGB durch diese Ziffer 15.4 vollständig abgedungen wird und keine Anwendung findet.

- 15.5 Im Falle eines Konflikts zwischen dem Inhalt der deutschen und der englischen Fassung dieses Anstellungsvertrages ist die deutsche Fassung maßgebend.

forceable or missing provision. The Parties agree that Sec. 139 German Civil Code is completely excluded by this Sec. 15.4 and, therefore, does not apply.

- 15.5 In case of a conflict between the German and the English version of this service agreement the German version shall prevail.

- 15.6 For purposes of this service agreement, "Section 409A" means Section 409A of the U.S. Internal Revenue Code of 1986, as amended, and the U.S. Treasury Regulations promulgated thereunder (and such other Treasury or Internal Revenue Service guidance) as in effect from time to time. The parties intend that any amounts payable hereunder that could constitute "deferred compensation" within the meaning of Section 409A will be compliant with Section 409A. Notwithstanding anything in this service agreement to the contrary, in the event that the Managing Director is deemed to be a "specified employee" within the meaning of Section 409A(a)(2)(B)(i), no payments hereunder that are "deferred compensation" subject to Section 409A shall be made to the Managing Director prior to the date that is six (6) months after the date of the Managing Director's "separation from service" (as defined in Section 409A) or, if earlier, the date of the Managing Director's death. Following any applicable six (6) month delay, all such delayed payments will be paid in a single lump sum on the earliest date permitted under Section 409A that is also a business day. For purposes of Section 409A, each of the payments that may be made hereunder is designated as a separate payment. For purposes of this service agreement, with respect to payments of any amounts that are considered to be "deferred compensation" subject to Section 409A, references to "termination of

employment" (and substantially similar phrases) shall be interpreted and applied in a manner that is consistent with the requirements of Section 409A. To the extent that any reimbursements under this service agreement are taxable to the Managing Director, any such reimbursement payment due to the Managing Director shall be paid to the Managing Director as promptly as practicable consistent with Company practice following the Managing Director's appropriate itemization and substantiation of expenses incurred, and in all events on or before the last day of the Managing Director's taxable year following the taxable year in which the related expense was incurred. The taxable reimbursements under this service agreement that could constitute "deferred compensation" within the meaning of Section 409A are not subject to liquidation or exchange for another benefit, and the amount of such benefits and reimbursements that the Managing Director receives in one taxable year shall not affect the amount of such benefits or reimbursements that the Managing Director receives in any other taxable year.


* * * * *

[Unterschriftenseite folgt // Signature Page follows]

[Unterschriftenseite // Signature Page]

Für die Gesellschaft // For the Company:

Name: **David Khalil**
Position // Capacity: **Vorsitzender des Verwaltungsrats // Chairperson of the Company's administrative board**
Ort, Datum // City, Date: _____



(Unterschrift // Signature)

Der Geschäftsführende Direktor // The Managing Director:

Name: **Robert O'Hare**
Ort, Datum // City, Date: **NEW YORK NY / JANUARY 11, 2018**



(Unterschrift // Signature)

[Bindende deutsche Fassung.
Binding German version.]

[Englische Übersetzung nur zu
Informationszwecken. English translation for infor-
mation purposes only.]

**Dienstvertrag für
geschäftsführenden
Direktor**

**Managing Director
Service Agreement**

zwischen

between

Spark Networks SE

mit Sitz in München (künftig: Berlin), vertre-
ten durch den Verwaltungsrat, dieser vertreten
durch den Verwaltungsratsvorsitzenden

registered in Munich (in the future: Berlin),
represented by the administrative board (*Ver-
waltungsrat*), the latter represented by the
chairman of the administrative board

(nachfolgend die „Gesellschaft“)

(hereinafter the “Company”)

und

and

Michael Schrezenmaier

Strasse 132 Nr. 20, 13158 Berlin

(nachfolgend der
„Geschäftsführende Direktor“)

(hereinafter the
“Managing Director”)

(Gesellschaft und Geschäftsführender Direktor
nachfolgend zusammen die „Parteien“
und einzeln jeweils eine „Partei“).

(Company and Managing Director
collectively hereinafter
the “Parties”, and each a “Party”).

Präambel

Der Geschäftsführende Direktor ist durch Beschluss des Verwaltungsrats der Gesellschaft („Verwaltungsrat“) vom 12. April 2017 zeitlich unbefristet zum geschäftsführenden Direktor der Gesellschaft bestellt worden. Der Geschäftsführende Direktor ist ferner Geschäftsführer der Affinitas GmbH mit Sitz in Berlin („Affinitas“). Zwischen dem Geschäftsführenden Direktor und der Affinitas besteht ein Geschäftsführerdienstvertrag vom 9. Oktober 2015 (in seiner geltenden Fassung samt Nachträgen und Änderungsvereinbarungen der „Geschäftsführerdienstvertrag Affinitas“). Zur Regelung des Anstellungsverhältnisses als geschäftsführender Direktor der Gesellschaft wird der nachfolgende Dienstvertrag geschlossen werden. Er soll zum Zeitpunkt seines Inkrafttretens an die Stelle des Geschäftsführerdienstvertrags Affinitas treten, der durch gesonderten Aufhebungsvertrag aufgehoben werden wird. Dies vorausgeschickt, vereinbaren die Parteien das Folgende:

1. Aufgaben und Pflichten

- 1.1 Der Geschäftsführende Direktor ist berechtigt und verpflichtet, die Gesellschaft nach Maßgabe der nachfolgenden Ziffern zu vertreten und die Geschäfte der Gesellschaft zu führen. Die Gesellschaft ist berechtigt, die Vertretungsbefugnis des Geschäftsführenden Direktors jederzeit zu ändern.
- 1.2 Der Geschäftsführende Direktor führt die Geschäfte der Gesellschaft nach Maßgabe der Gesetze, der Satzung der Gesellschaft, etwaiger Geschäftsordnungen für den Verwaltungsrat sowie für die geschäftsführenden Direktoren in ihrer jeweils gültigen Fassung, den Empfehlungen des Deutschen Corporate Governance Kodex in seiner jeweils geltenden Fassung (soweit diese

Preamble

The Managing Director has been appointed as managing director of the Company by resolution of the Company's administrative board (“Administrative Board”) dated April 12, 2017 for an indefinite period of time. The Managing Director is also managing director of Affinitas GmbH with seat in Berlin („Affinitas“). The Managing Director and Affinitas entered into a managing director service agreement dated October 9, 2015 (as amended from time to time, the “Affinitas Managing Director Service Agreement”). In order to govern the employment as managing director of the Company, the following service agreement will be concluded. It shall replace the Affinitas Managing Director Service Agreement which will be terminated by way of a separate termination agreement as of the effective date of this service agreement. Now, therefore, the Parties hereby agree as follows:

1. Responsibilities and Duties

- 1.1 The Managing Director shall be entitled and obligated to represent the Company in accordance with the following provisions and to manage the Company's business. The Company may change the authority of the Managing Director to represent the Company at any time.
- 1.2 The Managing Director shall manage the Company's business in compliance with statutory law, the Company's articles of association, the rules of procedure (*Geschäftsordnung*) for the Administrative Board and for the managing directors as amended from time to time, the recommendations of the German Corporate Governance Code as amended from time to time (to

jeweils von der Gesellschaft befolgt werden) sowie dieses Dienstvertrages.

1.3 Der Geschäftsführende Direktor hat die ihm obliegenden Pflichten mit der Sorgfalt eines ordentlichen und gewissenhaften Kaufmanns wahrzunehmen.

1.4 Auf Wunsch der Gesellschaft übernimmt der Geschäftsführende Direktor auch Organstellungen und ähnliche Ämter in Gesellschaften, an denen die Gesellschaft unmittelbar oder mittelbar beteiligt oder mit denen sie im Sinne der §§ 15 ff. AktG verbunden ist (zusammen die „Gruppe“), sowie Ämter in Verbänden und ähnlichen Zusammenschlüssen, soweit hieran ein Interesse der Gesellschaft besteht. Die Übernahme solcher Aufgaben begründet keine weiteren Anstellungsverhältnisse. Sämtliche solche Tätigkeiten sind mit der Vergütung nach diesem Dienstvertrag abgegolten. Der Geschäftsführende Direktor ist verpflichtet, sämtliche solcher Organstellungen und Ämter jederzeit auf Verlangen der Gesellschaft oder spätestens bei Beendigung dieses Dienstvertrags niederzulegen.

1.5 Der Arbeitsplatz des Geschäftsführenden Direktors ist Berlin, Deutschland, es sei denn, der Verwaltungsrat stimmt zu oder verlangt, jeweils unter Berücksichtigung der Interessen der Gesellschaft, dass der Geschäftsführende Direktor seine Arbeit an einem anderen Ort verrichtet.

2. Treuepflichten / Betriebsgeheimnisse

2.1 Der Geschäftsführende Direktor ist verpflichtet, Dritten gegenüber strengstes Stillschweigen über alle ihm im Rahmen seiner Tätigkeit anvertrauten oder sonst bekannt gewordenen geschäftlichen, betrieblichen oder technischen Information und Vorgänge zu

the extent complied with by the Company), and this service agreement.

1.3 The Managing Director shall carry out the duties incumbent upon him with the due care and diligence of a prudent businessman.

1.4 At the request of the Company, the Managing Director will also assume office in executive bodies and similar offices in companies in which the Company directly or indirectly holds an interest, or in affiliated companies within the meaning of Sec. 15 *et seq.* of the German Stock Corporation Act (*Aktiengesetz*) (jointly the “Group”), as well as offices in associations and similar organisations if the Company has an interest therein. The assumption of any of the aforementioned responsibilities does not constitute any separate service relationship. Any of the aforementioned activities are compensated by the remuneration stipulated under this service agreement. The Managing Director shall, upon request by the Company, at the latest, however, upon expiry or termination of this service agreement, resign from all of the aforementioned offices.

1.5 The Managing Director's place of work shall be Berlin, Germany, unless otherwise required or approved by the Administrative Board taking into account the Company's interests and business.

2. Fiduciary Duties / Company Secrets

2.1 The Managing Director is obliged to strictly maintain confidentiality *vis-à-vis* third parties regarding all business, operational or technical information and processes with which he is entrusted or of which he may otherwise become aware in the context of his



wahren, die internen oder vertraulichen Charakter haben, jeweils sofern und soweit nicht nach zwingendem Recht etwas anderes angeordnet ist. Nach Beendigung des Dienstverhältnisses besteht diese Pflicht dauerhaft fort, auch im Falle einer Kündigung oder eines Eintritts in den Ruhestand.

2.2 Geschäftliche und betriebliche Unterlagen aller Art, auch in elektronischer Form, einschließlich persönlicher Aufzeichnungen über dienstliche Angelegenheiten, dürfen nur zu geschäftlichen Zwecken verwandt werden. Insbesondere ist untersagt, Kostenberechnungen, Statistiken, technische Einzelheiten und Ähnliches in Abschriften, Fotokopien oder Auszügen außerbetrieblich zu fertigen, zu benutzen oder an dritte Personen weiterzugeben.

2.3 Unterlagen im Sinne der Ziff. 2.2, die der Geschäftsführende Direktor im Rahmen seines Dienstverhältnisses in Besitz hat, sind sorgfältig aufzubewahren und auf Verlangen der Gesellschaft jederzeit, spätestens bei Beendigung des Dienstverhältnisses, der Gesellschaft auszuhändigen. Gleiches gilt für sonstige Gegenstände, die sich im Eigentum oder Besitz der Gesellschaft befinden. Gleiches gilt auch für die Rückgabe elektronisch gespeicherter Daten. Die Rückgabe von elektronisch gespeicherten Daten hat auf einem geeigneten Speichermedium zu erfolgen; der Geschäftsführende Direktor wird zugleich die Löschung dieser Daten auf allen Speichermedien bestätigen, auf die die Gesellschaft keinen Zugriff hat. Zurückbehaltungsrechte können durch den Geschäftsführenden Direktor nicht geltend gemacht werden.

3. Arbeitszeit / Nebentätigkeit

work insofar as they are of an internal or confidential nature, in each case unless and to the extent otherwise required from time to time under mandatory law. This obligation shall continue beyond the end of his service relationship, also in case of termination of this service agreement or retirement.

2.2 Business and operational documents of any kind, also electronic data, including personal notes regarding business matters, may only be used for business purposes. In particular, it is prohibited to produce or make use of any transcripts, photocopies or excerpts of cost calculations, statistics, technical details and the like externally or to pass on such documents to third parties.

2.3 All documents as defined under Sec. 2.2 above, which the Managing Director has in his possession in the course of the performance of his duties, must be stored in a secure place and handed back to the Company upon request by the Company at any time, no later, however, than upon termination of the service relationship. The aforesaid shall also apply for any other materials that are property of the Company. The same applies to the return of electronically stored data. The return of electronically stored data shall be effected by a proper storage device; the Managing Director will confirm at the same time the deletion of all data on any storage devices, which are not accessible by the Company. The Managing Director may not assert any rights of retention.

3. Hours of work / Secondary Activity

3.1 Der Geschäftsführende Direktor hat seine volle Arbeitskraft und seine gesamten Kenntnisse und Erfahrungen der Gruppe (d.h. der Gesellschaft und denjenigen weiteren Gesellschaften, bei denen der Geschäftsführende Direktor gem. Ziff. 1.4 Aufgaben oder Ämter wahrnimmt) zur Verfügung zu stellen.

3.2 An bestimmte Arbeitszeiten ist der Geschäftsführende Direktor nicht gebunden. Der Geschäftsführende Direktor ist verpflichtet, jederzeit, wenn und soweit das Wohl der Gesellschaft es verlangt, zur Dienstleistung zur Verfügung zu stehen.

4. Vergütung

4.1 Die Vergütung des Geschäftsführenden Direktors setzt sich zusammen aus (i) einer jährlichen Festvergütung (Ziff. 4.2), (ii) einer jährlichen variablen Tantieme (Ziff. 4.3) sowie (iii) der Teilnahme am Virtual Stock Option Program (VSOP) der Gesellschaft (Ziff. 4.4).

4.2 Der Geschäftsführende Direktor erhält ab Vertragsbeginn als Vergütung für seine Tätigkeit ein Brutto-Jahresgehalt in Höhe von EUR 160.000,00, das in zwölf (12) gleichen monatlichen Raten jeweils am Monatsende unter Einbehalt der gesetzlichen Abzüge bezahlt wird.

4.3 Der Geschäftsführende Direktor erhält – erstmals für das am 1. Januar 2018 beginnende Geschäftsjahr – zudem eine variable jährliche Tantieme in Höhe von maximal EUR 80.000,00, deren Höhe der Verwaltungsrat für jedes Geschäftsjahr jeweils vor Feststellung des Jahresabschlusses für das betreffende Geschäftsjahr festsetzt. Bei der Festsetzung hat der Verwaltungsrat zu berücksichtigen, bis zu welchem Grad

3.1 The Managing Director shall devote his entire working capacity and his entire knowledge and experience to the Group (i.e. the Company and such other companies of the Group in which the Managing Director assumes functions in accordance with Sec. 1.4 above).

3.2 The Managing Director shall not be bound to fixed working hours. However, the Managing Director shall be at the Company's service at any time if and to the extent required by the Company's interests.

4. Remuneration

4.1 The remuneration of the Managing Directors shall be composed of (i) an annual fixed salary (Sec. 4.2), (ii) an annual variable bonus (Sec. 4.3) and (iii) the participation in the Virtual Stock Option Program (VSOP) of the Company (Sec. 4.4).

4.2 As of the commencement of this service agreement, the Managing Director shall receive an annual gross salary of EUR 160,000.00 as remuneration, which shall be paid in twelve (12) pro-rated monthly payments after statutory deductions are withheld at the end of each month.

4.3 Furthermore, starting with the business year commencing on January 1, 2018, the Managing Director shall receive a variable annual bonus of up to EUR 80,000.00, to be determined by the Administrative Board for each respective business year prior to the approval of the annual accounts of the respective business year. When determining the variable annual bonus, the Administrative Board shall take into account the extent to which the Company has achieved the business

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die Gesellschaft im betreffenden Geschäftsjahr Unternehmensziele erreicht hat, die spätestens zum Beginn eines jeden Geschäftsjahres oder eines anderen Planungszeitraums zwischen dem Geschäftsführenden Direktor und dem Verwaltungsrat in einer Zielvereinbarung vereinbart worden sind. Diese Tantieme ist zeitgleich mit der nächsten monatlichen Gehaltszahlung gem. Ziff. 4.2 nach ihrer Festsetzung fällig. Der Geschäftsführende Direktor muss zu dem Zeitpunkt, zu dem die Tantieme festgesetzt wird, in einem Anstellungsverhältnis mit der Gesellschaft stehen, um die Tantieme in Anspruch nehmen zu können. Für das volle Geschäftsjahr 2017 erhält der Geschäftsführer eine Tantieme auf Grundlage des Geschäftsführerdienstvertrags Affinitas.

goals and objectives in the respective business year which have been agreed upon between the Managing Director and the Administrative Board in a target agreement at the latest at the beginning of each respective business year or any other planning period agreed upon. The variable annual bonus payment shall be due and payable together with the next monthly salary payment in accordance with Sec. 4.2 after having been determined. The Managing Director must be employed by the Company on the date on which the bonus is determined in order to be eligible to receive such bonus. For the full business year 2017, the Managing Director will receive a bonus payment on the basis of the Affinitas Managing Director Service Agreement.

4.4 Der Geschäftsführende Direktor nimmt nach Maßgabe eines gesonderten Zuteilungsschreibens und den anwendbaren Planbedingungen an einem Virtual Stock Option Plan (VSOP) der Gesellschaft teil. Diese Vergütungskomponente setzt dem Geschäftsführenden Direktor langfristige Anreize.

4.4 In accordance with a separate letter of grant and the applicable plan terms and conditions, the Managing Director participates in a Virtual Stock Option Plan (VSOP) of the Company. This component of the Managing Director's remuneration package provides long-term incentives.

4.5 Beginnt bzw. endet das Dienstverhältnis während bzw. vor Ablauf eines Kalenderjahres, so wird das jährliche Brutto-Jahresgehalt nach Ziff. 4.2 sowie die Tantieme nach Ziff. 4.3 zeitanteilig gezahlt. Hiervon abweichend ist die variable jährliche Tantieme nach Ziff. 4.3 erstmals für das am 1. Januar 2018 beginnende Geschäftsjahr geschuldet.

4.5 If this service agreement commences or ends during or before the end of a calendar year, the remuneration according to Sec 4.2 as well as the bonus according to Sec. 4.3 shall be paid on a pro rata basis. Deviating hereof, the variable annual bonus according to Sec. 4.3 shall be payable for the first time for the business year commencing on January 1, 2018.

4.6 Für den Fall, dass sich der Geschäftsführende Direktor privat kranken- und pflegeversichert, zahlt die Gesellschaft dem Geschäftsführenden Direktor einen Zuschuss zur privaten Kranken- und Pflegeversicherung in Höhe des Arbeitgeberanteils, wie er bei Versicherungspflicht in der gesetzlichen Kranken- und Pflegeversicherung bestünde, höchstens jedoch in Höhe der Hälfte des

4.6 In case the Managing Director chooses a private health insurance and private nursing care insurance instead of the statutory insurance the Company pays a contribution to a private health insurance and a private nursing care insurance up to the amount which it would have to bear as its contribution to statutory health insurance and nursing care insurance for the Managing Director, but limited to half of

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Betrags, den der Geschäftsführende Direktor tatsächlich für seine private Kranken- bzw. Pflegeversicherung aufzuwenden hat.

- 4.7 Ein Anspruch auf Vergütung von Überstunden, Sonntags-, Feiertags- oder sonstiger Mehrarbeit besteht nicht.

5. Krankheit, Tod

- 5.1 Im Falle unverschuldeter Arbeitsverhinderung durch Krankheit oder Unfall bleibt der Vergütungsanspruch für die Dauer von drei (3) Monaten bestehen. Die Bezüge vermindern sich allerdings um diejenigen Beträge, die der Geschäftsführende Direktor für diesen Zeitraum von Dritten erhält, insbesondere aus einer Krankenversicherung oder Krankentagegeldversicherung. Der Geschäftsführende Direktor ist verpflichtet, der Gesellschaft unverzüglich und vollständig von derartigen Zahlungen Kenntnis zu geben.

- 5.2 Im Falle des Todes des Geschäftsführenden Direktors während der Dauer dieses Dienstvertrages ist die Vergütung gemäß Ziff. 4.2 für den Sterbemonat und die sechs (6) folgenden Kalendermonate, längstens aber bis zur Beendigung dieses Dienstvertrags, an den Ehegatten des Geschäftsführenden Direktors, ersatzweise an die unterhaltsberechtigten Kinder des Geschäftsführenden Direktors (letztere als Gesamtgläubiger), fortzuzahlen.

6. Urlaub

- 6.1 Dem Geschäftsführenden Direktor steht ein Jahresurlaub von 26 Arbeitstagen zu, wobei Samstage nicht als Arbeitstage zählen. Die Urlaubszeiten sind im Einvernehmen mit den übrigen geschäftsführenden Direktoren und dem Verwaltungsratsvorsitzenden festzulegen. Beginnt oder endet dieser Dienst-

the expenses actually incurred by the Managing Director.

- 4.7 There shall be no entitlement to remuneration for overtime, work on Sundays and statutory holidays or other additional work.

5. Illness, Death

- 5.1 In case of involuntary incapability to work due to illness or accident, the Managing Director's entitlement to remuneration shall continue for three (3) months. However, any amounts received by the Managing Director from third parties, in particular from his health insurance, shall be deducted from remuneration. The Managing Director is obliged to immediately inform the Company of such payments.

- 5.2 In the event of the Managing Director's death during the term of this service agreement, the remuneration must continue to be paid pursuant to Sec. 4.2 of this service agreement for the month of death and the six (6) subsequent months to the Managing Director's spouse, alternatively to the Managing Director's dependent children (the latter as the owner of joint rights), for the longest, however, until the expiration of this service agreement

6. Vacation

- 6.1 The Managing Director shall be entitled to 26 working days of annual vacation. Saturdays are not considered as working days. The vacation shall be determined in consultation with the other managing directors of the Company and the chairman of the Administrative Board. If this service agreement commences or ends during a calendar year, the Managing

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vertrag während des Kalenderjahres unterjährig, so besteht der Urlaubsanspruch in anteiliger Höhe.

6.2 Kann der Geschäftsführende Direktor aus geschäftlichen Gründen den Urlaub im laufenden Kalenderjahr nicht oder nicht vollständig nehmen, so ist der Urlaub bis zum 31. März des Folgejahres zu nehmen, ansonsten verfällt er ersatzlos. Ein Anspruch auf Abgeltung des Urlaubsanspruchs besteht nicht.

6.3 Offenstehende Urlaubsansprüche, die der Geschäftsführende Direktor wegen der Beendigung des Dienstverhältnisses ganz oder teilweise nicht in Anspruch nehmen konnte, werden mit der letzten Gehaltsabrechnung abgegolten. Die Abgeltung erfolgt auf Basis der jährlichen Festvergütung gemäß Ziff. 4.2.

7. Arbeitsverhinderung

Der Geschäftsführende Direktor ist verpflichtet, jede Arbeitsverhinderung und deren voraussichtliche Dauer unverzüglich anzuzeigen. Auf Verlangen sind die Gründe der Arbeitsverhinderung mitzuteilen. Die Mitteilung hat an einen anderen geschäftsführenden Direktor, wenn ein solcher nicht vorhanden ist, an den Verwaltungsratsvorsitzenden zu erfolgen. Im Falle der Erkrankung ist der Geschäftsführende Direktor darüber hinaus verpflichtet, vor Ablauf des dritten Kalendertages seit Eintritt der Arbeitsunfähigkeit eine ärztliche Bescheinigung über die Arbeitsunfähigkeit sowie deren voraussichtliche Dauer vorzulegen.

8. D&O Versicherung

Die Gesellschaft wird für den Geschäftsführenden Direktor eine Vermögensschadenhaftpflichtversicherung (D&O Versicherung) abschließen. Die

Director will have a *pro rata* vacation entitlement.

6.2 If the Managing Director is unable to take his full annual vacation in a running calendar year for operational reasons, the entitlement to the remaining days of vacation leave shall be forfeited, unless taken by the Managing Director prior to 31 March of the following year. The Managing Director shall not be entitled to compensation for his vacation entitlement.

6.3 As far as remaining vacation entitlements cannot be taken completely or partly by the Managing Director due to the termination of this service agreement, compensation will be paid through the last payroll. The calculation of the compensation will be based on the annual fixed salary according to Sec. 4.2.

7. Work Impediment

The Managing Director shall be obligated to inform the Company of any impediment to work and its expected duration without undue delay. The reasons for the work impediment shall be disclosed upon request. The notice shall be given to a fellow managing director or, as the case may be, to the chairman of the administrative board. In the event of illness, the Managing Director shall also be obligated to present a doctor's certificate relating to the incapacity for work and its expected duration before the expiry of the third calendar day since the occurrence of the incapacity for work.

8. D&O insurance

The Company will take out a D&O insurance for the benefit of the Managing Director. The Company is entitled to amend the policy at its equitable discretion without the Managing Director's

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Gesellschaft ist berechtigt, die Versicherung ohne Zustimmung des Geschäftsführenden Direktors nach billigem Ermessen zu ändern, wenn die Deckungssumme den Risiken des Geschäftsbetriebs der Gesellschaft nicht mehr angemessen ist. Für diese Versicherung wird ein Selbstbehalt in Höhe von 10% des Schadens begrenzt je Kalenderjahr auf das Eineinhalbfache des festen Jahresbruttogehaltes gemäß Ziff. 4.2 vereinbart (§ 40 Abs. 8 SEAG, § 93 Abs. 2 Satz 3 AktG).

9. Auslagen

Dem Geschäftsführenden Direktor werden die von ihm bei dienstlichen Reisen und für Repräsentationszwecke im Interesse der Gesellschaft gemachten tatsächlichen Aufwendungen im Rahmen der vom Finanzamt anerkannten steuerlichen Höchstsätze ersetzt, soweit diese erforderlich und angemessen waren und der jeweils anwendbaren compliance policy der Gesellschaft entsprechen. Die Abrechnung erfolgt monatlich oder nach Anfall aufgrund solcher Belege, wie sie von den Finanzämtern als hinreichend für die Abzugsfähigkeit von Auslagen anerkannt werden.

10. Vertragsdauer, Beendigung

- 10.1 Der Dienstvertrag tritt am 1. Dezember 2017 in Kraft und wird für die Zeit bis zum Ablauf des 30. November 2021 geschlossen. Über eine Vertragsverlängerung sollen die Parteien im Zeitraum von zwölf bis sechs Monaten vor Ablauf der Vertragsdauer verhandeln und entscheiden.
- 10.2 Der Anstellungsvertrag ist jederzeit, auch vor Ablauf der in Ziff. 10.1 geregelten Vertragslaufzeit, mit einer Kündigungsfrist von sechs (6) Monaten zum Monatsende ordentlich kündbar.

consent if the coverage of the Company's business risks is no longer sufficient. The Parties agree on a deductible of 10% of the damage, limited to one and a half times the amount of the annual gross salary pursuant to Sec. 4.2 (Sec. 40(8) German SE Implementation Act (*SEAG*), Sec. 93(2) sentence 3 German Stock Corporation Act (*Aktiengesetz*)).

9. Expenses

The Managing Director shall be reimbursed within the maximum tax rates recognized by the tax authorities for any expenses which were actually incurred on business trips or due to representation purposes in the Company's interest, as long as they were necessary and reasonable and in accordance with any compliance policy of the company as applicable from time to time. The expenses shall be balanced monthly or dependent on the accrual by means of such receipts acknowledged by the revenue offices as sufficient for the deduction of costs.

10. Term of Agreement, Termination

- 10.1 This service agreement shall take effect as of December 1, 2017 and is concluded for the period until the end of November 30, 2021. The parties shall negotiate and decide upon the extension of the service agreement within a period of twelve to six months prior to the expiration of the term of agreement.
- 10.2 Either Party has the right to terminate this service agreement at any time, also prior to the term pursuant to Sec. 10.1, by giving six (6) months prior notice to the end of a calendar month.

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- 10.3 Der Widerruf der Bestellung zum geschäftsführenden Direktor gilt als Kündigung des Anstellungsvertrages zum nächstzulässigen Zeitpunkt. Beruht der Widerruf auf einem Grund, der nicht zugleich ein wichtiger Grund für die fristlose Kündigung des Dienstvertrags nach § 626 BGB ist (in diesem Fall endet dieser Anstellungsvertrag mit sofortiger Wirkung), so endet der Dienstvertrag erst mit Ablauf der in Ziff. 10.2 genannten Frist. Gleiches gilt bei Amtsniederlegung durch den Geschäftsführenden Direktor.
- 10.4 Der Dienstvertrag ist jederzeit aus wichtigem Grund fristlos kündbar.
- 10.5 Jede Kündigung bedarf zu ihrer Wirksamkeit der Schriftform.
- 10.6 Dieser Dienstvertrag endet automatisch, ohne dass es einer Kündigung bedarf, am Ende des Monats, in dem der Geschäftsführende Direktor die Regelaltersgrenze der gesetzlichen Rentenversicherung erreicht.
- 10.7 Zum Ablauf der Vertragsdauer wird der Geschäftsführende Direktor auf Verlangen sein Amt als geschäftsführender Direktor der Gesellschaft niederlegen.
- 10.3 The revocation of the appointment as managing director shall be deemed notice of termination effective as of the earliest possible date. If this revocation is for a reason which does not constitute good cause for terminating this service agreement without notice according to Sec. 626 of the German Civil Code (*Bürgerliches Gesetzbuch – BGB*) (in this case this service agreement will end with immediate effect), this service agreement will not end until expiry of the notice period set forth in Sec. 10.2 above. The same shall apply if the Managing Director resigns from his office.
- 10.4 The service agreement may be terminated for good cause without notice at any time.
- 10.5 Each notice of termination must be in writing.
- 10.6 This service agreement will end, without any formal notice of termination, at the end of the month in which the Managing Director has reached the regular retirement age in the statutory pension scheme.
- 10.7 As of the expiry of the term of this agreement, the Managing Director will withdraw from the office as managing director of the Company upon request.
- 11. Abfindung; Change of Control**
- 11.1 Bei einer vorzeitigen Beendigung dieses Dienstvertrags, die nicht auf (i)(a) einer berechtigten Kündigung aus wichtigem Grund durch die Gesellschaft oder (b) der Abberufung des Geschäftsführenden Direktors von der Position als geschäftsführender Direktor mit wichtigem Grund, (ii)(a) einer ordentlichen Kündigung des Geschäftsführenden Direktors gem. Ziff. 10.2, (b) auf einer außerordentlichen Kündigung des
- 11. Severance Payment; Change of Control**
- 11.1 If this service agreement is prematurely terminated, other than by way of (i)(a) a termination by the Company for cause or (b) the Administrative Board revoking the appointment of the Managing Director to the office as managing director with cause; or (ii)(a) a termination by the Managing Director without cause in accordance with Sec. 10.2, (b) a termination by the Managing Director for cause of a Change of Control pursuant to

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Geschäftsführenden Direktors gemäß Ziff. 11.4 im Falle eines Change of Control oder (c) auf einer Amtsniederlegung des Geschäftsführenden Direktors ohne wichtigen Grund, oder (iii) auf dem Tod des Geschäftsführenden Direktors beruht, erhält der Geschäftsführende Direktor eine einmalige Barabfindung in Höhe der Vergütungsansprüche für die verbleibende Vertragslaufzeit gemäß Ziff. 10.1 (Festvergütung und variable Tantieme auf Basis einer 100 %-Zielerreichung), insgesamt jedoch höchstens zwei (2) Brutto-Jahresvergütungen gemäß Ziff. 4.2 und 4.3, die nach der Brutto-Jahresvergütung des abgelaufenen Geschäftsjahres zu bemessen sind. Die Abfindung ist mit der letzten Vergütungsabrechnung zur Zahlung fällig.

- 11.2 Im Falle eines Change of Control im Sinne von Ziff. 11.3 stehen dem Geschäftsführenden Direktor die unter Ziff. 11.4 näher beschriebenen Rechte zu.
- 11.3 Ein „Change of Control“ ist (i) der Verkauf, Austausch, die Einbringung, die Übertragung oder anderweitige Verfügung über mehr als 50% der Aktien der Gesellschaft, gleich ob in einer einheitlichen Transaktion oder in einer Abfolge mit einander verbundener oder in engem zeitlichem Zusammenhang miteinander stehender Transaktionen; (ii) der Verkauf, die Übertragung (einschließlich der Übertragung wirtschaftlichen Eigentums, z.B. durch Gewährung einer exklusiven Lizenz) oder jede sonstige Verfügung über sämtliche oder im Wesentlichen sämtliche Vermögensgegenstände der Gesellschaft; oder (iii) jegliche Form von Konsolidierung, Verschmelzung, Geschäftszusammenschlusses oder sonstigen umwandlungsrechtlichen Maßnahmen (mit Ausnahme des bloßen Formwechsels, der keine Veränderungen der Aktionärsstruktur der Gesellschaft mit sich bringt),

Sec. 11.4, or (c) the Managing Director stepping down from his office without cause, or (iii) the death of the Managing Director, the Managing Director shall be entitled to a cash lump-sum severance payment equal to the amount of his remuneration entitlement for the remainder of the term of this service agreement pursuant to Sec. 10.1 (fixed base salary plus variable annual bonus on the basis of a 100%-performance), however, the severance payment shall in no event exceed the amount of two times (2x) the Managing Director's gross annual salary pursuant to Sec. 4.2 and 4.3, which shall be determined on the basis of the preceding business year. The severance payment shall be due and payable together with the last salary payment.

- 11.2 In case of a Change of Control as defined in Sec. 11.3, the Managing Director shall have the rights set forth in Sec. 11.4.
- 11.3 A “Change of Control” shall be (i) a sale, exchange, contribution, transfer or other disposition of more than 50 % of the shares issued by the Company, whether in one transaction or in a series of connected transactions or in a series of transactions with a close temporal relation; (ii) the sale, transfer (including the transfer of beneficial or economic ownership, *e.g.*, through an exclusive licensing) or other disposition of all or substantially all of the Company's assets; or (iii) any form of consolidation, merger, or business combination, or any other form of transformation (except for a mere transformation of legal form which does not entail changes in the shareholder structure of the Company), irrespective of the applicable law regime, provided that upon consummation of such measure the shareholders holding shares in the Company prior to such measure, together, possess 50 % or less

unabhängig davon, nach welchem nationalen Recht eine solche Maßnahme umgesetzt wird, sofern im Anschluss an eine solche Maßnahme die Aktionäre, die vor der Maßnahme Aktien der Gesellschaft gehalten haben, weniger als 50% der Aktien, Eigentumsrechte, Stimmrechte oder sonstigen wirtschaftlichen Rechte an der Gesellschaft halten. Soweit Aktien der Gesellschaft durch American Depositary Shares („ADS“) repräsentiert werden, ist für diese Bestimmung anstatt auf eine Transaktion in Aktien auf eine Transaktion in ADSs abzustellen.

- 11.4 Im Falle eines Change of Control ist der Geschäftsführende Direktor berechtigt, mit einer Ankuendigungsfrist von zwei (2) Monaten zum Monatsende sein Amt als geschäftsführender Direktor der Gesellschaft niederzulegen und diesen Dienstvertrag außerordentlich mit einer Auslaufrist von zwei (2) Monaten zum Monatsende zu kündigen. Macht der Geschäftsführende Direktor von diesem Sonderkündigungsrecht Gebrauch, so endet seine Bestellung zum Geschäftsführenden Direktor und dieser Dienstvertrag mit Ablauf der vorgenannten Frist.

Der Geschäftsführende Direktor erhält in diesem Fall eine Abfindung in Höhe der Vergütungsansprüche für die verbleibende Vertragslaufzeit Ziff. 10.1 (Festvergütung und variable Tantieme auf Basis einer 100 %-Zielerreichung), insgesamt jedoch höchstens zwei (2) Brutto-Jahresvergütungen gemäß Ziff. 4.2 und 4.3, die nach der Brutto-Jahresvergütung des abgelaufenen Geschäftsjahres zu bemessen sind. Die Abfindung ist mit der letzten Vergütungsabrechnung zur Zahlung fällig.

Der Abfindungsanspruch nach dieser Ziff. 11.4 entsteht nicht, wenn dieser Dienstvertrag unabhängig von dem

of the shares, equity rights or voting power or other economic interests of the relevant surviving entity. To the extent the shares of the Company are represented by American Depositary Shares („ADS“), instead of transactions in shares, transactions in ADSs shall be decisive when applying this provision.

- 11.4 In case of a Change of Control the Managing Director shall in such case be entitled with a two (2) months' prior notice to the end of a month to step down from office as managing director of the Company and extraordinarily terminate this service agreement with a phasing-out period of two (2) months to the end of a month. If the Managing Director terminates this service agreement pursuant to the foregoing sentence, the Managing Director's appointment as managing director of the Company shall be deemed revoked and this service agreement shall terminate with effect as of the expiry of the aforementioned phasing-out period.

The Managing Director shall be entitled to a severance payment equal to the amount of his remuneration entitlement for the remainder of the term of this service agreement Sec. 10.1 (fixed base salary plus variable annual bonus on the basis of a 100%-performance), however, the severance payment shall in no event exceed the amount of two times (2x) the Managing Director's gross annual salary pursuant to Sec. 4.2 and 4.3, which shall be determined on the basis of the preceding business year. The severance payment shall be due and payable together with the last salary payment.

The Managing Director shall not be entitled to any severance payment pursuant to this Sec. 11.4 if this service agreement

Change of Control innerhalb der darauffolgenden sechs (6) Monate durch Fristablauf geendet hätte.

12. Freistellung

Im Falle der Kündigung behält sich die Gesellschaft das Recht vor, den Geschäftsführenden Direktor bis zum Ablauf der Befristung bzw. Kündigungsfrist von der Verpflichtung zur Dienstleistung unwiderruflich freizustellen; sind Urlaubsansprüche offen, sind diese auf den Freistellungszeitraum anzurechnen. In der Zeit der Freistellung gilt § 615 BGB entsprechend mit der Folge, dass sich der Geschäftsführende Direktor einen in der Zeit der Freistellung durch Verwendung seiner Arbeitskraft erzielten Verdienst auf den Vergütungsanspruch gegenüber der Gesellschaft anrechnen lassen muss. Über derartige Einnahmen hat der Geschäftsführende Direktor die Gesellschaft unverzüglich zu informieren.

13. Wettbewerbsverbot / Abwerbverbot

- 13.1 Dem Geschäftsführenden Direktor ist es untersagt, für die Dauer dieses Dienstvertrags und für die Dauer von zwölf (12) Monaten nach Beendigung dieses Dienstvertrags in selbständiger, unselbständiger oder sonstiger Weise Geschäfte im Geschäftsbereich der Gesellschaft zu tätigen oder für ein Unternehmen tätig zu werden oder es auf andere Weise zu unterstützen, welches Geschäfte im Geschäftsbereich der Gesellschaft betreibt (hiernach „Wettbewerbsunternehmen“) oder mit einem Wettbewerbsunternehmen i.S.d. §§ 15ff. AktG verbunden ist. In gleicher Weise ist es dem Geschäftsführenden Direktor für die Dauer dieses Dienstvertrags und für die Dauer von zwölf (12) Monaten nach Beendigung dieses Dienstvertrags untersagt, ein solches Unternehmen zu errichten, zu erwerben

would have expired irrespective of the Change of Control within six (6) months following the Change of Control.

12. Release from Duties

In case of termination, the Company reserves the right to irrevocably discharge the Managing Director from his duties until expiry of the notice period; should there be any outstanding holiday entitlements, these shall be set off against the period of discharge. During the period of being released from duties Sec. 615 of the German Civil Code (*Bürgerliches Gesetzbuch*) shall apply accordingly, with the consequence that any earnings of the Managing Director generated by using his working capacity during the period of being released from duties shall be offset against his claim for remuneration vis-à-vis the Company. The Managing Director shall inform the Company of such earnings without undue delay.

13. Non-compete / non-solicitation covenant

- 13.1 For the duration of this service agreement and for a period of twelve (12) months after expiration/termination of this service agreement, the Managing Director undertakes not to engage in any activity whether self-employed, as employee or in any other capacity in the business field of the Company or to work for or otherwise support an enterprise that competes with the Company (“Competitor”) or is affiliated with a Competitor according to Sec.15 *et seq.* of the German Stock Corporation Act (*Aktiengesetz*). Likewise, for the duration of this service agreement and for a period of twelve (12) months after expiration/termination of this service agreement, the Managing Director may not establish or acquire a Competitor, or directly or indirectly hold an interest in any Competitor, other than an interest of less than 5% in the registered capital



oder sich hieran unmittelbar oder mittelbar zu beteiligen. Dies gilt nicht bei Beteiligungen in Höhe von weniger als 5% am Aktienkapital börsennotierter Unternehmen (insgesamt das „Wettbewerbsverbot“).

- 13.2 Das nachvertragliche Wettbewerbsverbot ist räumlich auf solche Länder beschränkt, in denen die Gruppe bei Ausscheiden des Geschäftsführenden Direktors geschäftlich tätig ist.
- 13.3 Dem Geschäftsführenden Direktor ist es untersagt, während der Dauer dieses Dienstvertrags und für die Dauer von zwölf (12) Monaten nach Beendigung des Dienstvertrags, Arbeitnehmer der Gesellschaft oder mit ihr verbundener Unternehmen für eigene oder fremde Zwecke abzuwerben, dritte Personen zur Abwerbung zu veranlassen oder diese bei Abwerbungsaktivitäten zu unterstützen. In demselben Zeitraum ist es dem Geschäftsführenden Direktor ebenfalls untersagt, direkt oder indirekt vertragliche Beziehungen zu Kunden der Gesellschaft, der von ihr beherrschten Unternehmen sowie der sonst mit ihr verbundenen Unternehmen, für die der Geschäftsführende Direktor tätig geworden ist, einzugehen oder dies zu versuchen. Dieses Verbot ist auf Kunden der Gesellschaft beschränkt, die in den letzten drei Jahren in Geschäftsbeziehungen mit der Gesellschaft bzw. der mit ihr verbundenen Unternehmen standen (insgesamt das „Abwerbverbot“).
- 13.4 Die Gesellschaft zahlt dem Geschäftsführenden Direktor für die Dauer des nachvertraglichen Wettbewerbs- und Abwerbverbots eine Entschädigung in Höhe von 50 % der zuletzt bezogenen Festvergütung gemäß Ziff. 4.2. Auf die Entschädigung werden Einkünfte angerechnet, die der Geschäftsführende Direktor während der Dauer des nachvertraglichen Wettbewerbs- und Abwerbverbots durch anderweitige

stock of listed stock corporations (altogether the “Non-Compete Obligation“).

- 13.2 The post-contractual Non-Compete Obligation shall only apply for such countries in which the Group is active on the date of the expiration/termination of this service agreement becoming effective.
- 13.3 For the duration of this service agreement and for a period of twelve (12) months after the expiry/termination of this service agreement, the Managing Director undertakes not to solicit any other person employed by the Company or its affiliated companies for his own purpose or the purpose of any third party or motivate or support a third party to solicit such an employee. For the same period of time the Managing Director will not, neither directly nor indirectly, enter into or try to enter into an agreement with customers of the Company or its affiliated companies, for which the Managing Director has been acting for. This prohibition shall only be applicable for customers which have had business relations with the Company or its affiliated companies in the respective previous three years (altogether the “Non-Solicitation Obligation“).
- 13.4 For the duration of the post-contractual Non-Compete Obligation and the post-contractual Non-Solicitation Obligation, the Company shall pay to the Managing Director a compensation of 50% of the fixed gross monthly salary pursuant to Sec. 4.2. Any other remuneration received by the Managing Director during the term of the post-contractual Non-Compete Ob-

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Verwendung seiner Arbeitskraft bezieht.

13.5 Die Gesellschaft kann durch schriftliche Erklärung jederzeit, sowohl vor Beendigung des Dienstvertrages als auch danach, auf das nachvertragliche Wettbewerbsverbot und Abwerbeverbot verzichten mit der Folge, dass sie nach Ablauf von sechs (6) Monaten von der Zahlung der Entschädigung befreit ist. Endet das Anstellungsverhältnis, weil der Geschäftsführende Direktor die Regelaltersgrenze in der gesetzlichen Rentenversicherung erreicht hat oder dauerhaft dienstunfähig ist, tritt das nachvertragliche Wettbewerbs- und Abwerbeverbot nicht in Kraft. Im Fall einer Kündigung aus wichtigem Grund steht dem kündigungsberechtigten Vertragsteil das Recht zu, innerhalb eines (1) Monats nach Ausspruch der Kündigung aus wichtigem Grund durch schriftliche Erklärung gegenüber dem anderen Teil das nachvertragliche Wettbewerbs- und Abwerbeverbot mit sofortiger Wirkung entschädigungslos aufzuheben.

13.6 Für jede Handlung, durch die der Geschäftsführende Direktor das (nachvertragliche) Wettbewerbs- und/oder Abwerbeverbot gemäß vorstehenden Ziff. 13.1 bis 13.2 schuldhaft verletzt, hat er eine Vertragsstrafe in Höhe eines Bruttomonatsgehalts nach Ziff. 4.2 zu zahlen. Besteht die Verletzungshandlung in der kapitalmäßigen Beteiligung an einem Wettbewerbsunternehmen oder der Eingehung eines Dauerschuldverhältnisses (z.B. Arbeits-, Dienst-, Handelsvertreter oder Geschäftsführerverhältnis), wird die Vertragsstrafe für jeden angefangenen Monat, in dem die kapitalmäßige Beteiligung oder das Dauerschuldverhältnis besteht, neu ver-

ligation and the post-contractual Non-Solicitation Obligation shall be credited against the compensation payment.

13.5 The Company may at any time by written declaration, prior to or after the termination of this service agreement, waive the post-contractual Non-Compete Obligation and the post-contractual Non-Solicitation Obligation, whereupon the Company, as of the expiry of a notice period of six (6) months, is relieved from its obligation to the compensation payments. In the event this service agreement expires because the Managing Director reaches the standard retirement age under the statutory retirement pension scheme or is permanently unfit for service (*dauerhaft dienstunfähig*), the post-contractual Non-Compete Obligation and the post-contractual Non-Solicitation Obligation shall not apply. In the event of a termination for cause (*Kündigung aus wichtigem Grund*) the relevant terminating Party may, within one (1) month after the announcement of the termination for cause, cancel the post-contractual Non-Compete Obligation and the post-contractual Non-Solicitation Obligation by written notice *vis-à-vis* the relevant other party with immediate effect and without any compensation.

13.6 For each culpable breach of the (post-contractual) Non-Compete Obligation and/or (post-contractual) Non-Solicitation Covenant pursuant to preceding Sec. 13.1 through Sec. 13.2, the Managing Director shall pay a contractual penalty equal to the gross monthly salary pursuant to Sec. 4.2. Should the breach consist of participating in the capital of a Competitor or entering into a contract for the performance of a continuing obligation (e.g. an employment, service, commercial agency or consultancy contract), the contractual penalty shall be imposed anew for each full or partial month in which the capital participation or the contract for the performance of a continuing obligation exists (ongoing

wirkt (Dauerverletzung). Mehrere Verletzungshandlungen lösen jeweils gesonderte Vertragsstrafen aus, gegebenenfalls auch mehrfach innerhalb eines Monats. Erfolgen dagegen einzelne Verletzungshandlungen im Rahmen einer Dauerverletzung, sind sie von der für die Dauerverletzung verwirkten Vertragsstrafe mit umfasst. Bei Verwirkung mehrerer Vertragsstrafen ist der Gesamtbetrag der zu zahlenden Vertragsstrafen auf das Sechsfache (6) eines Bruttomonatsgehalts begrenzt. Die Geltendmachung von Schäden, die über die verwirkte Vertragsstrafe hinausgehen, sowie die Geltendmachung sonstiger Rechte, z.B. Unterlassungsansprüche, bleiben vorbehalten.

- 13.7 Soweit in diesem Dienstvertrag nichts anderes geregelt ist, gelten die §§ 74 ff. HGB entsprechend. Dies gilt insbesondere für die geltungserhaltende Reduktion nach § 74a HGB.

14. Rechte an Arbeitsergebnissen

- 14.1 Der Geschäftsführende Direktor verpflichtet sich dazu, sämtliche Materialien, Daten, Informationen, Schöpfungen, Erfindungen, Erkenntnisse, Werke und sonstige Arbeitsergebnisse, die er während der Dauer dieses Anstellungsverhältnisses erstellt, sei es während der Tätigkeit oder – sofern ein Bezug zur Tätigkeit aufgrund dieses Dienstvertrags besteht – außerhalb der Tätigkeit (die „Arbeitsergebnisse“), zu dokumentieren und umgehend gegenüber der Gesellschaft offenzulegen und diese Arbeitsergebnisse gegenüber Dritten gemäß Ziff. 2 dieses Dienstvertrags geheim zu halten.
- 14.2 Der Geschäftsführende Direktor verpflichtet sich darüber hinaus, der Gesellschaft alle Originale und Kopien jeglicher Arbeitsergebnisse, unabhän-

breach). Multiple breaches shall each trigger a separate contractual penalty, possibly also more than once within one month. However, if individual breaches occur within the scope of an ongoing breach, they shall be covered by the contractual penalty owed for the ongoing breach. If several contractual penalties are incurred, the total amount payable is limited to an aggregate amount of six (6) gross monthly salaries. The Company reserves the right to assert damages over and above the contractual penalty imposed, as well as other rights, e.g. the right to claim injunctive relief.

- 13.7 If not stipulated otherwise in this service agreement, Sec. 74 et seq. of the German Commercial Code (*Handelsgesetzbuch*), shall apply accordingly. In particular, this applies to the provision on blue-pencilling (*geltungserhaltende Reduktion*) pursuant to Sec. 74a German Commercial Code.

14. Rights to Work Results

- 14.1 The Managing Director undertakes to document and disclose immediately vis-à-vis the Company all materials, data, information, creations, inventions, findings, works and other work results, in the creation of which he is involved in during his service relationship, be it during working hours or – provided that a connection to his activity pursuant to this agreement exists – outside of working hours (the “Work Results”), and to keep these Work Results confidential vis-à-vis third parties in accordance with Sec. 2 of this service agreement.
- 14.2 Upon request by the Company, the Managing Director, moreover, undertakes to forward all and any original Work Results

gig von ihrer Form oder ihrem Speichermedium, jederzeit auf Verlangen zu übergeben.

14.3 Der Geschäftsführende Direktor erkennt an, dass sämtliche Geistigen Eigentumsrechte (wie nachfolgend definiert) und alle sonstigen Rechte, die an den Arbeitsergebnissen bestehen, aus ihrer Nutzung entstehen und/oder in ihnen verkörpert sind (insgesamt die „Rechte an den Arbeitsergebnissen“), im Zeitpunkt ihrer Entstehung vollständig und ohne Einschränkung auf die Gesellschaft übergehen. Der Geschäftsführende Direktor überträgt bereits hiermit sämtliche Rechte an den Arbeitsergebnissen auf die Gesellschaft. Die Gesellschaft nimmt diese Übertragung hiermit an.

14.4 „Geistige Eigentumsrechte“ meint alle registrierten oder unregistrierten, angemeldeten oder (noch) nicht angemeldeten, schutzrechtsfähigen oder nicht schutzrechtsfähigen geistigen Eigentumsrechte und gewerblichen Schutzrechte, insbesondere (ohne hierauf beschränkt zu sein) (A) alle Rechte an (i) Computerprogrammen bzw. Computersoftware, (ii) jeder Form von Quellcode, Objektcode und jeder anderen Form von Code einschließlich von dem Code zugrunde liegenden Algorithmen, (iii) Datenbanken, APIs, Applikationen, Hardware oder Halbleitertopographien, (iv) Patenten, Gebrauchs- oder Geschmacksmustern, Designrechten und Urheberrechten (soweit nicht schon von vorstehenden Ziffern (i) bis (iii) erfasst), (v) Geschäftsgeheimnissen und Know-How (im Sinne von nicht öffentlich zugänglichem Wissen, das z.B. für die Nutzung oder Weiterentwicklung von Soft- oder Hardwarekomponenten nützlich oder erforderlich ist), sowie (B) alle anderen Rechte an Informationen, Zeichnungen, Plänen, technischen Notizen, Pro-

and copies thereof to the Company, regardless of form or storage media at any time.

14.3 The Managing Director acknowledges that all Intellectual Property Rights (as defined hereinafter) and all other rights which exist with respect to Work Results or result from their usage and/or are embodied within them (collectively the “Rights to the Work Results”) are passed on to the Company, in their entirety and without limitation, at the time of their development. The Managing Director hereby transfers all Rights to the Work Results to the Company. The Company accepts such transfer.

14.4 “Intellectual Property Rights” means all registered or unregistered, filed or not (yet) filed, protectable or non-protectable intellectual property rights and commercial proprietary rights, in particular (without limitation) (A) all rights to (i) computer programs or computer software, (ii) any form of source code, object code, and any other form of code including algorithms underlying code, (iii) databases, APIs, applications, hardware, or semiconductor topographies, (iv) patents, utility patents, design patents, design rights and copyrights (to the extent not already included in digits (i) through (iii) above), (v) business secrets and know-how (in the sense of not publicly-accessible knowledge, which is useful or required, e.g., for the use or further development of soft- or hardware components), as well as (B) all other rights to information, drawings, plans, technical notes, prototypes, methods, algorithms, any technology-related documentation whatsoever, ideas, concepts, irrespective of whether these fall into the scope of application of the German Copyright Act (*Urhebergesetz*), Patent Act (*Patentgesetz*), Utility Patent

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totypen, Prozessen, Methoden, Algorithmen, jedweder technikbezogener Dokumentation, Ideen, Konzepten und sonstigen Arbeitsergebnissen, sei es, dass diese dem Anwendungsbereich des UrhG, PatentG, GebrMG, GeschmMG oder anderer (in- oder ausländische) Gesetze unterfallen.

- 14.5 Für den Fall, dass die unter der vorstehenden Ziff.14.3 vorgesehene Rechtsübertragung nicht wirksam nach zwingend anwendbarem Recht bewirkt werden kann, insbesondere im Hinblick auf das Urheberpersönlichkeitsrecht, räumt der Geschäftsführende Direktor der Gesellschaft hiermit ein umfassendes, ausschließliches, räumlich und zeitlich unbegrenztes und für alle, auch neuen Nutzungsarten uneingeschränkt geltendes Nutzungsrecht an den Rechten an den Arbeitsergebnissen ein. Zu den übertragenen Rechten gehören insbesondere, aber nicht ausschließlich, das räumlich, zeitlich und inhaltlich unbeschränkte und frei übertragbare Veröffentlichungsrecht (§ 12 UrhG), Vervielfältigungsrecht (§ 16 UrhG), Verbreitungsrecht (§ 17 UrhG), Ausstellungsrecht (§ 18 UrhG), das Vortrags-, Aufführungs- und Vorführungsrecht (§ 19 UrhG), das Recht der öffentlichen Zugänglichmachung (§ 19a UrhG), das Senderecht (§ 20 UrhG), das Recht der Wiedergabe durch Bild- und Tonträger (§ 21 UrhG), die Rechte nach § 22 UrhG sowie das Recht zur Bearbeitung und Umgestaltung der Arbeitsergebnisse (§ 23 UrhG).
- 14.6 Der Geschäftsführende Direktor verpflichtet sich, auf Verlangen der Gesellschaft umgehend alle Dokumente zur Verfügung zu stellen und jede Unterstützung zu leisten, die erforderlich ist, damit die Gesellschaft die Rechte an den Arbeitsergebnissen erlangt.

Act (*Gebrauchsmustergesetz*), Design Patent Act (*Geschmacksmustergesetz*) or any other (domestic or foreign) laws.

- 14.5 In case that the intended transfer of rights pursuant to Sec. 14.3 is not effected due to applicable compulsory law, particularly with respect to the moral right (*Urheberpersönlichkeitsrecht*), the Managing Director hereby transfers to the Company irrevocably an exclusive usage and exploitation right with respect to the Rights to the Work Results that is unlimited from a temporal and territorial perspective and comprises all types of usage including new types of usage. This transfer includes, but is not limited to publicity rights (Sec. 12 German Copyright Act), reproduction rights (Sec. 16 German Copyright Act), distribution rights (Sec. 17 German Copyright Act), exhibition rights (Sec. 18 German Copyright Act), the right of recital, performance and presentation (Sec. 19 German Copyright Act), the right to make available to the public (Sec. 19a German Copyright Act), broadcasting rights (Sec. 20 German Copyright Act), the right to reproduce through image carrier and sound storage medium (Sec. 21 German Copyright Act), the rights pursuant to Sec. 22 German Copyright Act and the right of processing and rearrangement of Work Products (Sec. 23 German Copyright Act), which are unlimited from a temporal and territorial perspective and freely transferable.
- 14.6 Upon request by the Company, the Managing Director undertakes to immediately make available all documents and to render any assistance necessary to enable the Company to obtain the Rights to the Work Results.

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- 14.7 Die Parteien sind sich einig, dass eine zukünftige Beendigung dieses Dienstvertrags keine Auswirkungen auf die Weitergeltung der erfolgten Rechteübertragung bzw. -einräumung hat.
- 14.8 Die Übertragung der Rechte an den Arbeitsergebnissen und die weiteren unterstützenden Handlungen sind durch die Vergütung nach Ziff.4 abgegolten.
- 15. Aufhebung bestehender Verträge; Ausschlussklausel**
- 15.1 Die Parteien sind sich einig, dass der Geschäftsführerdienstvertrag Affinitas mit Wirkung zum Ablauf des 30. November 2017 mit der Maßgabe beendet werden soll, dass (i) der Geschäftsführende Direktor die im Geschäftsführerdienstvertrag Affinitas geregelte Tantieme noch für das volle Geschäftsjahr 2017 erhält und (ii) die Vereinbarung zwischen dem Geschäftsführenden Direktor und Affinitas zur Abwicklung seiner Rechte aus dem bestehenden Virtual Share Incentive Plan Employees (VESOP) bei Affinitas und bestimmter Call Optionen des Geschäftsführenden Direktors sowie die in dieser Vereinbarung geregelten Rechte und Pflichten von der Beendigung unberührt bleiben. Die Beendigung erfolgt durch Abschluss eines gesonderten Aufhebungsvertrags.
- 15.2 Ansprüche des Geschäftsführenden Direktors und der Gesellschaft aus dem Dienstverhältnis verfallen, wenn sie nicht innerhalb von drei Monaten nach ihrer Fälligkeit gegenüber der anderen Partei in Textform (§ 126b BGB; z.B. per Brief, Fax, E-Mail) geltend gemacht werden.
- 15.3 Lehnt die andere Partei den Anspruch ab oder erklärt sie sich nicht innerhalb von zwei Wochen nach der Geltendmachung des Anspruchs, verfällt dieser,
- 14.7 The Parties agree that a future termination of this agreement shall not affect the continuing validity of the transfer and grant of rights.
- 14.8 The transfer of the Rights to the Work Results and other supporting actions are entirely compensated by the remuneration pursuant to Sec. 4.
- 15. Termination of existing agreements; forfeiture of claims**
- 15.1 The parties agree that the Affinitas Managing Director Service Agreement shall be terminated with effect as of the end of November 30, 2017 provided that (i) the Managing Director shall receive the bonus payment as set out in the Affinitas Managing Director Service Agreement for the full financial year 2017 and (ii) the agreement between the Managing Director and Affinitas regarding the settlement of his rights under the current Virtual Share Incentive Plan Employees (VESOP) of Affinitas and certain call options of the Managing Director as well as the rights and obligations included in this agreement shall remain unaffected by the termination. The termination shall be effected by way of conclusion of a separate termination agreement.
- 15.2 All claims of the Managing Director and the Company arising from the service relationship must be asserted in text form (Sec. 126b of the German Civil Code, e.g. letter, fax, e-mail) within three months as of their due date; otherwise they shall be deemed forfeited.
- 15.3 If the other party rejects such claim or does not react within two weeks of such claim having been asserted, it shall be deemed forfeited if not pursued by the claiming party through court action

wenn er nicht innerhalb von drei Monaten nach Ablehnung oder Fristablauf gerichtlich geltend gemacht wird.

- 15.4 Die vorstehenden Bestimmungen unter Ziff. 15.2 und 15.3 gelten nicht bei einer Haftung wegen Vorsatzes und grober Fahrlässigkeit, bei einer Haftung wegen fahrlässiger Verletzung des Lebens, des Körpers oder der Gesundheit, für Ansprüche aus unerlaubter Handlung, für Ansprüche, auf die nur mit Zustimmung Dritter verzichtet werden kann, für Ansprüche auf ein gesetzliches Mindestentgelt sowie für andere unverzichtbare Ansprüche.

16. Schlussbestimmungen

- 16.1 Dieser Dienstvertrag unterliegt deutschem Sachrecht.
- 16.2 Der Gerichtsstand für alle Ansprüche aus und im Zusammenhang mit diesem Dienstvertrag ist, soweit gesetzlich zulässig, Berlin.
- 16.3 Nebenabreden zu diesem Dienstvertrag bestehen nicht. Sämtliche Änderungen oder Ergänzungen dieses Dienstvertrages bedürfen der Schriftform. Dieses Schriftformerfordernis gilt auch für die Aufhebung dieser Schriftformklausel. Unberührt bleiben Individualabreden im Sinne des § 305b BGB.
- 16.4 Falls einzelne Bestimmungen dieses Anstellungsvertrages unwirksam sein oder werden sollten oder dieser Dienstvertrag Lücken enthält, wird dadurch die Wirksamkeit der übrigen Bestimmungen nicht berührt. Anstelle der unwirksamen Bestimmung gilt diejenige wirksame Bestimmung als vereinbart, welche dem Sinn und Zweck der unwirksamen Bestimmung entspricht. Im Falle von Lücken gilt diejenige Bestimmung als vereinbart, die dem entspricht, was nach Sinn und Zweck dieses Anstellungsvertrages

within three months after the said rejection or expiry of the two-week period.

- 15.4 The foregoing provisions under Sec. 15.2 and 15.3 shall not apply to claims based on liability for intentional acts or gross negligence, in case of liability for negligent injury to life, body and/or health, to claims arising out of tort, to claims that can only be waived with third party consent, to claims to a statutory minimum wage as well as to other claims that may not be waived.

16. Final Provisions

- 16.1 This contract is governed exclusively by the substantive laws of Germany.
- 16.2 The place of jurisdiction for all disputes arising from or in connection with this service agreement is – to the extent permissible under applicable statutory law – Berlin (Germany).
- 16.3 No side agreements are in place between the Parties. Changes, side letters and amendments must be in writing. This also applies to a cancellation of the written-form requirement. The only exceptions are individual agreements stipulated in Sec. 305b of the German Civil Code (*Bürgerliches Gesetzbuch*).
- 16.4 If any provision of this service agreement or any part of such provision is or becomes invalid or unenforceable or is missing, the other provisions of this service agreement shall not be affected thereby. The invalid or unenforceable or missing provision shall be replaced by a valid and enforceable provision, the effect of which comes as close as possible to the intended economical effect of the invalid or unenforceable or missing provision. The Parties agree that Sec. 139

vernünftigerweise vereinbart worden wäre, hätten die Parteien die Angelegenheit von vornherein bedacht. Die Parteien sind sich darüber einig, dass § 139 BGB durch diese Ziff. 16.4 vollständig abbedungen wird und keine Anwendung findet.

German Civil Code is completely excluded by this Sec. 16.4 and, therefore, does not apply.

16.5 Im Falle eines Konflikts zwischen dem Inhalt der deutschen und der englischen Fassung dieses Anstellungsvertrages ist die deutsche Fassung maßgebend.

16.5 In case of a conflict between the German and the English version of this service agreement the German version shall prevail.

* * * * *

[Unterschriftenseite folgt // Signature Page follows]

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[*Unterschriftenseite // Signature Page*]

Für die Gesellschaft // For the Company:

Name: **David Khalil**

Position // Capacity: **Vorsitzender des Verwaltungsrats // Chairperson of the Company's administrative board**

Ort, Datum // City, Date: _____



(*Unterschrift // Signature*)

Der Geschäftsführende Direktor // The Managing Director:

Name: **Michael Schrezenmaier**

Ort, Datum // City, Date: _____



(*Unterschrift // Signature*)

[Bindende deutsche Fassung.
Binding German version.]

[Englische Übersetzung nur zu
Informationszwecken. English translation for infor-
mation purposes only.]

Änderungsvereinbarung

Amendment Agreement

zwischen

between

Spark Networks SE

mit Sitz in München (künftig: Berlin), vertre-
ten durch den Verwaltungsrat, dieser vertreten
durch den Verwaltungsratsvorsitzenden

registered in Munich (in the future: Berlin),
represented by the administrative board (*Ver-
waltungsrat*), the latter represented by the
chairman of the administrative board

(nachfolgend die „Gesellschaft“)

(hereinafter the “Company”)

und

and

Michael Schrezenmaier
Straße 132 Nr. 20, 13158 Berlin

(nachfolgend der
„Geschäftsführende Direktor“)

(hereinafter the
“Managing Director”)

(Gesellschaft und Geschäftsführender Direktor
nachfolgend zusammen die „Parteien“
und einzeln jeweils eine „Partei“).

(Company and Managing Director
collectively hereinafter
the “Parties”, and each a “Party”).

Präambel

Der Geschäftsführende Direktor ist durch
Beschluss des Verwaltungsrats der Gesell-

Preamble

The Managing Director has been appointed
as managing director of the Company by

schaft („Verwaltungsrat“) zum geschäftsführenden Direktor der Gesellschaft bestellt und als geschäftsführender Direktor in das Handelsregister eingetragen worden.

Die Parteien sind sich einig, den bestehenden, undatierten Geschäftsführerdienstvertrag, der zum 1. Dezember 2017 in Kraft getreten ist, (nachfolgend „**Dienstvertrag**“) wie nachfolgend vereinbart zu ändern. Diese Änderungsvereinbarung tritt zum 1. April 2018 in Kraft.

1. Vergütung

Ziffer 4.2. Dienstvertrag wird wie folgt geändert:

Der Geschäftsführende Direktor erhält für seine Tätigkeit ein Brutto-Jahresgehalt in Höhe von EUR 200.000,00, das in zwölf (12) gleichen monatlichen Raten jeweils am Monatsende unter Einbehalt der gesetzlichen Abzüge bezahlt wird.

2. Abfindung; Change of Control

Ziffer 11.3. Dienstvertrag wird durch folgenden Satz am Ende ergänzt:

Zur Vermeidung von Zweifeln wird klargestellt, dass ein „Change of Control“ in diesem Sinne stets auch dann vorliegt, wenn ein „Liquidity Event“ im Sinne des „Virtual Share Option Plan, Stand März 2018“ (im Folgenden: „**VSOP**“) vorliegt.

3. Ziffer 11.4 Dienstvertrag wird durch folgende Bestimmung ersetzt:

Im Falle eines Change of Control ist der Geschäftsführende Direktor berechtigt, nach Ablauf der Claw-Back-Period ge-

resolution of the Company's administrative board (“Administrative Board”) and has been registered as Managing Director in the German commercial register.

The Parties agree to amend the terms of the current, undated service agreement, which entered into force on December 1, 2017 (hereinafter: “**Service Agreement**”) as set forth, below. This Amendment Agreement shall become effective as of April 1st 2018.

1. Remuneration

Section 4.2. Service Agreement is amended as follows:

The Managing Director shall receive an annual gross salary of EUR 200,000.00, which shall be paid in twelve (12) pro-rated monthly payments after statutory deductions are withheld at the end of each month.

2. Severance Payment; Change of Control

Section 11.3 Service Agreement is supplemented by the following sentence (at the end of the paragraph) :

For the avoidance of doubt, a “Change of Control” pursuant to this clause is always given, in the event of a “Liquidity Event” pursuant to the “Virtual Share Option Plan”, as of March 2018 (hereinafter: “**VSOP**”).

3. Section 11.4 Service Agreement is replaced as follows:

In the event of a Change of Control and after expiration of the Claw-Back Period pursuant to Section 3.5 (b) of the

mäß Ziffer 3.5 (b) des VSOP mit einer Ankündigungsfrist von zwei (2) Monaten zum Monatsende sein Amt als Geschäftsführender Direktor der Gesellschaft niederzulegen und diesen Dienstvertrag außerordentlich mit einer Auslauffrist von zwei (2) Monaten zum Monatsende zu kündigen. Macht der Geschäftsführende Direktor von diesem Sonderkündigungsrecht Gebrauch, so endet seine Bestellung zum Geschäftsführenden Direktor und dieser Dienstvertrag mit Ablauf der vorgenannten Frist.

Der Geschäftsführende Direktor erhält in diesem Fall eine Abfindung in Höhe der Vergütungsansprüche für die verbleibende Vertragslaufzeit (d.h. der Festvergütung und der variablen Tantieme auf Basis einer 100%-Zielerreichung gemäß § 4 Dienstvertrag), insgesamt jedoch höchstens eine Brutto-Jahresvergütung gemäß Ziffer 0 und **Fehler! Verweisquelle konnte nicht gefunden werden.**, die nach der Brutto-Jahresvergütung des abgelaufenen Geschäftsjahres zu bemessen ist. Die Abfindung ist mit der letzten Vergütungsabrechnung zur Zahlung fällig.

Der Abfindungsanspruch gemäß dieser Ziffer 11.4 entsteht nicht, wenn dieser Dienstvertrag unabhängig von dem Change of Control innerhalb von sechs Monaten nach Ablauf der Claw-Back-Period gemäß Ziffer 3.5 (b) des VSOP durch Fristablauf geendet hätte.

VSOP, the Managing Director shall in such case be entitled with a two (2) months' prior notice to the end of a month to resign from his office as managing director of the Company and extraordinary terminate this Service Agreement with a phasing-out period of two (2) months to the end of a month. If the Managing Director exercises this right of an extraordinary termination, his office as a Managing Director and the Service Agreement shall expire upon expiration of the aforementioned notice period.

In such case the Managing Director shall be entitled to a severance payment equal to the amount of his remuneration entitlement for the remainder of the term of his service agreement (i.e., fixed base salary plus variable annual bonus on the basis of 100%-target achievement pursuant to Section 4 Service Agreement), however, the severance payment shall in no event exceed the amount of the gross annual salary of the Managing Director pursuant to Section 4.2 and 4.3, for which the performance shall be determined on the basis of the performance of the preceding completed business year. The severance payment shall be due and payable together with the last salary payment.

The manager shall not be entitled to any severance payment pursuant to this section 11.4 if this Service Agreement would have been expired irrespective of the Change of Control within six months after expiration of the Claw-Back Period pursuant to Section 3.5 (b) of the VSOP.

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4. Wettbewerbsverbot/Abwerbverbot

Ziffer 13.4 Dienstvertrag wird durch folgenden Satz nach dem ersten Satz ergänzt:

Ausschließlich im Fall einer Kündigung des Dienstvertrages und der Niederlegung des Amtes gemäß Ziffer 11.4 zahlt die Gesellschaft dem Geschäftsführenden Direktor eine Entschädigung in Höhe von 100 % der zuletzt bezogenen Festvergütung gemäß Ziffer 4.2 (pro-rata während der Laufzeit des Wettbewerbsverbots).

5. Sonstiges

Im Übrigen bleibt es bei den Bestimmungen des Dienstvertrages.

4. Non-compete/non-solicitation covenant

Section 13.4 Service Agreement is supplemented by the following sentence (after the first sentence of the paragraph):

Exclusively in the event of a termination of this Service Agreement and a resignation from office pursuant to Section 11.4, the Company shall pay to the Managing Director a compensation of 100 % of the fixed gross salary pursuant to Section 4.2 (pro-rated during the term of the non-compete covenant).

5. Miscellaneous

With respect to all other regulations the Service Agreement remains determinative.

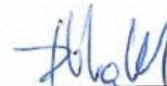
Für die Gesellschaft // For the Company:

Name: **David Khalil**

Position // Capacity: **Vorsitzender des Verwaltungsrats // Chairperson of the Company's administrative board**

Ort, Datum // City, Date:

Berlin, 16.5.2018

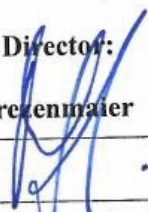


(Unterschrift // Signature)

Geschäftsführender Direktor // The Managing Director:

Name: **Michael Schrezenmaier**

Ort, Datum // City, Date:



(Unterschrift // Signature)

THIRD AMENDED AND RESTATED EMPLOYMENT AGREEMENT

This Third Amended and Restated Employment Agreement (this "Agreement") is effective as of December 22, 2018 (the "Effective Date") by and between Spark Networks, Inc., a Delaware corporation (the "Company"), and Robert O'Hare, an individual resident in New York ("Executive").

WITNESSETH:

WHEREAS, the Company and Executive entered into a Second Amended and Restated Employment Agreement effective as of June 23, 2017 (the "Employment Agreement"); and

WHEREAS, the Company and Executive desire to make certain amendments to the Employment Agreement as set forth in this Agreement.

NOW THEREFORE, in consideration of the mutual obligations herein contained, the parties hereto, intending to be legally bound hereby, covenant and agree as follows:

1. EMPLOYMENT

(a) The Company is employing Executive to render services to the Company in the position of Chief Executive Officer. Executive is also separately serving as the Chief Financial Officer of the Company's parent corporation, Spark Networks SE, a European stock corporation ("Spark Networks SE"). Executive shall perform such duties commensurate with his position, subject to the control of the Board of Directors of the Company (the "Board") and the Board of Directors of Spark Networks SE, as applicable, for the overall strategic direction and leadership of the Company and Spark Networks SE. Executive shall report to the Board in his capacity as Chief Executive Officer of the Company.

(b) Throughout the Term (as defined below), Executive shall devote his full business time and undivided attention to the business and affairs of the Company and its affiliates (including Spark Networks SE) and subsidiaries, except for reasonable vacations and except for illness or incapacity, but nothing in the Agreement shall preclude Executive from engaging in charitable and public service activities provided such activities do not materially interfere with the performance of his duties and responsibilities under this Agreement.

2. TERM

The term of this Agreement (the "Term") shall commence on the Effective Date and shall continue until terminated pursuant to Section 4 hereof.

3. COMPENSATION

For services rendered by Executive during the Term of this Agreement, and for his performance of all additional obligations of employment, the Company agrees to pay Executive and Executive agrees to accept the following salary, other compensation, and benefits:

(a) Base Salary. During the Term, the Company shall pay Executive a base salary at the annual rate of \$305,000 (the "Annual Base Salary") to be paid evenly over the course of the year in accordance with the Company's standard payroll policies. During the Term, the Annual Base Salary will not be increased or decreased.

(b) Annual Bonus. In addition to the Annual Base Salary, Executive is currently eligible to receive an annual bonus with a target amount of 30% of his Annual Base Salary for calendar year 2018 and subsequent calendar years based on the achievement of individual and Company performance goals for such years to be determined by the Board or the Compensation Committee, or the Board of Directors or the Compensation Committee of the Board of Directors of Spark Networks SE, as applicable. Any annual bonus payment shall be made at the same time that annual bonus payments are made to other employees of the Company and Spark Networks SE, but in no event later than March 15 of the year following the year in which such bonus payment is earned. Subject to the terms of Section 4 below, Executive must be employed by



the Company on the date on which such bonus is earned in order to be eligible to receive such bonus.

(c) Benefits. Executive shall be entitled to participate, as long as he is an employee of the Company, in any and all of the Company's present or future employee benefit plans, including without limitation pension plans, thrift and savings plans, insurance plans, and other benefits that are generally applicable to the Company's executives; provided, however, that the accrual and/or receipt by Executive of benefits under and pursuant to any such present or future employee benefit plan shall be determined by the provisions of such plan.

(d) Business Expenses. Executive shall be reimbursed for all reasonable expenses incurred in connection with the conduct of the Company's business upon presentation of evidence of such expenditures, including but not limited to travel expenses incurred by Executive in the performance of his duties and professional organization dues.

(e) Relocation Expenses. If Executive's employment is terminated by the Company without Cause, Executive resigns from employment with the Company for Good Reason or Executive voluntarily resigns during the Retention Period (defined below), Executive shall be reimbursed for reasonable out of pocket relocation expenses of up to \$35,000 for his relocation back to California within six months following any such termination of employment, provided that Executive submits to the Company such expenses for reimbursement within four months of such relocation (and the Company shall promptly reimburse Executive for such expenses, but in no event later than one month after Executive's submission thereof).

(f) Housing Stipend. Executive shall receive a stipend for housing in New York of \$100,000 per year (the "Housing Stipend"), paid on a monthly basis on or about the first business day of each month so long as he remains employed by the Company and continues to live in New York.

4. TERMINATION OF EMPLOYMENT. Subject to the terms and conditions of this Section 4, either the Company or Executive may terminate Executive's employment at any time, with or without Cause (as defined in Section 4(f)), during the Term. Any termination of Executive's employment during the Term shall be communicated by written notice of termination from the terminating party to the other party ("Notice of Termination"). The Notice of Termination shall indicate the specific provision(s) of this Agreement relied upon in effecting the termination and a written statement of the reason(s) for the termination. A Notice of Termination provided by either party shall not be effective for a period of thirty (30) days after receipt of such Notice of Termination by the other party. In the event the Executive's employment terminates under Section 4(a) (Severance upon Involuntary Termination without Cause, Termination by Executive with Good Reason or Termination by Executive after Retention), Section 4(b) (Effect of Death or Disability) or Executive is terminated by Company for Cause, the Company shall pay to Executive upon Executive's termination of employment: (i) the prorated Annual Base Salary earned as of the date of Executive's termination of employment, plus (ii) the accrued but unused vacation as of the date of Executive's termination of employment. Any unvested equity interests held by Executive shall be forfeited upon the employment termination date, except as otherwise provided herein. Except as otherwise provided in this Section 4 or in any other agreement between the Company and Executive, the Company shall have no further obligation to make or provide to Executive, and Executive shall have no further right to receive or obtain from the Company, any payments or benefits in respect of the termination of Executive's employment with the Company during the Term of Employment.

(a) Severance upon Involuntary Termination without Cause, Termination by Executive with Good Reason or Termination by Executive during Retention Period

(i) In addition to any payments set forth above in Section 4, in the event that the Company causes to occur an involuntary termination without Cause (as defined in Section 4(f)), Executive resigns from employment with the Company for Good Reason (as defined in Section 4(f)) or Executive voluntarily resigns after June 30, 2019 but prior to August 31, 2019 (such period, the "Retention Period"), Executive shall be entitled to a "Severance Package" that consists of the following: (i) a single cash lump sum "Severance Payment" equal to 100% of Executive's Aggregate Annual Compensation (as defined below) but not to exceed \$500,000 in the aggregate, payment to be made on the sixtieth (60th) day following such termination or, in the event the legally required revocation period for Executive's release as contemplated pursuant to Section 4(a)(i) expires prior to such sixtieth (60th) day, as soon as reasonably practicable following the expiration of such revocation period, and (ii) reimbursement of any COBRA payments paid by Executive in the twelve (12) month period following Executive's termination of employment to the extent Executive is not eligible for similar coverage through another employer. "Aggregate Annual Compensation" shall be calculated as the sum of the following: (A) 100% of Executive's Annual Base Salary, *plus* (B) 100% of Executive's annual bonus target amount for the year in which such termination occurs (or, if annual bonuses have not yet been paid for the prior year, the target amount of such prior year annual bonus), *plus* (C) 100% of the annual amount paid to Executive by Spark Networks SE for serving as a managing director of Spark Networks SE, *plus* (D) the

Housing Stipend of \$100,000 per year. For the avoidance of doubt, the term "Aggregate Annual Compensation" excludes the value of any equity in Spark Networks SE held by Executive at the time of the termination of employment.

(ii) If any plan pursuant to which severance welfare benefits are provided is not, or ceases prior to the expiration of the period of continuation coverage to be, exempt from the application of Section 409A under Treasury Regulation Section 1.409A-1(a)(5) or the Company is otherwise unable to continue to cover Executive under its group health plans without substantial adverse tax consequences, then an amount equal to each remaining premium payment shall thereafter be paid to Executive as currently taxable compensation in substantially equal monthly installments over the continuation coverage period (or the remaining portion thereof). Executive's eligibility for any Severance Package will be conditional on Executive executing a Separation Agreement that includes a general mutual release by the Company and Executive in favor of the other and their successors, affiliates and estates to the fullest extent permitted by law, drafted by and in a form reasonably satisfactory to the Company and Executive, and Executive not revoking the mutual general release within any legally required revocation period, if applicable, within the fifty-two (52)-day period following termination. All legally required and authorized deductions and tax withholdings shall be made from the Severance Payment, including for wage garnishments, if applicable, to the extent required or permitted by law. Effective immediately upon termination of employment, Executive shall no longer be eligible to contribute to or to receive additional Company contributions as an active participant in any retirement or benefit plan covering employees of the Company, but shall continue to have all rights under each such plan that are afforded to terminated employees and inactive participants.

(b) Effect of Death or Disability. In the event that Executive dies or terminates employment by reason of a Disability (as defined in Section 4(f)) during the Term of Employment, Executive shall be entitled to (i) payment of the unpaid prorated Annual Base Salary earned as of the date of Executive's death or Disability (the "Measurement Date"), (ii) a pro rata amount of Executive's annual target bonus amount for the year in which Executive's employment terminates based on the number of days Executive was employed by the Company during such year and (iii) reimbursement of any COBRA payments paid by Executive or his estate or beneficiaries in the twelve (12) month period following the Measurement Date; provided, however, that if any plan pursuant to which severance welfare benefits are provided is not, or ceases prior to the expiration of the period of continuation coverage to be, exempt from the application of Section 409A under Treasury Regulation Section 1.409A-1(a)(5) or the Company is otherwise unable to continue to cover Executive under its group health plans without substantial adverse tax consequences, then an amount equal to each remaining premium payment shall thereafter be paid to Executive or his estate or beneficiaries as currently taxable compensation in substantially equal monthly installments over the continuation coverage period (or the remaining portion thereof). All legally required and authorized deductions and tax withholdings shall be made from the payments described in the previous sentence, including for wage garnishments, if applicable, to the extent required or permitted by law. Payment under this Section 4(b) shall be made not more than once, if at all.

(c) Statement Regarding Termination of Employment. In the event Executive's employment is terminated without Cause, or Executive resigns for Good Reason, Executive and the Company will negotiate in good faith to reach an agreement on a statement reflecting a benign reason for termination or resignation.

(d) Ineligibility for Severance. Notwithstanding anything to the contrary in this Agreement, Executive shall not be entitled to any Severance Package under this Agreement if at any time during the Term of Employment, (a) Executive voluntarily resigns or otherwise terminates employment with the Company other than (i) during the Retention Period or (ii) for Good Reason, or (b) the Company properly terminates Executive's employment with Cause. Effective immediately upon termination of employment, Executive shall no longer be eligible to contribute to or to be an active participant in any retirement or benefit plan covering employees of the Company.

(e) Taxes and Withholdings. The Company may withhold from any amounts payable under this Agreement, including any benefits or Severance Payment, such federal, state or local taxes as may be required to be withheld pursuant to applicable law or regulations, which amounts shall be deemed to have been paid to Executive.

(f) Definitions.

(i) "Cause" shall mean the occurrence during the Term of any of the following: (i) formal admission to (including a plea of guilty or nolo contendere to), or conviction of a felony, or any criminal offense involving Executive's moral turpitude under any applicable law, (ii) gross negligence or willful misconduct by Executive in the performance of Executive's material duties required by this Agreement and such negligence or misconduct has been communicated to Executive in the form of a written notice from the Board, and that Executive has not substantially cured within thirty (30) days following receipt by

Executive of such written notice; or (iii) material breach of this Agreement by Executive which breach has been communicated to Executive in the form of a written notice from the Board, and that Executive has not substantially cured within thirty (30) days following receipt by Executive of such written notice.

(ii) “Disability” shall mean, to the extent consistent with applicable federal and state law (including, without limitation Section 409A), Executive’s inability by reason of physical or mental illness to fulfill his obligations hereunder for ninety (90) consecutive days or for a total of one hundred and eighty (180) days in any twelve (12) month period which, in the reasonable opinion of an independent physician selected by the Company or its insurers and reasonably acceptable to Executive or Executive’s legal representative, renders Executive unable to perform the essential functions of his job, even after reasonable accommodations are made by the Company. The Company is not, however, required to make unreasonable accommodations for Executive or accommodations that would create an undue hardship on the Company.

(iii) “Good Reason” shall mean the occurrence during the Term of Employment of any of the following: (i) a material breach of this Agreement by the Company which is not cured by the Company within thirty (30) days following the Company’s receipt of written notice by Executive to the Company describing such alleged breach; (ii) Executive’s Annual Base Salary is reduced by the Company; (iii) a reduction in Executive’s title, or a material reduction in Executive’s duties, authorities, and/or responsibilities, whether at the Company or at Spark Networks SE; or (iv) a requirement by the Company, without Executive’s consent, that Executive relocate to a location that is greater than thirty-five (35) miles from Executive’s place of residence. Notwithstanding the above, the occurrence of any of the events described in the foregoing sentence shall not constitute Good Reason unless Executive gives the Company written notice, within thirty (30) calendar days after Executive has knowledge of the occurrence of any of the events described in the foregoing sentence, that such circumstances constitute Good Reason and the Company thereafter fails to cure such circumstances within thirty (30) days after receipt of such notice, and Executive terminates his employment hereunder within ninety (90) days after such event occurs.

(iv) “Section 409A” means Section 409A of the Internal Revenue Code of 1986, as amended, (“Code”) and all applicable guidance promulgated thereunder.

(g) Nonduplication of Benefits. Notwithstanding any provision in this Agreement or in any other Company or Spark Networks SE benefit plan or compensatory arrangement to the contrary, (i) any payments due under either Section 4(a) or Section 4(b) shall be made not more than once, if at all, (ii) payments may be due under either Section 4(a) or Section 4(b), but under no circumstances shall payments be made under more than one of the following: Section 4(a) and Section 4(b), and (iii) Executive shall not be entitled to severance benefits from the Company other than as contemplated under this Agreement, unless such other severance benefits provide for larger benefits than under this Agreement.

5. NON-SOLICIT

(a) During Executive’s employment with the Company, and for a period of twelve (12) months thereafter, Executive will not knowingly, separately or in association with others, materially and substantially interfere with, impair, disrupt or damage the Company’s or Spark Networks SE’s relationship with any of the customers of the Company or Spark Networks SE with whom Executive has had contact by contacting them for the purpose of inducing or encouraging any of them to divert or take away business from the Company or Spark Networks SE and to an enterprise that is in direct competition with the Company Business; provided, however, that none of the foregoing restrictions shall preclude Executive from being employed by a consulting, financial or advisory firm that provides any advice or services to a person, enterprise or business that is in competition with the Company or Spark Networks SE so long as Executive does not personally provide such advice or services to the competing person, enterprise or business.

(b) During Executive’s employment with the Company, and for a period of twelve (12) months thereafter, Executive will not, knowingly, separately or in association with others, materially and substantially, interfere with, impair, disrupt or damage the Company’s or Spark Networks SE’s business by directly contacting any Company or Spark Networks SE officers or key employees for the purpose of inducing or encouraging them to discontinue their employment with the Company or Spark Networks SE; provided, however, that the foregoing provisions shall not (i) restrict Executive from directly or indirectly making any general solicitation for employees, making a public advertising or participating in any job fairs or recruiting workshops or (ii) preclude Executive from soliciting and/or hiring any officer, key employee or other person at any time (A) in the case of voluntary terminations, later than six (6) months after such person’s termination of employment from the Company or Spark Networks SE and (B) in the case of all other terminations, after such person’s termination of employment from the Company or Spark Networks SE.

6. INDEMNIFICATION; INSURANCE

(a) During the Term of this Agreement and thereafter, the Company shall indemnify Executive to the fullest extent permitted under applicable law from and against any expenses (including but not limited to attorneys' fees, expenses of investigation and preparation and fees and disbursements of Executive's accountants or other experts), judgments, fines, penalties and amounts paid in settlement actually and reasonably incurred by Executive in connection with any proceeding in which Executive was or is made party or was or is involved (for example, as a witness) by reason of the fact Executive was or is employed by or serving as an officer or director of the Company or any of its affiliates, including Spark Networks SE. Such indemnification shall continue as to Executive during the Term of this Agreement and for so long thereafter as Executive may have exposure with respect to acts or omissions which occurred prior to his cessation of employment with the Company and shall inure to the benefit of Executive's heirs, executors and administrators. The Company shall advance to Executive all costs and expenses incurred by him in connection with any proceeding covered by this provision within 20 calendar days after receipt by the Company of a written request for such advance. Such request shall include an undertaking by Executive to repay the amount of such advance if it shall ultimately be determined that he is not entitled to be indemnified against such costs and expenses.

(b) The Company agrees to purchase and maintain adequate Directors' and Officers' liability insurance from a reputable, nationally recognized and financially sound insurer with provisions that will provide coverage for Executive as a director, officer and employee as well as coverage as a former director, officer and employee following any termination of this Agreement or Executive's employment and service on the Board. Such insurance shall inure to the benefit of Executive's heirs, executors and administrators.

7. MISCELLANEOUS

(a) Successors and Assigns. This Agreement shall be binding upon and shall inure to the benefit of the Company and its successors and assigns. Executive shall not be entitled to assign any of Executive's rights or obligations under this Agreement without the Company's written consent, provided that upon Executive's death, Executive's named beneficiaries, estate or heirs, as the case may be, shall succeed to all of Executive's rights under this Agreement.

(b) Nonexclusivity Rights. Executive is not prevented from continuing or future participation in any Company or Spark Networks SE benefit, bonus, incentive or other plans, programs, policies or practices provided by the Company or Spark Networks SE subject to the terms and conditions of such plans, programs, or practices.

(c) Entire Agreement. This Agreement supersedes any prior agreements or understandings, oral or written, with respect to employment of Executive and constitutes the entire Agreement with respect thereto. This Agreement cannot be altered or terminated orally and may be amended only by a subsequent written agreement executed by both of the parties hereto or their legal representatives, and any material amendment must be approved by a majority of the voting shareholders of the Company.

(d) Waiver. Either party's failure to enforce any provision of this Agreement shall not in any way be construed as a waiver of any such provision, or prevent that party thereafter from enforcing each and every other provision of this Agreement

(e) Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of New York.

(f) Litigation Costs and Expenses. In any action to enforce the terms of this Agreement, the prevailing party shall be reimbursed by the non-prevailing party for such prevailing party's reasonable attorneys' fees and costs, including the costs of enforcing a judgment.

(g) Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provisions, which shall remain in full force and effect.

(h) Interpretation; Construction. The headings set forth in this Agreement are for convenience only and shall not be used in interpreting this Agreement. This Agreement has been drafted by legal counsel representing the Company, but Executive has participated in the negotiation of its terms. Furthermore, Executive acknowledges that Executive has had an opportunity to review and revise the Agreement and have it reviewed by legal counsel, if desired, and, therefore, the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the

interpretation of this Agreement.

(i) Arbitration. Any dispute, claim or controversy arising out of or relating to this Agreement or the breach, termination, enforcement, interpretation or validity thereof, including the determination of the scope or applicability of this agreement to arbitrate, shall be determined by arbitration in New York City, New York, before three arbitrator(s). The arbitration shall be administered by JAMS pursuant to its Comprehensive Arbitration Rules and Procedures. Judgment on the Award may be entered in any court having jurisdiction. This clause shall not preclude parties from seeking provisional remedies in aid of arbitration from a court of appropriate jurisdiction, in which case each party consents to the jurisdiction and venue of the state and federal courts located in New York, New York. All forum costs related to such arbitration shall be borne by the Company.

(j) Notices. Any notices, requests or other communications provided for by this Agreement shall be sufficient if in writing and if sent by registered or certified mail to Executive at the last address he has filed in writing with the Company or, in the case of the Company, at its principal offices.

(k) Cooperation. If Executive is no longer employed by the Company for any reason, Executive and the Company shall in good faith negotiate future cooperation by Executive as reasonably requested by the Company at a reasonable rate for a period of no less than six (6) months.

8. COMPLIANCE WITH CODE SECTION 409A

With respect to any compensation payable or benefits to be provided under this Agreement that are subject to Section 409A, this Agreement is intended to comply with the provisions of Section 409A. In furtherance of this intent, to the extent that any compensation payable or benefits to be provided under this Agreement are subject to Section 409A, this Agreement shall be interpreted, operated, and administered in a manner consistent with these intentions, and the parties agree to amend this Agreement further (if necessary) in order to avoid the adverse tax consequences of Section 409A. Notwithstanding any other provision of this Agreement to the contrary, no severance pay or benefits to be paid or provided to Executive, if any, pursuant to this Agreement that, when considered together with any other severance payments or separation benefits, are considered deferred compensation under Section 409A (together, the "Deferred Payments") will be paid or otherwise provided until Executive has had a "separation from service" within the meaning of Section 409A. Similarly, no severance payable to Executive, if any, that otherwise would be exempt from Section 409A pursuant to Treasury Regulation Section 1.409A-1(b)(9) will be payable until Executive has had a "separation from service" within the meaning of Section 409A. Each payment and benefit payable under this Agreement is intended to constitute a separate payment and the right to a series of installment payments under this Agreement will be treated as a right to a series of separate payments. If Executive is a "specified employee" within the meaning of Section 409A at the time of his "separation from service" (within the meaning of Section 409A), then the Deferred Payments that would otherwise be payable within the six (6) month period following his separation from service will be paid in a lump sum on the date six (6) months and one (1) day following the date of his separation from service (or the next business day if such date is not a business day). All subsequent Deferred Payments, if any, will be payable in accordance with the payment schedule applicable to each payment or benefit. If Executive dies following his separation from service, but prior to the six (6) month anniversary of his separation from service, then any payments delayed in accordance with this paragraph will be payable in a lump sum as soon as administratively practicable after the date of his death and all other Deferred Payments will be payable in accordance with the payment schedule applicable to each payment or benefit.

9. COMPLIANCE WITH CODE SECTION 280G

In the event that it is determined by the Company in its sole discretion that any payment or benefit to the Executive under this Agreement, or otherwise, either cash or non-cash, that the Executive has the right to receive from the Company, including, but not limited to, accelerated vesting or payment of any deferred compensation, restricted stock or any benefits payable to Executive under any plan for the benefit of employees, would constitute an "excess parachute payment" (as defined in Section 280G of the Code), then such payments or other benefits will be either (a) delivered in full, or (b) delivered as to such lesser extent which would result in no portion of such payments or benefits being subject to excise tax under Section 4999 of the Code, whichever of the foregoing amounts, taking into account the applicable federal, state and local income taxes and the excise tax imposed by Section 4999 of the Code, results in the receipt by Executive on an after-tax basis of the greatest amount of payments and benefits, notwithstanding that all or some portion of such payments or benefits may be taxable under Section 4999 of the Code. The order in which the payment will be reduced are (i) cash payments; (ii) equity-based payments that are taxable; (iii) equity-based payments that are not taxable; (iv) equity-based acceleration; and (v) other non-cash forms


of benefits. Within any such category of payments and benefits (that is, (i), (ii), (iii), (iv) or (v)), a reduction shall occur first with respect to amounts that are not “deferred compensation” within the meaning of Section 409A of the Code and then with respect to amounts that are. In no event will Executive have any discretion with respect to the ordering of payment reductions.

[Signature Page Follows]



IN WITNESS WHEREOF, the parties have executed this Agreement on the day and year first above written.

SPARK NETWORKS, INC.

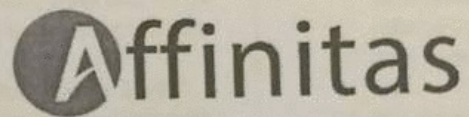
By: 
Name: Cristina Ceballos
Title: VP Finance, Spark Networks Inc

ROBERT O'HARE





Please note that the following text in the right column is not intended to be used as a contract template. The text is intended to be used as a translation to the German contract template in the left column.



Employment Contract concluded by

Affinitas GmbH
Kohlfurterstr. 41/43
D-10999 Berlin
hereinafter referred to as "Employer"

and

Benjamin McCormick Hoskins
Apartement Kemang Village, Ritz Tower, G2-02, Jl P. Antasari no 36
Jakarta Selatan, Indonesia
Born on 02.07.1974 in Dumfries, Scotland
hereinafter referred to as "Employee"

CAM
Blatt



§ 1 Dauer und Beendigung des Arbeitsverhältnisses; Probezeit

- (1) Das Arbeitsverhältnis beginnt am 16.01.2017 und wird auf unbestimmte Zeit geschlossen.
- (2) Die ersten sechs Monate des Arbeitsverhältnisses gelten als Probezeit.

§ 2 Tätigkeit

- (1) Der Arbeitnehmer wird als Chief Technical Officer eingestellt. Im Einzelnen richtet sich die Tätigkeit nach den Weisungen des Arbeitgebers und der Vorgesetzten.
- (2) Dienstsitz ist Berlin. Der Arbeitgeber behält sich vor, den Arbeitnehmer auch an einem anderen Ort einzusetzen, soweit dies dem Arbeitnehmer unter Abwägung der betrieblichen und persönlichen Belange zumutbar ist. Der Arbeitgeber wird eine angemessene Ankündigungsfrist einhalten.
- (3) Der Arbeitgeber behält sich vor, dem Arbeitnehmer eine gleichwertige andere Tätigkeit zuzuweisen, die seinen Vorkenntnissen und Fähigkeiten entspricht. Macht der Arbeitgeber hiervon Gebrauch, so ist mindestens die bisherige Vergütung weiterzuzahlen.

§ 3 Nebenbeschäftigung

Die Ausübung einer Nebenbeschäftigung bedarf der vorherigen Zustimmung des Arbeitgebers. Die Zustimmung kann nur verweigert werden, wenn durch die Nebenbeschäftigung Interessen des Arbeitgebers verletzt würden.

§ 4 Arbeitszeit

- (1) Die regelmäßige Arbeitszeit beträgt 40 Stunden wöchentlich.
- (2) Beginn und Ende der täglichen Arbeitszeit und der Pausen richtet sich im Rahmen der gesetzlichen Bestimmungen nach den betrieblichen Erfordernissen.
- (3) Bei Vorliegen betrieblicher Notwendigkeiten verpflichtet sich der Arbeitnehmer Mehrarbeit im Rahmen seiner Möglichkeiten und unter Beachtung des gesetzlich zulässigen Umfangs zu erbringen.

Section § 1 Period and Ending of the Work Relationship; Probationary Period

- (1) The work relationship shall begin on 09.01.2017 and is concluded for an indefinite period of time.
- (2) The first six months of the work relationship shall be regarded as a probationary period.

Section § 2 Activities

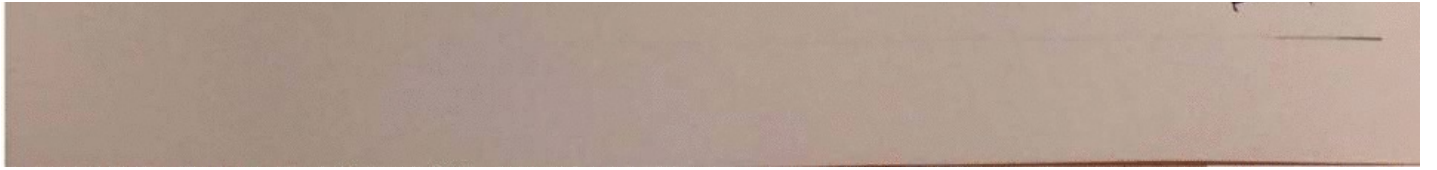
- (1) Employee shall be employed as Chief Technical Officer. In detail the activities shall be in keeping with Employer's instructions and with those of the superiors.
- (2) The place of work is Berlin. Employer reserves the right to also deploy Employee at another location, provided this is reasonable for Employee in consideration of the company-internal and personal interests. Employer shall observe an appropriate notification period.
- (3) Employer reserves the right to assign to Employee other equivalent activities corresponding to his previous experience and capabilities. If Employer makes use of this option, the previous level of payment, at least, must continue to be paid.

Section § 3 Secondary Occupation

The pursuance of a secondary occupation shall require Employer's prior approval. Such approval may only be refused if, as a result of the secondary occupation, Employer's interests would be harmed.

Section § 4 Hours of Work

- (1) The regular working time shall be 40 hours a week.
- (2) The start and end of the day-to-day working time and the breaks shall be in keeping with the company-internal requirements, within the context of the statutory regulations.
- (3) Where necessary for business reasons, Employee shall be obliged to work extra time, within his possibilities and observing the legally permissible extent.



§ 5 Vergütung

Der Arbeitnehmer erhält ein monatliches Bruttogehalt in Höhe von 14.166,67 €, zahlbar jeweils nachträglich zum Monatsende.

Mit Leistung des monatlichen Bruttogehalts wird auch etwaige Mehr- oder Überarbeit abgegolten.

§ 6 Bonus

Während seiner Tätigkeit als Chief Technical Officer hat der Chief Technical Officer zusätzlich zum Fixgehalt Anspruch auf eine jährliche Bonuszahlung von bis zu maximal EUR 25.000,00 €, wenn die im jeweils gültigen Bonusplan festgelegten Ziele erreicht wurden. Der jährliche Bonusplan wird auf Grundlage von Meilensteinen vereinbart, über die sich der Chief Technical Officer, die Geschäftsführer und die Gesellschafterversammlung bzw. – im Falle der Zuständigkeit des Aufsichtsrats gemäß den Bestimmungen des Gesellschaftsvertrags der Gesellschaft – der Aufsichtsrat verständigt haben. Die im Bonusplan enthaltenen Meilensteine können beispielsweise aus festgelegten und gewichteten Einnahmen, EBIT sowie kunden- oder marktorientierten Zielen bestehen. Der Anspruch auf Bonus entfällt bei Kündigung dieses Vertrages für das Jahr, in dem die Kündigung wirksam wird.

§ 7 Sonderzahlungen

Die Gewährung etwaiger Sonderleistungen (z.B. Weihnachts- oder Urlaubsgeld) erfolgt freiwillig und ohne Einräumung eines Rechtsanspruchs. Ein Anspruch für die Zukunft wird auch durch wiederholte Gewährung nicht begründet. Es bleibt stattdessen im freien, unbeschränkten Ermessen des Arbeitgebers, eine ähnliche Leistung zukünftig zu erbringen.

§ 8 Urlaub

Der Arbeitnehmer hat Anspruch auf 25 Arbeitstage (Montag-Freitag) Erholungsurlaub im Kalenderjahr. Der Urlaub ist rechtzeitig mit dem Arbeitgeber abzustimmen. Im Übrigen gelten die Vorschriften des Bundesurlaubsgesetzes.

§ 9 Nutzungsrechte; Rechteübertragung

Soweit durch die Mitwirkung des Arbeitnehmers Urheber-, Leistungsschutz-, Persönlichkeits- oder

Section § 5 Remuneration

Employee shall receive a monthly gross salary to the value of 14.166,67 €, payable subsequently in each case at the end of the month.

Any potential additional work or overtime is also compensated in this monthly gross salary.

Section § 6 Bonus

Additionally, the Chief Technical Officer, during his tenure as a member of the managing board, is entitled to receive an annual bonus payment of up to a maximum of 25.000,00 € if targets are achieved in accordance with the bonus plan in place from time to time. The bonus plan for each year shall be based upon milestones agreed between the Chief Technical Officer, the managing directors and the shareholders' meeting or – in case of the competence of the Company's advisory board pursuant to the articles of association – the advisory board. The milestones contained in the bonus plan may consist, for example, of defined and weighted revenue, EBIT, as well as customer or market-orientated targets. In case of a termination of this Agreement the entitlement to receive a bonus shall become void for such year in which the termination becomes valid.

Section § 7 Special Payments

The granting of any special performance (e.g. Christmas bonus or holiday pay) is made voluntarily and without concession of a legal entitlement. Even repeated payments shall not justify a claim for the future. Instead, provision of a similar performance in the future shall continue to be made at the free and unrestricted discretion of Employer.

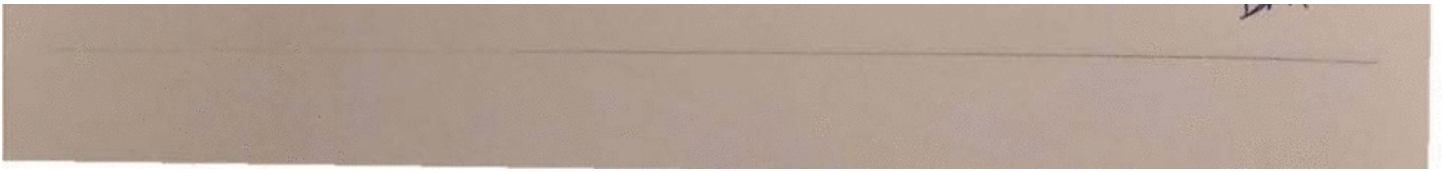
Section § 8 Holidays

Employee shall be entitled to 25 workdays (Monday-Friday) as recreational holidays in the calendar year.

Agreement on holiday dates is to be reached with Employer in good time. Otherwise the provisions of the Federal Holiday with Pay Act shall apply.

Section § 9 Rights of Use; Transfer of Rights

If, due to the Employee's participation, copyright, performance property rights, personal



sonstige vergleichbare Rechte entstehen, so räumt er hieran dem Arbeitgeber alle zeitlich, örtlich und inhaltlich unbegrenzten, frei übertragbaren sowie ausschließlichen Nutzungsrechte einschließlich der Bearbeitungs- und Weiterentwicklungsrechte ein, die der Arbeitgeber zur umfassenden Auswertung der daraus entstandenen Werke in allen derzeit bekannten -und auch künftig bekannt werdenden-Medien benötigt.

Im Übrigen gilt die Rechteanlage (Anlage 1 – Rechteübertragung)

§ 10 Arbeitsverhinderung

- (1) Der Arbeitnehmer ist verpflichtet, im Falle einer Arbeitsverhinderung dem Arbeitgeber unverzüglich Mitteilung zu machen. Bei Arbeitsunfähigkeit infolge Erkrankung hat der Arbeitnehmer dem Arbeitgeber ab dem ersten Tag der Erkrankung eine ärztliche Bescheinigung vorzulegen, aus der sich die Dauer der voraussichtlichen Arbeitsunfähigkeit ergibt.
- (2) Der Arbeitnehmer hat Anspruch auf Entgeltfortzahlung bei persönlicher Arbeitsverhinderung in folgenden Fällen:
 - 1 Tag für die eigene Eheschließung
 - 1 Tag bei der Geburt eines leiblichen Kindes
 - 1 Tag bei dem Tod eines nahen Angehörigen
 Im Übrigen wird die Entgeltfortzahlung bei persönlicher Arbeitsverhinderung nach § 616 BGB ausgeschlossen.

§ 11 Verschwiegenheitspflicht; Datenschutz

- (1) Der Arbeitnehmer verpflichtet sich, über alle vertraulichen Angelegenheiten und Vorgänge, insbesondere Geschäfts- und Betriebsgeheimnisse, die ihm im Rahmen seiner Tätigkeit zur Kenntnis gelangen, Stillschweigen zu bewahren, auch nach Beendigung des Arbeitsverhältnisses. Entsprechendes gilt für die Bezüge des Arbeitnehmers. Die Weitergabe von Informationen ist von der Verschwiegenheit ausgenommen, wenn sie zur Erfüllung der dem Arbeitnehmer übertragenen Aufgaben erforderlich oder ihm durch den Arbeitgeber zuvor schriftlich gestattet worden ist. Im Zweifel ist eine Weisung einzuholen, ob eine bestimmte Information als vertraulich zu behandeln ist.
- (2) Der Arbeitnehmer ist verpflichtet, die einschlägigen Datenschutzgesetze zu beachten.

rights or other comparable rights come into existence, he shall grant Employer all temporally, locally and content-specifically unlimited, freely transferable and exclusive rights of use to these, including the processing rights and further-development rights, needed by Employer for comprehensive exploitation of the works resulting from this in all currently known - as well as future - media.

Otherwise the legal appendix (Appendix 1 – Transfer of Rights) shall apply.

Section § 10 Inability to Work

- (1) Employee is obliged, in the event of inability to work, to notify Employer of this immediately. In cases of inability to work as a result of illness Employee must submit a medical certificate to Employer as from the first day of the illness, this indicating the anticipated period of inability to work.
- (2) Employee shall be entitled to continuation of payments in cases of personal inability to work in the following cases:
 - 1 day for his own marriage
 - 1 day for the birth of his own child
 - 1 day for the death of a close relative
 Otherwise continuation of payments in cases of personal inability to work shall be excluded in keeping with section § 616 of BGB [German Civil Code].

Section § 11 Duty to Secrecy; Data Protection

- (1) Employee undertakes to maintain strict silence with respect to all confidential matters and processes, particularly business secrets and operating secrets that became known to him in the context of his activities, and to maintain such secrecy even after the ending of the work relationship. The same applies to Employee's emoluments. The passing-on of information is exempted from secrecy if this is required for fulfilment of the duties assigned to Employee, or if this has previously been permitted in writing for him by Employer. If in doubt, an instruction on whether a certain piece of information is to be treated confidentially must be obtained.
- (2) Employee is obliged to observe the relevant data protection law.

*SKT
Bau*



§ 12 Beendigung des Arbeitsverhältnisses

- (1) Während der Probezeit kann das Arbeitsverhältnis beiderseits mit einer Kündigungsfrist von 2 Wochen gekündigt werden.
- (2) Nach Ablauf der Probezeit gilt für beide Seiten eine Kündigungsfrist von 6 Monaten zum Monatsende, bis es aufgrund von § 622 BGB zu einer Verlängerung der Kündigungsfrist kommt. Eine Verlängerung der Kündigungsfrist zugunsten einer Vertragspartei gilt auch als zugunsten der anderen Vertragspartei vereinbart.
- (3) Beide Parteien haben das Recht zur Kündigung aus wichtigem Grund.
- (4) Eine Kündigung bedarf zu ihrer Wirksamkeit der Schriftform.
- (5) Der Arbeitgeber ist berechtigt, den Arbeitnehmer bei Vorliegen eines berechtigten Interesses – insbesondere nach einer arbeitgeber- oder arbeitnehmerseitigen Kündigung- unter Fortzahlung der Vergütung, widerruflich oder unwiderruflich, von der Verpflichtung zur Arbeitsleistung freizustellen. Eine unwiderrufliche Freistellung erfolgt regelmäßig unter Anrechnung von Resturlaubsansprüchen und sonstigen Freizeitansprüchen.
- (6) Das Arbeitsverhältnis endet, ohne dass es einer Kündigung bedarf, spätestens am letzten Tag desjenigen Monats, in dem der Arbeitnehmer die Regelaltersgrenze in der gesetzlichen Rentenversicherung erreicht.

§ 13 Rückgabe des Arbeitsmaterials

Der Arbeitnehmer ist verpflichtet, alle Arbeitsmittel, die ihm der Arbeitgeber zur Verfügung gestellt hat, bei Beendigung des Arbeitsverhältnisses herauszugeben, hier gehören insbesondere Computer, Geschäftsunterlagen und Datenträger.

§ 14 Ausschlussfrist

Alle beiderseitigen Ansprüche aus dem Arbeitsverhältnis müssen innerhalb von 3 Monaten nach Fälligkeit schriftlich geltend gemacht werden, ansonsten verfallen sie. Werden die Ansprüche nach Geltendmachung von der anderen Seite nicht erfüllt, so

Section § 12 Ending of the Employment Relationship

- (1) During the probationary period the work relationship shall be terminable by either party subject to a period of notice of 2 weeks.
- (2) After expiry of the probationary period a period of contractual notice of 6 months to the end of the month shall apply to both sides until, on the basis of section § 622 of BGB [German Civil Code], an extension of the period of contractual notice is due. An extension of the period of contractual notice to the benefit of one of the contracting parties shall also apply as agreed for and to the benefit of the other contracting party.
- (3) Both parties have the right to termination for good cause.
- (4) Notice of termination must be given in writing, if it is to be valid.
- (5) Employer shall be entitled, given a justified cause - particularly after notice has been given by either of the parties - to release Employee, subject to revocation or irrevocably, from the obligation to work, under continuation of remuneration payments. Irrevocable release is regularly undertaken subject to offsetting of remaining holiday entitlements and other free-time entitlements.
- (6) At the latest, the work relationship shall end, without any notice being required, at the end of the last day of the month in which Employee reaches the regular age of retirement in the statutory pension scheme.

Section § 13 Return of Work Material

At the end of the work relationship Employee is obliged to return all work materials provided by Employer, including in particular computers, business documents and data carriers.

Section § 14 Time Limits

All claims of both sides arising from the work relationship must be asserted in writing within 3 months of their becoming due, otherwise they shall expire. If, after assertion, the claims are not satisfied by the other party, enforcement must be initiated in the courts within a further period



4



ist die gerichtliche Geltendmachung innerhalb einer weiteren Frist von 3 Monaten nach schriftlicher Geltendmachung notwendig, ansonsten verfallen die Ansprüche. Die Einlegung einer Kündigungsschutzklage reicht für die gerichtliche Geltendmachung hiervon abhängiger Zahlungsansprüche aus. Diese Ausschlussfristen gelten nicht für Haftungsansprüche wegen Vorsatz und bei Verletzung von Leben, Körper oder Gesundheit sowie bei grobem Verschulden.

§ 15 Vertragsänderungen

Nebenabreden und Änderungen des Vertrages bedürfen zu ihrer Wirksamkeit der Schriftform, sofern sie nicht auf einer ausdrücklichen oder einer individuell ausgehandelten Abrede beruhen. Auch die Änderung dieses Schriftformerfordernisses bedarf der Schriftform.

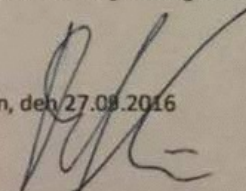
§ 16 Belehrung gemäß §§ 2, 38 SGB III

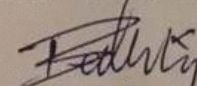
Der Arbeitnehmer wird bereits jetzt darauf hingewiesen, dass er verpflichtet ist, sich möglichst frühzeitig, spätestens jedoch 3 Monate vor Beendigung des Arbeitsverhältnisses beim Arbeitsamt persönlich arbeitsuchend zu melden.

§ 17 Salvatorische Klausel

Sollte eine Bestimmung dieses Vertrages unwirksam sein oder werden, so wird hierdurch die Wirksamkeit der übrigen Vertragsbestimmungen nicht berührt. Anstatt der unwirksamen Bestimmung gilt eine solche Bestimmung als vereinbart, die dem von den Parteien mit der unwirksamen Bestimmung verfolgten wirtschaftlichen Zweck im Rahmen des rechtlich Zulässigen möglichst nahe kommt.

Berlin, den 27.08.2016


Geschäftsführung Affinitas GmbH


Benjamin McCormick Hoskins

of 3 months after written assertion, otherwise the claims shall expire. The lodging of a suit for protection against unlawful dismissal shall be sufficient for the court enforcement of payment entitlements dependent on this. These exclusion deadlines shall not apply to liability claims due to malintent or to injury to life, limb or health, nor in cases of gross negligence.

Section § 15 Amendments of Contract

To be effective, ancillary agreements and amendments of contract shall require the written form, unless they are based on an explicit or individually negotiated agreement. Exclusion of this written-form requirement shall also require the written form.

Section § 16 Instruction in Accordance with Sections § 2 and § 38 of SGB III [Code of Social Law]

Employee's attention is already drawn to the fact that, in connection with termination of the work relationship, he is obliged to personally register with the employment exchange as a job-seeker as quickly as possible, and 3 months before the ending of the work relationship at the latest.

Section § 17 Escape Clause

Should one of the provisions of this contract prove to be ineffective, whether now or at some future date, this shall not detract from the effectiveness of the remaining provisions of the contract. In place of the ineffective provision, a provision that approaches, as closely as possible, the economic purpose pursued by the ineffective provision agreed to by the parties in the context of what is legally permissible, shall be regarded as agreed on.



The English text below is provided for guidance only. In the event of any inconsistency between the German and English versions, the German version shall prevail. **Exhibit 4.19**



Amendment Contract

Between

Spark Networks Services GmbH (formerly Affinitas GmbH)
Kohlfurterstr. 41/43
D-10999 Berlin
hereinafter referred to as "Employer"

and

Benjamin McCormick Hoskins
Chaussee Str. 104
10115 Berlin
Born on 02.07.1974 in Dumfries, Scotland

hereinafter referred to as "Employee"

In addition to the employment contract from 27.09.2016
the following Amendment contract will be concluded:

§ 1 Änderungen

(1) § 2 Tätigkeit (Gültig ab 16.01.2017)

- (1) Der Arbeitnehmer wird als Chief Technical Officer eingestellt. Im Einzelnen richtet sich die Tätigkeit nach den Weisungen des Arbeitgebers und der Vorgesetzten.

(2) § 5 Vergütung (Gültig ab 01.01.2018)

Der Arbeitnehmer erhält ein monatliches Bruttogehalt in Höhe von 16.666,67 €, zahlbar jeweils nachträglich zum Monatsende.

Mit Leistung des monatlichen Bruttogehalts wird auch etwaige Mehr- oder Überarbeit abgegolten.

(3) Inkrafttreten

Die übrigen Bestimmungen des Arbeitsvertrages vom 27.09.2016 bleiben unberührt.

Berlin, 10.01.2018



Spark Networks Services GmbH



Benjamin McCormick Hoskins

Section § 1 Amendments

(1) Section § 2 Activities (with effect from 16.01.2017)

- (1) Employee shall be employed as Chief Technical Officer. In detail the activities shall be in keeping with Employer's instructions and with those of the superiors.

(2) Section § 5 Remuneration (with effect from 01.01.2018)

Employee shall receive a monthly gross salary to the value of € 16.666,67, payable subsequently in each case at the end of the month. Mit Leistung des monatlichen Bruttogehalts wird auch etwaige Mehr- oder Überarbeit abgegolten.

(3) Date of Commencement

The remaining provisions of the employment contract of 27.09.2016 remain unaffected.

**CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Jeronimo Folgueira, certify that:

1. I have reviewed this annual report on Form 20-F of Spark Networks SE;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or cause such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: April 29, 2019

By: _____
/s/ Jeronimo Folgueira
Jeronimo Folgueira
Chief Executive Officer

**CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Robert W. O'Hare, certify that:

1. I have reviewed this annual report on Form 20-F of Spark Networks SE;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or cause such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: April 29, 2019

By: _____
/s/ Robert W. O'Hare
Robert W. O'Hare
Chief Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

The certification set forth below is being submitted in connection with the Annual Report on Form 20-F for the year ended December 31, 2018 (the "Report") for the purpose of complying with Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 (the "Exchange Act") and Section 1350 of Chapter 63 of Title 18 of the United States Code.

I, Jeronimo Folgueira, certify that:

1. the Report fully complies with the requirements of Section 13(a) or 15(d) of the Exchange Act; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: April 29, 2019

By: _____
/s/ Jeronimo Folgueira
Jeronimo Folgueira
Chief Executive Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

The certification set forth below is being submitted in connection with the Annual Report on Form 20-F for the year ended December 31, 2018 (the "Report") for the purpose of complying with Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 (the "Exchange Act") and Section 1350 of Chapter 63 of Title 18 of the United States Code.

I, Robert W. O'Hare, certify that:

1. the Report fully complies with the requirements of Section 13(a) or 15(d) of the Exchange Act; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: April 29, 2019

By: _____
/s/ Robert W. O'Hare
Robert W. O'Hare
Chief Financial Officer

Consent of Independent Registered Public Accounting Firm

The Board of Directors of Spark Networks SE:

We consent to the incorporation by reference in the registration statements (No. 333-224719 and 333-222277) on Form S-8 of Spark Networks SE of our report dated April 26, 2019, with respect to the consolidated balance sheets of Spark Networks SE as of December 31, 2018 and 2017, and the related consolidated statements of comprehensive loss/income, shareholders' equity and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes, which report appears in the December 31, 2018 annual report on Form 20-F of Spark Networks SE.

/s/ KPMG AG Wirtschaftsprüfungsgesellschaft

Hamburg, Germany
April 29, 2019