KPN Integrated Annual Report 2020

Accelerating digitalization of the Netherlands

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In 2020, the Netherlands experienced a digital acceleration. In this Integrated Annual Report we display five case studies which emphasize the impact on healthcare, culture, public transport, safety and education sectors. KPN employees reflect on the effects of the developments for KPN's business and internal organization. You can read the case studies on page 18-19, 31-32, 40-41, 49-50 and 64-65.

Contents

Notes:
The Board of Management Report consist of pages 6 - 82. KPN's policy regarding board diversity is described on pages 90 - 93. The detailed list of top risks can be found in Appendix 4.

In preparing this Integrated Annual Report, we have taken the principles of the International Integrated Reporting Council (IIRC) into account. For the CSR information included in this report, we followed the Global Reporting Initiative (GRI) Standards - Option: Comprehensive.

We follow the EU directive on Non-Financial Reporting and also we have taken the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) into account. KPN recognizes the importance of disclosure on environmental, social and governance matters. We do so by integrating disclosure of this information with other financial and non-financial information, based on materiality considerations, in this Integrated Annual Report.

CEO letter to stakeholders

Gaining digital momentum

New reality

By any measure, 2020 was an extraordinary year. The short-term impact of the COVID-19 pandemic on Dutch society has been enormous. This new reality has underlined the vital importance of being connected and having a resilient digital infrastructure. As a side effect of the pandemic, the Netherlands is gaining digital momentum. We want to enable our customers and society in every way we can, as telecommunication companies play a crucial role in this process. Tackling the long-term effects of the pandemic requires an inclusive approach, one that supports economic recovery while simultaneously addressing the global challenges on sustainability and social inclusion.

I truly feel that in 2020 we experienced the power of our company as never before. First and foremost, I am incredibly proud of the high level of engagement of our employees. Their flexibility and resilience ensured we continued to deliver services to all our customers throughout the challenging times. When everyone was obliged to work from home, they vigilantly monitored and maintained network performance 24/7. They helped hospitals increase call center and workplace capacity overnight. They provided extra facilities to help businesses upgrade their security protocols and enabled the healthcare sector to connect patients with their family, caregivers and doctors. KPN Mooiste Contact Fonds connected 847 children with their classroom during periods of prolonged illness. Together with our partners we developed an IoT-application to monitor the CO_2e levels in schools and offices. All this illustrates how we give meaning to our ambition to go all out to connect everyone in the Netherlands to a sustainable future.

Digitalization is a catalyst

Digitalization is a catalyst for the country's economic recovery and offers significant opportunities to address the social and environmental challenges we face. We have achieved some important milestones in this respect and set an ambitious agenda for the years to come. Several external bodies recognized our ESG-efforts and position as a global leader in sustainability. For example, we maintained a top five position in the Dow Jones Sustainability Index for the fifth year running. By 2025, we want to be one of the first big companies in the Netherlands to be almost completely circular - an ambition that recalls our achievement in 2011 when we became one of the country's first big companies to use 100% green energy. We have maintained this achievement ever since and continue to reduce our energy consumption, even though data consumption has multiplied several times in the past 10 years.

Encouraging base developments

We saw encouraging base developments in the Consumer segment. Our mobile postpaid base started to grow in the second half of the year and a strong inflow of fiber consumers supported an encouraging trend towards stabilization of our broadband base in the second half of the year. We connected an increasing number of households to fiber as demand grew for this best-in-class connection. Although we are well on track in the Business segment to migrate our SME and LCE customers to a future-proof proposition, we are facing some headwinds because of COVID-19. The Wholesale segment continues to show solid growth, despite reduced roaming revenues. Even though our fixed access is no longer regulated in the Netherlands, we stand by our open network policy based on reasonable and non-discriminatory terms. We closed 2020 with both a strong balance sheet and liquidity position, and a solid set of results.

The appreciation of our customers and stakeholders for the quality and reliability of our networks and services, our high security standards and the sustainable way we run our business, was reflected in a record high reputation score in 2020. Increased internet and iTV usage during the pandemic led to increased pressure on our service center and mechanics. We have put full focus on this and taken additional measures to restore the service levels customers may expect from a quality leader and to improve our NPS.

Strategy update

We presented our Strategy Update 2021-2023 'Accelerate to grow' in November 2020, setting a clear path to growth alongside the accelerated digitalization of the Netherlands. Three key pillars underpin this strategy: leveraging and expanding our superior networks, growing and strengthening our customer footprint, and simplifying and streamlining our operating model. Fiber is one of the key drivers for our return to growth, so we have increased our fiber roll-out to a run rate of about 500,000 homes passed annually for the next five years. We have contracted sufficient building capacity to ensure these unprecedented fiber roll-out levels in the Netherlands. In addition, we are improving our digital customer experience and innovating our way of working.

In coming years, we foresee growing demand for flexibility, autonomy and personalized digital experiences. This will be supported by trends such as the need for more and secured connectivity, differentiated offerings and blurring work/life boundaries. Anticipating these opportunities, we have increased our efforts to improve and digitalize the user experience of our products and services. We are keen to offer the best solutions for everyone; individuals or businesses, at home or on the move.

We seek to deliver premium converged services that are simple, flexible and reliable.

Fiber and 5G are important as the key building blocks of our future network. They offer the best, fastest and most reliable digital experience. This enables new services and applications for companies, industries and society. A highly promising development is that our 5G network has already been recognized by several independent benchmarks as the fastest (Ookla) and most innovative (Umlaut).

A new way of working

Our ambitions require change. Starting with myself and the KPN leadership team, we will steer the company based on our core values of trust, courage and growth. We will step up engagement within the organization and with stakeholders to ensure we stay relevant and adapt quickly to changing demands and circumstances. We will shift our company's way of working to a more hybrid model that will reduce our office footprint, combining remote working with collaboration, brainstorming and socializing in an inspiring office environment. I believe that continued and consistent digitalization and simplification will create a more effective and flexible organization. Our purpose-led performance and digitally savvy workforce are key to our ongoing efforts to enhance our valuable asset and the service we offer customers day in, day out.

A path to grow

In 2021, we will take another step forward on our path to growth. The COVID-19 pandemic will undoubtedly continue to have an effect, but we will maintain our spirit of creativity and flexibility. If anything, 2020 has shown how resilient we can be.

CEO letter to stakeholders

We will continue our progressive dividend policy, covered by free cash flow, and grow mass-market (Consumer, SME and Wholesale) service revenues and adjusted EBITDA AL. In recent years, KPN has worked on a healthy financial position and profitability. This provides sufficient financial latitude to offer shareholders a progressive dividend that will grow annually by 3-5% in the coming years. KPN is able to finance its planned capital expenditure and a growing dividend as presented during our Strategy Update from its own free cash flow, while maintaining its solid financial position.

I would like to thank all our partners and suppliers. Our progress in the Netherlands is due to the hard work they do every day. I also want to thank all our shareholders for their continued support, and our customers, be they long-standing or new. Their choice of KPN motivates us to work tirelessly to maintain their trust and provide them with the outstanding and reliable services as the network of the Netherlands.

Joost Farwerck,
CEO and Chairman of the KPN Board of Management

Our purpose and the world around us

A central role in society

The connected society in 2020

Last year will be considered a juncture in the way we live and work. It has become clearer than ever that digitalization is key to social contact, the global economy and sectors such as healthcare and education. At KPN, we supported the acceleration of this digital transformation in 2020. Our state-of-the-art and future-proof network design proved itself when COVID-19 measures led to major shifts and peaks in demand for data last year.

As a consequence of the lock-down measures, we were again made aware of our responsibility to keep our networks running as smoothly and stably as possible. Day and night, our technicians and experts prevented and responded to outages, taking appropriate health and safety measures into account. In the healthcare sector, we set up medical call centers and created additional network capacity to meet the growing demand. We put in place extra monitoring of hospital networks, as these came under more pressure. We witnessed a substantial impact from the loss of roaming revenues and delayed IT projects in the Business segment. This was partially offset by lower costs as we saw limited use of our own offices and less travel by our own employees.

Within the context of COVID-19, the World Economic Forum assessed 37 countries' efforts to achieve economic transformation. The Netherlands achieves high scores on almost all the 11 priority areas, with top three scores in the areas of infrastructure, digital networks and skills & training for the future labor market. Digitalization will continue to play a central role, making telecom companies more relevant than ever.

We are highly aware of the uncertainties that lie ahead of us. Climate change, loss of biodiversity and social concerns around exclusion and technological developments will continue to challenge society, and so too our business. We strongly believe we must embrace solutions that help create new ways of working and living together, while supporting positive impact on society and the environment.

Our purpose

We believe connections bring people closer, and take them further. That’s why we go all out to connect everyone in the Netherlands to a sustainable future. Every day we build the network of the future, a network of people and technology solutions that move us forward. We enable new secure ways of working and strive to offer first class connections, flexibility and outstanding customer experience - safely and simply. This way people can relax, do business, make friends, collaborate and discover new worlds. We want to make the Netherlands the most connected country in the world. We want to lead the country's digitalization and become the preferred partner in digital life.

Our business model also highlights our long-term impact on society in terms of secure and future-proof connectivity, enabling societal innovations, encouraging inclusion and reducing environmental impact. This business model starts with our key assets, our network of technology and people, which includes our state-of-the-art and converged networks, our customer base, workforce and partnerships.

Market developments

The fixed broadband market remained competitive, with three operators focusing on converged customers and competition from local fiber operators in rural areas. The Consumer mobile market for entry-level propositions remained competitive, while in the premium segment all operators are now offering unlimited data. The Business market also remained competitive, especially in the mobile market and the Large Corporate segment.

We are focusing on the best digital access and experience in our Consumer segment and on finalizing migrations and increasing product density in our Business segment. In Wholesale, we remain committed to our open access policy. We aim to further simplify and streamline our operating model, supporting new ways of working and a next wave of cost savings. Together, these strategic priorities support our ambition to connect the Netherlands for a sustainable future, grow mass-market services revenues (Consumer market, SME and Wholesale) and EBITDA, and provide attractive shareholder returns.

To maintain our leading position, we are working to provide customers with superior networks and attractive portfolios at a fair price. In addition, we will leverage the growing value of our network and relevant partnerships to provide premium connectivity services and best-in-class digital experiences. We are enhancing the digital infrastructure of the Netherlands by building a converged fiber and 5G network. We obtained an attractive combination of frequency licenses in the Dutch 5G auction enabling us to further increase mobile data speeds and offer new and differentiated 5G services across the country.

We have embedded a strong business ethics standard in our way of working and it goes without saying that we comply with all relevant legislation. The Dutch government has issued a policy that enables it to exclude suppliers from certain countries from critical parts of telecom networks in the Netherlands. Further

Our purpose and the world around us

regulations on technical and other requirements for operations are expected in 2022. KPN has stated it will comply with Dutch rules on this matter. To ensure compliance and continuity of our operations, we implemented a structured process to minimize any financial and operational continuity risks arising from additional regulations on technical and other requirements expected in the coming years.

With regards to our wholesale operations, the Netherlands Authority for Consumers and Markets (ACM) discontinued planned assessments of regulated tariffs following the ruling by the Dutch Trade and Industry Appeals Tribunal on wholesale fixed-access regulation. Although KPN's fixed-access network is no longer regulated, we will continue our open wholesale policy.

Resulting from an EU Directive, the Dutch government implements the European Electronic Communication Code (EECC). The still partial implementation of the code in the Netherlands does include a new instrument for regulators – the so-called symmetrical access regulation – which means that access obligations to any network may be imposed if there is no economically viable alternative. Even though KPN is currently not regulated, we stand by our open network policy, which is built on reasonable and non-discriminatory terms. As such, we believe we offer an economically viable future alternative to current and future wholesale partners and therefore already operate in line with this upcoming regulation.

Technology trends

To be successful, it is crucial to act proactively on broader technological developments. Major technological developments occurred in 2020: 5G conquered the world and there was enormous progress made in the field of quantum technology, which we believe has huge potential, and in developments in human-artificial intelligence (AI) interactions that will make our lives easier. We make sure that new ideas, services and functionalities are available to our customers. In order to do that we identify and monitor new developments at the earliest possible stage.

These technological advances prompt new questions such as how will the privacy of our customers be affected by developments related to the use of personal data or how can the spread and impact of online disinformation be tackled? We also experienced renewed concerns in 2020 around the perceived health effects of our operations, in particular related to the roll-out of 5G. We are concerned about the increase in cases of arson on mobile phone masts. This kind of extreme vandalism impacts the mobile coverage in a region, creating a risk that emergency services in the area may be unreachable, if called from a mobile phone. Cooperating closely with peers and the government, we continue to speak to stakeholders about these developments and share information on our website.

SWOT

Our Strategy, Risk and other departments continuously review our business model and adapt our resources and capabilities to counter risks and create new opportunities. The overview on the next page summarizes our main insights and position in the environment in which we operate.

Overview of our strengths, weaknesses, opportunities and threats

Strengths that makes us stand out

Network

- A highly invested network, aimed to meet the demands for high network quality and reliability.
- Strong competences in network security and cybersecurity to ensure customer data privacy.
- Trusted provider of critical communication services to governmental bodies.

Business activities

- A strong brand reputation.
- Open network policy, wholesale access to third party operators.
- Attractive combination of bundled services and broad business and consumer service offering for fixed, mobile and IT services.

Corporate social responsibility

- Externally recognized for ESG contribution, as illustrated by positive benchmark results.
- An attractive employer with skilled and motivated employees.

Financial

- Robust balance sheet and liquidity position.
- Cost control resulting in strong EBITDA AL margins.

Opportunities for growth

Network

- Accelerating fiber roll-out and improving penetration rate.
- Technological developments in infrastructure, software, 5G, IoT and virtual networks accelerate innovation.
- Leveraging the strength of our network when security is increasingly becoming a basic foundation of any digital service/network.
- New technologies enable us to manage network capacity in a dynamic way.

Business activities

- Capitalizing on the growth in the importance of communication networks and applications due to the increased trend of working from home.
- Digitalization of customer interactions offers opportunities to improve processes and reduce cost.
- Leverage strong distribution, customer and household relations footprint to develop new business models and deliver more added customer value.
- Leveraging data and analytics capabilities to create more value in the current business model and develop new business models.

Corporate social responsibility

- KPN's own new way of working and working from home contributes to cost reduction and lower emissions.
- Substitution of existing products and services with alternatives in the short term with lower greenhouse gas emissions.

Weaknesses to improve

Business activities

- Extensive customized business market portfolio and processes for large enterprises.
- Relatively high cost to serve due to complex IT systems and processes.
- Length of time it takes to simplify and digitalize customer front-end in B2B solutions.
- NPS Consumer is under pressure.

Corporate social responsibility

- Gender diversity, especially in middle management functions.

Financial

- Elevated Capex level driven by accelerated fiber roll-out

Threats we face

General

- COVID-19 effects will influence the economy and society with uncertainty around economic activity.
- Challenging labor market for sufficient qualified staff.
- Potential restrictive regulation in the EU and the Netherlands for telecommunication companies.

Network

- Dependency on suppliers that are subject to international geopolitical discussions.
- Confidentiality, integrity and availability of networks, systems or customer data need continued attention.
- Precipitation impact on our technical infrastructure due to medium-term impact of climate change.

Financial

- Increased price of energy commodities in the medium term due to embedded greenhouse gas regulation tariffs.

Competition

- Fierce competition from international network providers, OTT technology parties and local access networks.
- Disruptive technologies and new business models that we need to adapt to.

Strategy, key performance and value creation model

Accelerate to grow

Since the start of the latest strategic program in 2019, we have become a much leaner, faster and simpler company. In 2020, we continued to execute our strategy as planned and delivered robust performance. We have built a strong foundation for the years to come.

Strategic pillars 2019-2021	Main pillars	KPIs	Original goal 2021	Progress YE 2019	Progress YE 2020	Reference to chapter
Building the best converged smart infrastructure	– Acceleration of fiber roll-out	– FttH households compared to end 2018	+1 million	+~120k	+~440k	**Network infrastructure (p.33)**
	– Full mobile network modernization	– Mobile network modernization: 5G ready	100% 5G ready	641 mobile sites modernized	2,803 mobile sites modernized	
	– Moving to all-IP	– Households at 1Gbps[1]	~45%	31%	35%	
		– Households at 200Mbps	~70%	61%	65%	
		– Virtualized network functions	~50%	26%	22%	
		– All-IP	100%: 775k legacy lines to be migrated	~175k legacy lines vs ~775k legacy lines end 2018	~43k legacy lines vs ~775k legacy lines end 2018	
Focusing on profitable growth segments	**Consumer** – Best household access and customer experience – Growing converged customer base and product penetration – Focus on delivering value	– Converged households	+300k	+59k	+62k	**Customer value (p. 20), Products and services (p. 36)**
		– Postpaid base converged	70%	63%	65%	
	Business – Converged simplified product portfolio – Transformation of operating platform – Lean and digital operations	– Migrate SME base from legacy	100%	74%	87%	**Customer value (p. 20), Products and services (p. 36)**
		– Migrate LE base from legacy	100%	53%	76%	
		– Value over volume in LE & Corporate	N/a	Significantly less revenues from low margin hardware deals	Ongoing	
		– End-to-end adj. EBITDA AL	Stabilization	In progress	Delayed, primarily due to COVID-19	
		– Reduce IT systems	By 75%	Ongoing IT integration	Ongoing IT integration	
Accelerating simplification and digitalization	– New multi-year opex reduction program – Lean operating model – Digital customer journeys – Automated back-end tasks	– Net indirect opex savings	~€ 350m (2019 – 2021)	€ 141m	€ 278m	**Shareholder value (p. 24), Customer value (p. 20), Focused innovation and digitalization (p. 42)**
		– From 20 to 4 converged IT stacks	2	In progress	In progress	
		– From 5 networks to 1 core network	1	3	3	
		– Simplified end-to-end organization	N/a	Disposals of NLDC, KPN Int, Argeweb & KPN Consulting	Ongoing	

1 Based on FttH broadband speed potential, KPN will make this available for designated FttH areas.

In November 2020, one year before the end of the prior strategic period, KPN presented its Strategy update 'Accelerate to grow'. This is not a change of direction, but a reiteration and an even stronger focus on certain strategic elements where we feel we can and need to accelerate.

As the digitalization of our society accelerates, so do we. We are accelerating the roll-out of fiber, improving the digital customer experience and reinventing the way we work. In doing this, we are contributing to the Dutch digitalization wave, enabling KPN to grow again.

Strategic pillars 2021-2023	KPIs	Ref. to chapter
Leverage & expand superior network – **Covering the Netherlands through fiber** – **Low latency services via 5G and edge computing**	Connecting Dutch households with FttH; 2023 goal >50% coverage Differentiated 5G services for B2B customers Return on capital employed	Network infrastructure (p.33) Products and services (p. 36)
Grow & strengthen customer footprint – **Outstanding digital experience** – **Differentiated services for families and businesses**	Growth of mass-market (B2C, SME and Wholesale) service revenues and EBITDA B2C service revenue growth as per end 2021 SME service revenue stabilization as per end 2021 Continued Wholesale revenue growth Net Promoter Score	Customer value (p. 20), Products and services (p. 36)
Simplify & streamline operating model – **New ways of digital working** – **Continue strong and disciplined cost control program**	Net indirect opex savings of >€ 250m (2021 - 2023)	Shareholder value (p. 24), Customer value (p. 20), Employability (p. 51)

Ambition

Connect the Netherlands to a sustainable future

- **Leading the Dutch digitalization wave**
- **Recognized as ESG (Environmental, Social and Governance) front runner**

Grow mass-market service revenues and EBITDA from end 2021

- **Fiber fueling household revenue growth in B2C**
- **Segmented B2B approach, stabilize SME first**

Provide attractive shareholder returns

- **Progressive dividend, +3-5% annually**
- **Covered by growing free cash flow**

Strategy, key performance and value creation model

Financial key performances

Adjusted EBITDA AL[1,2]
€ million

2,317
2019

2,320
2020

Free cash flow[1,3]
€ million

726
2019

765
2020

Capital expenditure[1]
€ million

1,115
2019

1,147
2020

Regular dividend per ordinary share
(in cents)

12.5
2019

13.0
2020[4]

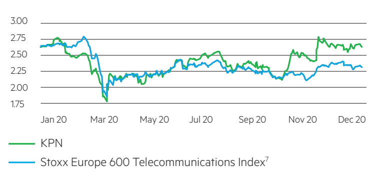
Return on capital employed[5]

9.3%
2019 Restated[6]

10.1%
2020

Total shareholder return

KPN 0.1% 2020   Telco index -12.1% 2020



Net indirect opex savings
€ million

141
2019

137
2020

1 Based on continuing operations.
2 KPN defines EBITDA as operating result before depreciation (incl. impairments) of PP&E and amortization (incl. impairments) of intangible assets. Adjusted EBITDA after leases are derived from EBITDA and are adjusted for the impact of restructuring costs and incidentals ('adjusted') and for lease costs, incl. depreciation of right-of-use assets and interest on lease liabilities ('after leases' or 'AL'). Reconciliations can be found in Appendix 1.
3 Free cash flow excluding Telefónica Deutschland dividend.
4 To be proposed at the AGM on 14 April 2021.
5 Net operating profit less adjustments for taxes divided by capital employed.
6 Comparative figures have been restated as ROCE is now calculated on a 4-quarter rolling basis.
7 Rebased to KPN's closing price of the last trading day of prior year.
8 Increased due to new proposition of 1Gbps.
9 Estimated energy savings 2019 are restated. See Chapter Environmental performance and responsible supply chain and Appendix 3 for further details.
10 As percentage of broadband customers.

Non financial key performances

Network infrastructure

 # FttH households

2018	2019	2020
2.35m	2.47m	**2.78m**

Mobile sites modernized

2018	2019	2020
N/a	641	**2,803**

Network speed

Average maximum download speed broadband fixed per year-end

2018	2019	2020[8]
221Mbps	236Mbps	**337Mbps**

Average 4G download speed mobile network per year-end

2018	2019	2020
53Mbps	68Mbps	**97Mbps**

Energy consumption in petajoules

Energy consumed by KPN

2018	2019	2020
2.841	2.728	**2.428**

Estimated energy consumption saving by KPN customers

2018	2019[9]	2020
2.511	3.437	**7.507**

Converged services

Households in fixed-mobile bundles[10]

2018	2019	2020
46%	49%	**50%**

Postpaid customers in fixed-mobile bundles

2018	2019	2020
57%	63%	**65%**

Customer satisfaction

Net Promoter Score in Consumer

2018	2019	2020
14	19	**11**

Net Promoter Score in Business

2018	2019	2020
-1	-4	**-2**

Employee engagement

2018	2019	2020
77%	77%	**86%**

Reputation

RepTrak Pulse score

2018	2019	2020
72.6	74.4	**76.0**

Strategy, key performance and value creation model

Value creation model

Our valuable assets

- Loyal customers and digital era demands (p. 62)
- Strong partnerships and supplier base (p. 62)
- Future-proof infrastructure and mobile spectrum (p. 62)
- Skilled and motivated workforce (p. 62)
- Solid financial basis (p. 62)
- Green energy (p. 62)

Our purpose:
We go all out to connect everyone in the Netherlands to a sustainable future (p. 9)

Our belief, our vision and our ambition:
We believe connections bring us closer and take us further. To make the Netherlands the most connected country in the world and to become customers' preferred partner in digital life.

Strategic priority is accelerating to grow:
- Leverage and expand superior network
- Grow and strengthen customer footprint
- Simplify and streamline operating model (p. 12)

Core activities:
- Invest in a future-proof secure, reliable, high-quality network.
- Offer differentiated services with outstanding digital experience.
- Automating and digitalizing where possible, simplifying IT stacks, networks and our organization.

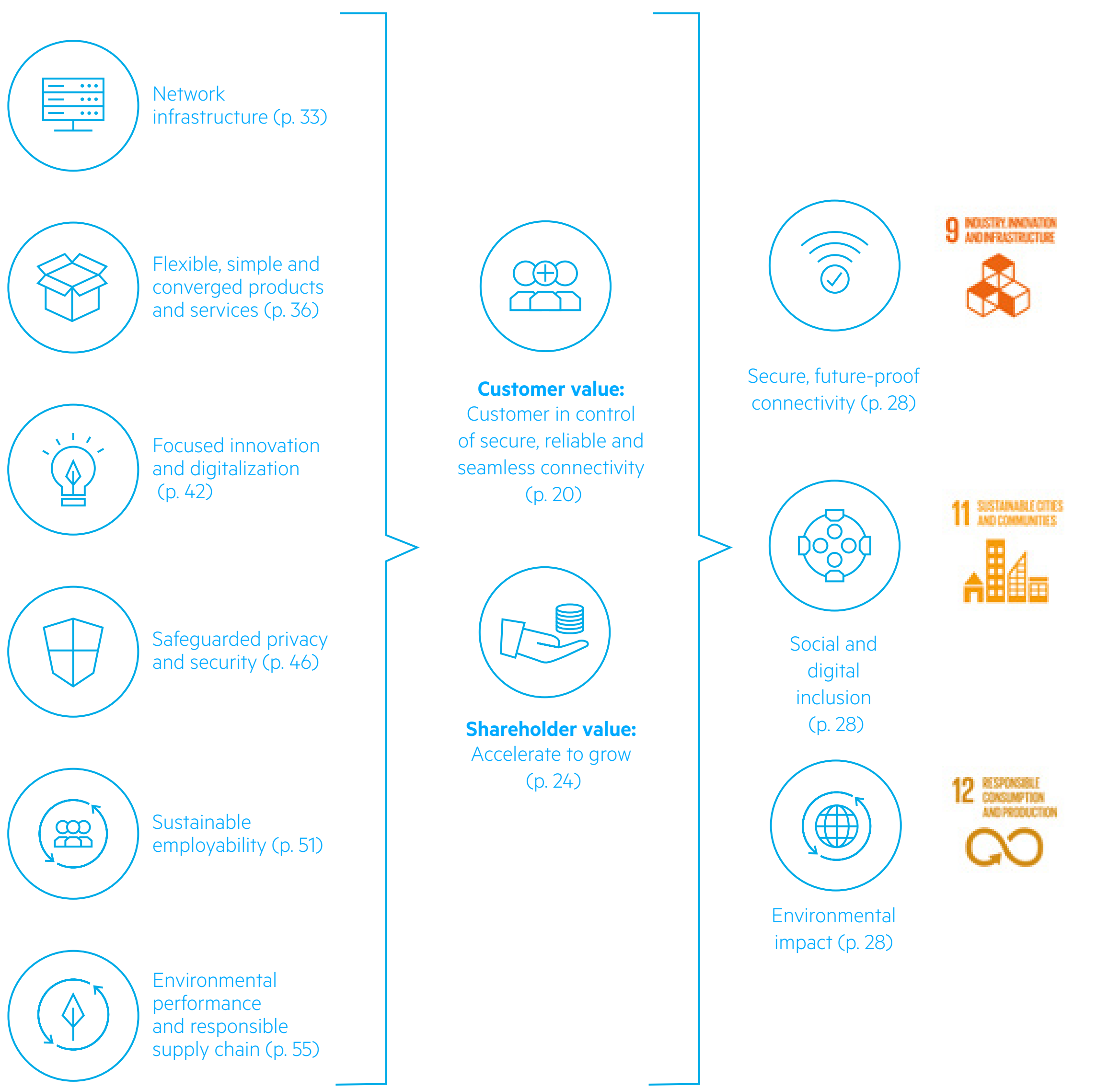
How:
Every day we build the network of the future;
A network of people and technology with solutions that move us forward.

Governance (p. 66)
Compliance (p. 73)
Risk and control (p. 73)

Our performance

Value we create

Long–term impact on society



Healthcare case: Onze Lieve Vrouwe Gasthuis (OLVG)

“All hands on deck”

Paul Bresser - CMIO, OLVG Hospital Amsterdam
Maurice van den Bosch - Chairman of the Board OLVG Hospital Amsterdam

"In the first week of March 2020, frustration reigned supreme at the OLVG. The approach to COVID-19 was like the plague in the Middle Ages: we locked people up and tried to prevent contact. There was nothing else we could do. We looked at the hospital in Den Bosch, where it was practically all hands on deck. Patient flow was unmanageable. We asked ourselves whether we could use new technology to regulate that flow and prevent healthcare from collapsing.

We were already familiar with digital care, such as apps that allow you to monitor and coach patients with a chronic condition. But it had a high bar for patients and healthcare providers. Contact would be less personal and it was complicated to set up.

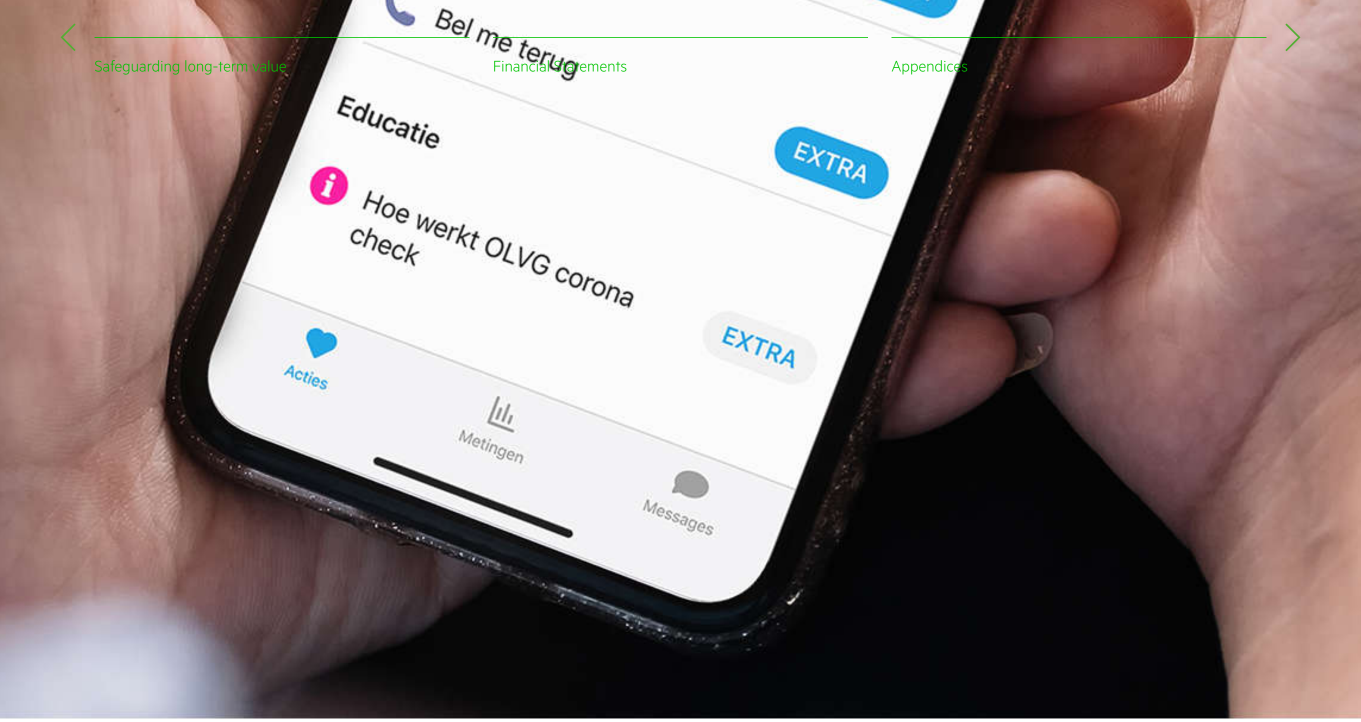
During those first weeks in March, however, we had to be able to plan the care. And so the Corona Check app was born. Instead of people with symptoms going to their general practitioner or emergency clinic of their own accord, with all the attendant consequences, we were able to monitor them advise them based on the information they entered into the app and also schedule appointments if needed.

We had call center teams of up to 30 people at the ready at locations all over the country. They spent all day on the phone, mainly reassuring people. Of course that meant that we needed many of additional phone lines, making KPN indispensable for us.

“The worries about digital care have largely been dispelled”

The Corona Check app has now taken on a different form, as there is a lot more coronavirus testing is being done. What's more, it’s clear that concerns about digital care have largely been dispelled, both among patients and healthcare staff. It's nice to see that we were able to contribute to that."

Nynke Dijkstra - Research nurse OLVG Hospital Amsterdam
"Initially, there were eight of us reviewing the reports that came in via the Corona Check app. But that number soon increased. People were panicking: they wanted to know whether they had COVID-19. Thanks to the app they felt that someone was looking out for them, and that was reassuring to them."



Vinood Mangroelal - EVP KPN Health

“Digital healthcare is here to stay”

"Just before the first lockdown, KPN Health saw an immense increase in requests. These ranged from additional infrastructure capacity and emergency facilities to extra mobile phone masts. Everything was geared to keeping healthcare running. For employees it was a very intense time that sometimes passed in a blur. Not for a moment, however, did anyone decide that something could wait until tomorrow.

At one point we were asked by a hospital board to enable video communication in their intensive care unit. Family visits were no longer permitted and this technology allowed patients to say goodbye to family. That really made an impression on us and reminded us even more that we are doing work that really matters. It also inspires you to get things done.

Digitalization has accelerated enormously over the past year, principally because there was simply no other way. For example, there was an approximately 60% increase in general practitioners using video consultations because they needed an alternative way of communicating with their patients. Many of the developments in digital healthcare will continue and I expect it an even greater boom.

COVID-19 has put tremendous pressure on the accessibility of healthcare, so it's important to continue digitalizing while maintaining personal contact to safeguard accessibility. Although that was already the mission of KPN Health, it has now become even more relevant than ever. We see clear opportunities for scaling up facilities such as video communication, remote measurements and smart data exchange so that, for example, certain triage does not have to be done twice. We're learning from the crisis and helping healthcare organizations to innovate further."

Our value for stakeholders: Customer value

Providing a vital service to society

We engage with our customers to understand their increasing dependence on digital connections and their growing expectations. We accelerated our strategic plan, in which more digitalized customer journeys play a major role. We recognize the need to act swiftly on increased customer demands.

KPI	Result 2020	Result 2019
NPS Consumer	11	19
NPS Fixed-Mobile[1]	18	30
NPS Business	-2	-4

1 Only refers to customers that have a fixed and mobile service at KPN or a fixed and mobile service at Telfort

Engaging with customers

2020 proved to be a unique year, where people massively intensified and changed their 'connected' lives. To respond to this changing way of working and living, we are investing in a digital omni-channel experience that gives customers full control and enables them to easily activate and manage products and services themselves. To offer an excellent experience, we need to improve and digitalize our customer journeys. Changing the way we interact with customers will help to achieve this.

It is essential that we engage with customers to understand what drives them, what is important in their connected lives and consequently what role KPN may play. For this, we use various types of market and customer research alongside our daily contact with customers.

We revamped our customer feedback program in 2020, making the process easier and more personalized. We made giving feedback more rewarding for customers by following up on open questions and feeding it back directly to employees across the organization.

We now measure the customer experience of our seven most important customer journeys from start to finish. This ensures our customer feedback better reflects customers' overall experience during their KPN journey and gives us better insights to enhance that journey.

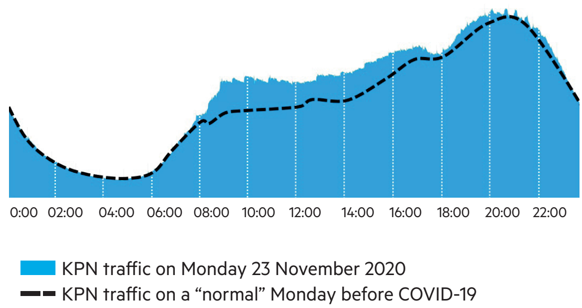
Due to COVID-19, we had to adapt the way we performed our in-depth customer interviews. We used our KPN Experience Lab for these interviews in 2019, but in 2020 we largely went virtual with our customer research, interviewing more than 400 customers via video chat.

In 2020, more than 1.2 million customers responded to our surveys, providing feedback that we are using to improve customer experience.

CHALLENGE

We did not want to expose our employees to the COVID-19 virus, but at the same time our customers needed our services more than ever during the pandemic. We asked ourselves: should we close our stores and keep our engineers away from home visits? We decided to gradually reopen our stores, ensuring that everyone followed the guidelines of the Dutch National Institute for Public Health & the Environment (RIVM) so that our stores were safe for both customers and employees. Installation and service engineers carried out all their activities while taking the necessary precautionary measures, such as wearing face masks.

Download KPN traffic

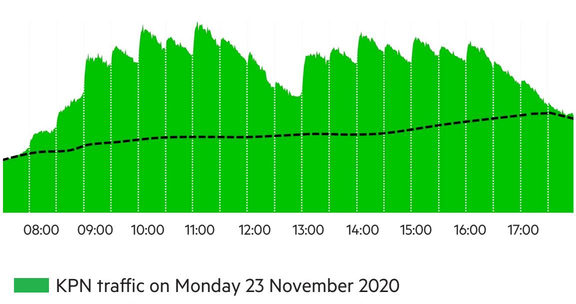


Consumer

In 2020, we continued to execute our strategic plan to simplify our brand portfolio and focus on our flagship brand KPN. The huge impact of COVID-19 meant we had to change our approach, however. People started working en masse from home, children were spending more time online for school and care was often provided remotely. We were forced to speed up plans to simplify and digitalize our customer service and to step up our digital customer service.

We saw a sharp increase and shift in traffic within our network: more from home, less from the office. We also saw a significant increase in mobile traffic and a rise in internet traffic. Clear home working patterns can be seen in outgoing internet traffic (upload), peaking every half hour and full hour when homeworkers enter a video call again. As the network of the Netherlands, we did everything we could to ensure that everyone remained connected. At the same time, we saw a significant increase in our fiber customers during the pandemic, while the number of customers using DSL broadband decreased.

Upload KPN traffic



To meet the needs of the increased number of people working from home and staying at home, we offered customers several products and services free of charge, such as additional TV channels and free anti-virus scanners. We provided 1,000 4G routers to families with few digital resources so that children could attend classes online. We gave KPN pensioners the opportunity to speak to a KPN employee to fight loneliness.

KPN also supported a number of initiatives in the cultural sector, helping provide a free platform for art, music and other forms of culture online.

Our engineers, who are more at risk of infection because they usually visit six to eight customers daily, drastically reduced their number of physical visits. Instead, they helped customers via video calls, remotely resolving problems such as Wi-Fi coverage or a malfunctioning modem. Customers appreciated this service, which allowed us to offer a shorter time-to-serve and reduce the cost-to-serve because of less travel time.

The pandemic showed that our staff is highly flexible and multi-talented. When our KPN stores experienced a significant drop in customers because of COVID-19 restrictions, we decided to re-train staff as customer service agents. Within a short period, they were able to support our customer service platform during slow shop hours and take calls from customers, helping resolve issues or providing information remotely. We found that a majority of the queries for which customers used to visit a shop could easily be dealt with remotely. We believe a significant percentage of these queries will not return to our stores once restrictions are lifted, although we expect customers will still prefer to visit our stores for certain services, such as mobile phone issues or purchases.

These experiences with increased digital customer service demonstrated that customers are ready for expanded remote digital support. We therefore decided to make some of the

Our value for stakeholders: Customer value

ad-hoc measures permanent and to accelerate digitalization of our customer service platforms whenever possible. At the end of 2020, KPN started a new store formula, based on the most recent insights into how people shop physically in combination with online. Customers can view, experience and buy products in the store, but they also have the option of a video call from home with an in-store employee. Where possible, in-store staff will continue to support their customer service colleagues when capacity is needed. We also launched an improved MijnKPN app to help accelerate the digitalization of sales and service processes.

As internet use grew significantly, with more people working from home and using online entertainment services, so too did the number of customer enquiries and complaints. We registered an increase in the number of calls to our service center of more than 10%. Although we ramped up service center capacity quickly, in part by mobilizing in-store staff, we were not able to provide the desired service levels, unfortunately. We also continue to experience price pressure at the lower end of the mobile market.

Our service formula was also impacted by the first lockdown in Q1 and Q2, which saw customers having to wait longer for certain service requests. Our focus in Q4 was to restore our previous service levels and quality. During the second half of 2020, the number of customer complaints decreased and processing time fell.

In spite of our efforts to meet increased customer demands, the setback led to a decline in Consumer NPS. Our Consumer NPS was also negatively impacted by Telfort customers who were migrated to KPN. In general, it is too early for these customers to recommend KPN. Starting from the end of Q3 2020 the iTV menu was changed and our iTV platform had performance issues, leading to a lower than normal customer experience of our iTV product. As a result of all of the above factors, the Consumer NPS decreased to 11 in Q4 2020.

Business

We started 2020 with a continuation of our customer value over volume strategy and focus on migrating customers to our future-proof portfolio. However, during lockdown, the focus of our Business segment shifted to ensuring customers could maintain their business operations, for example by upgrading their networks and security, and boosting their capacity to enable them to move their activities online. We rolled up our sleeves to achieve this by prioritizing the handling of these requests.

We saw accelerated mass adoption of digital tools by companies. Depending on where our Business customers were in terms of digital maturity when the pandemic struck, we worked to protect them as required and ensure they could be as productive as possible.

We provided customers in our Business segment with free support to help manage the crisis in the Netherlands. This included free conference-calling, support with working from home, and free security and digitalization advice for the healthcare sector. KPN did not charge for out-of-bundle costs for our KPN EEN MKB and Corporate customers, and SME suppliers with a limited annual spend were paid within 30 days to alleviate financial distress.

We provided the healthcare sector with workplaces to meet the demand for increased capacity at emergency locations. We issued hundreds of tokens to doctors to make working from home possible and offered our Zorg Messenger service to hospitals so that patients in intensive care could make video calls to loved ones. We set up medical call centers and conference call options for hospitals, and created additional network capacity where necessary.

Revenues for our Business segment fell in 2020 because of lower roaming revenues (due to less international travel), less use of some network services (e.g. Wi-Fi hotspots), and customers postponed IT projects. Customers also postponed migrations that required physical access to offices. The impact of these developments was partly offset by additional cost savings and a good base development.

The digital transformation also has major implications for how KPN works. We are constantly trying to reach our customers in new and better ways – such as last year's first-ever online version of our The Digital Dutch event, with considerably more Business customers than in 2019.

In addition, more customers were migrated from legacy to the target state portfolio to enable use of the latest technologies, products and services. We will continue to simplify and digitalize products and services in our Business segment in 2021.

Overall, the NPS of KPN Business segment increased to -2 in Q4 2020. This improved NPS is partly due to customer migrations to the target portfolio, where NPS results are higher than for the legacy portfolio. The migration of Telfort customers to KPN had a negative effect on NPS. COVID-19 caused an increase in customer expectations, putting extra pressure on our customer service. We are continuing with the migrations to the target portfolio, with a positive impact on NPS.

The rise in the NPS shows how much our customers appreciate the reliability and stability of our network and the quality of our products.

Wholesale

Through our Wholesale segment, we provide third-party telecom providers with access to our widespread fixed and mobile networks, enabling their end-customers to connect safely and reliably.

Both the first and second lockdown caused spikes in voice traffic, for which KPN worked day and night to ensure sufficient capacity. We saw organizations shift significantly from voice to data calls, using internet-based services such as Microsoft Teams and Zoom. Wholesale played a key role in this through our internet and interconnect exchange NL-ix, which handles data traffic.

NL-ix managed a huge increase in work and leisure data traffic, as home-working became the norm and people consumed more web-based content for longer periods. While higher voice traffic returned to normal levels after the spring spike and surged again during the second lockdown, data traffic remained at a higher level for the rest of the year. Our NPS for the Wholesale segment is relatively stable.

We swiftly created and reliably maintained special phone numbers for government and other official COVID-related services. We quickly laid the connections to link our network with those of other operators in the Netherlands.

Recognition

Reputation is important to KPN and we value how our stakeholders and Dutch society at large perceive us. Providing a service that is vital to society, we know that our image is not merely based on the quality of our products and services. People also base their judgment of KPN on the perception they have about the way we do business, how we act as a corporate citizen and how we behave as a large employer in the Netherlands.

In May 2020, KPN was recognized as the Dutch company with the strongest reputation in RepTraks industry-adjusted ranking. Ending with an overall score of 76 in the last quarter of 2020 (2019: 74.4) we saw a rise of 1.6 points with significant uplifts in five out of seven drivers. With a consistent lead in the benchmark, we maintained our track record as a company with a strong reputation.

Over the past few years, the way in which businesses act on ESG-related matters has become more important in terms of public perception. These matters continue to feature highly on the agenda of our Board of Management and we regularly monitor our ambitions to have a positive influence on society. This may also explain why KPN was awarded the number one position in the telecom sector on the Dutch Sustainable Brand Index, a perception-based ranking that reflects the public's view of how sustainable they believe a company to be.

Our value for stakeholders: Shareholder value

Providing attractive shareholder return

During 2020, we were able to make a valuable contribution to society by keeping the Netherlands connected. At the same time, we delivered on our financial outlook by continuing to post strong margins and cash generation and readily improving our ROCE in these dynamic times.

KPI	Result 2020	Result 2019
Adjusted EBITDA after leases[1]	€ 2,320m	€ 2,317m
Capex	€ 1,147m	€ 1,115m
Free cash flow (excl. TEFD dividend)[1]	€ 765m	€ 726m
Net indirect opex savings (cumulative since January 2019)	€ 278m	€ 141m

1 For definition see Appendix 5

Financial review

In 2020, we saw encouraging base developments in the Consumer segment. A strong inflow of fiber customers supported a stabilizing broadband base and our mobile postpaid base witnessed growth in the second half of the year. In the Business segment, we are on track to migrate our SME and LCE customers to a future-proof proposition, despite additional revenue headwinds due to COVID-19. In July we activated our 5G network - a milestone that holds the promise of new applications in industries such as health care and mobility. The Wholesale segment continues to show solid results based on our open network policy.

Revenues and other income

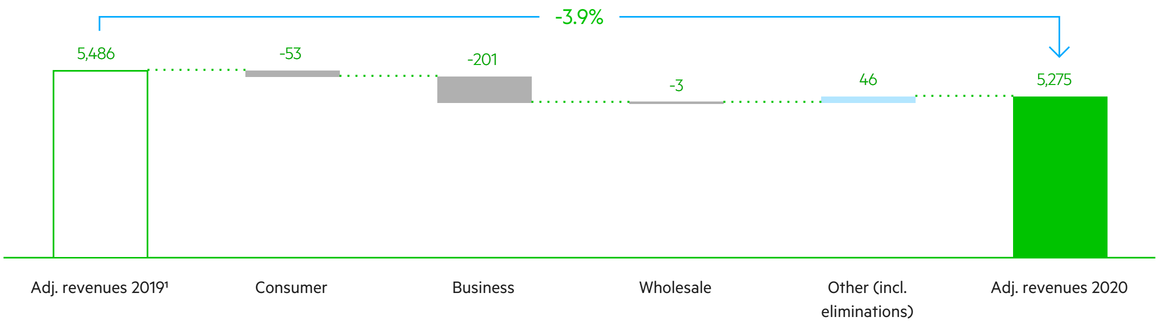
Adjusted revenues and other income declined 3.9% y-on-y in 2020. A part of this decline is related to the divestments of NLDC, Argeweb, International Network Services in 2019 and KPN Consulting in 2020. Due to COVID-19, KPN saw lower roaming revenues affecting Consumer, Business & Wholesale and the Business segment saw additional revenue challenges due to delayed IT projects.

Adjusted revenues in Consumer declined 1.8% y-on-y, driven by lower mobile revenues. Fixed revenues were broadly flat (0.1% y-on-y), since price adjustments effective 1 July 2020 were mostly offset by a declining customer base. Mobile service revenues declined 4.7% y-on-y, mainly due to lower postpaid ARPU and lower revenues from prepaid services.

Adjusted revenues for the Business segment decreased 9.9% y-on-y in 2020, largely driven by the disposal of subsidiaries. Adjusted revenues from Communication Services decreased 11% y-on-y. This was impacted by COVID-19 related measures resulting in lower roaming revenues, and by planned strategic actions, such as the migrations from traditional technology to a future-proof portfolio. Adjusted revenues from IT Services decreased 2.8% y-on-y, due to delayed IT projects, driven by COVID-19. Adjusted revenues from Professional Services increased 4.1% y-on-y, mainly driven by more project related work partially offset by delayed IT projects due to COVID-19.

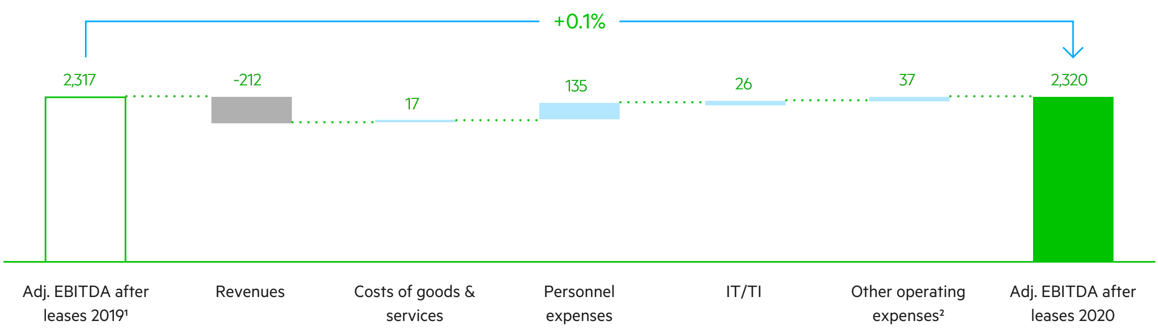
Adjusted revenues in Wholesale decreased 0.5%, driven by increased fixed and mobile revenues, which was fully offset by negative impact from the sale of NLDC.

Adjusted revenues
In € million



1 Adj revenues 2019 includes an (estimated) amount of ~EUR 80m relating to the divestments of NLDC, Argeweb, International Network Services and KPN Consulting. Adj revenues decreased by ~2.4% y-on-y corrected for these divestments.

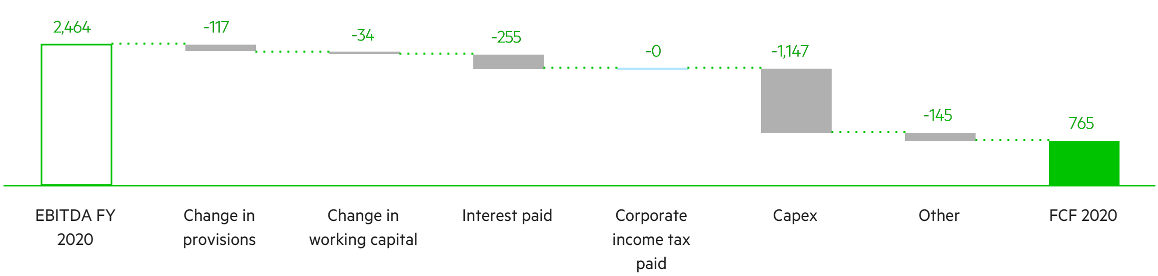
Adjusted EBITDA AL
In € million



1 Adj EBITDA AL 2019 includes an (estimated) amount of ~EUR 30m relating to the divestments of NLDC, Argeweb, International Network Services and KPN Consulting. Adj EBITDA AL increased by ~1.4% y-on-y corrected for these divestments.

2 Incl. lease-related expenses

Free cash flow
In € million



Our value for stakeholders: Shareholder value

Adjusted EBITDA AL

Adjusted EBITDA AL was flat y-on-y. 2019 adjusted EBITDA AL also included the results of the divestments NLDC, Argeweb, International Network Services and KPN Consulting. The effect of lower revenues was fully offset by strong and disciplined cost control. Cost of goods and services were 1.3% lower y-on-y, driven by lower COGS and lower traffic costs. Personnel expenses declined 13% y-on-y, mainly driven by the ongoing digital transformation of KPN, lower costs due to COVID-19 and the sale of KPN Consulting. IT/TI expenses declined 7.3% y-on-y, mainly driven by the simplification of networks, IT rationalization and contract renegotiations with suppliers, offset by additional hardware costs to support our employees in working from home.

In 2020, restructuring costs were recognized for the amount of EUR 36m (2019: EUR 115m). The net positive impact of incidentals in 2020 was EUR 28m, of which EUR 11m related to the book gain on sale of KPN Consulting and EUR 17m release of a revenue related provision. In 2019, the net positive impact of incidentals was EUR 215m, consisting of the book gains on sale of NLDC (EUR 171m) and International Network Services (EUR 25m), and release of a revenue related provision (EUR 20m). See Appendix 1 for the reconciliation of adjusted EBITDA AL. The adjusted EBITDA AL margin increased to 44.0% (2019: 42.2%), supported by a strong cost focus in all areas of the business.

For information on financial and operational performance per segment, see Note 3 to the Financial Statements.

Operating profit

Operating profit (EBIT) of EUR 912m was EUR 129m lower y-on-y, impacted by lower revenue related incidentals (EUR 215m in 2019 against EUR 28m in 2020), offset by lower opex related incidentals (EUR 6m in 2019 against nil in 2020). Excluding these incidentals, EBIT would have been EUR 53m higher y-on-y. This increase is mainly driven by EUR 79m lower restructuring costs offset by EUR 15m higher depreciation, amortization and impairment expenses.

Financial income and expenses

Net finance expenses decreased in 2020 by EUR 103m to EUR 269m. Significantly lower interest expenses on senior and hybrid debt due to redemptions and refinancings were partly offset by lower dividend income due to the sale of the Telefónica Deutschland stake in June 2019. The interest on lease liabilities decreased mainly as a result of the sale of NLDC in 2019 and KPN Consulting in 2020.

Income taxes

In 2020, KPN recognized a tax expense of EUR 88m (2019 EUR 49m). KPN's effective tax rate for 2020 is 13.7% (2019: 7.3%). Changes in the Dutch tax rates resulted in a benefit of EUR 67m in 2020, resulting in a lower effective tax rate than the Dutch corporate tax rate.

KPN continues to qualify as an innovative company and therefore benefits from the innovation box tax regime, a facility under Dutch corporate income tax law whereby profits attributable to innovation are taxed at an effective rate of 7%.

For 2021, the effective tax rate is expected to be ~22%. See Note 8 to the Consolidated Financial Statements for further information on KPN's tax position.

Net profit

Net profit of EUR 561m was EUR 54m lower compared to 2019. In addition to the incidentals that impacted operating profit, net profit was further impacted by a EUR 67m positive revaluation of KPN's deferred tax asset (EUR 48m in 2019) and EUR 95m additional finance expenses related to a bond tender in 2019. Excluding such incidentals, net profit would have increased by ~EUR 42m net of tax, mainly driven by lower finance cost due to debt redemptions and refinancing.

Free cash flow

Free cash flow of EUR 765m increased 5.4% y-on-y. This was the result of lower cash restructuring, less cash interest paid due to debt redemptions and refinancing, and lower cash taxes paid. These factors were partly offset by increased Capex, higher investments in working capital, and additions to provisions. FCF margin improved 128 basis points to 14.5%.

Solid financial position

KPN has a strong balance sheet and solid liquidity position. As per 31 December 2020, net debt amounted to EUR 5.3bn, EUR 0.2bn higher compared to the end of 2019. The increase in net debt was mainly driven by the spectrum auction payment , partly offset by positive retained cash flow after dividends. KPN's committed liquidity position consisted of EUR 864m in cash and short-term investments and an EUR 1.25bn undrawn revolving credit facility.

KPN remains committed to an investment grade credit profile and aims for a leverage ratio of <2.5x in the medium term. As per 31 December 2020, the leverage ratio was 2.3x (2019: 2.2x). The leverage ratio takes the equity credit on hybrid bonds into account leading to 0.2x lower leverage.

The weighted average cost of senior debt declined by 30 basis points y-on-y to 2.9% (2019: 3.2%) mainly driven by favourable refinancing conditions.

Capital allocation and shareholder remuneration

KPN continuously invests in its network infrastructure, products and customers, resulting in high-quality fixed and mobile networks. KPN continues to focus on improving the customer experience by further investing in the capacity, reliability and stability of its integrated network. KPN's free cash flow generation forms the basis of its policy related to progressive regular dividends.

KPN intends to grow its regular dividend per share with 3-5% annually, supported by growing free cash flow. KPN intends to pay a regular dividend per share of EUR 13ct in respect of 2020. The final regular dividend of EUR 8.7ct per share is subject to shareholder approval at the Annual General Meeting of Shareholders on 14 April 2021.

Outlook

	Achievements FY 2020	Outlook FY 2021	Ambitions FY 2023
Adj. EBITDA AL	€ 2,320m	~€ 2,345m	>€ 2,450m
Capex	€ 1,147m	€ 1,200m	€ 1.1bn - € 1.2bn
Free cash flow	€ 765m	~€ 765m	>€ 870m
Regular DPS	€ 13.0ct[1]	€ 13.6ct +4.6% y-on-y	Progressive dividend +3-5% annual growth

1 To be proposed at the AGM on 14 April 2021

Our value for stakeholders: Impact on society

Connecting the Netherlands to a sustainable future

In 2020, we saw our customers kept their businesses going, stayed connected and at the same time found opportunities to achieve major energy savings.

KPI	Result 2020	Result 2019
Energy savings by customers as % of KPN Group energy usage[1]	309%	126%
# of professionals with secure digital access to healthcare information	69,770	N/a

1 Energy savings by customers using KPN's ICT services more than doubled compared to previous year, mainly explained by the increasing use of our services by customers working from home in the COVID-19 pandemic. Estimated savings 2019 are restated from 93% to 126%. See page 58 and Appendix Environmental Figures Table 9 for further information.

ICT is key to solving societal challenges

We continue our strong support of the UN Sustainable Development Goals (SDGs) as a shared ambition for peace and prosperity for people and the plant. We have identified three SDGs we believe we can contribute to most, as an employer, business partner and telecommunication-services provider. Each of these SDGs presents an opportunity for us to provide solutions while reminding us to act in a responsible way. We have tied our strategy to each of the SDGs, summarized in the figure below. We work to embed ESG themes in the organization through secure future-proof infrastructure and by focusing on social and digital inclusion, energy efficiency and circularity.

Approach

Innovation gives meaning to technology. Our solutions aim to help the Netherlands progress and become safer and more resilient. We serve customers in the field of public security, defense, industry, transport and the maritime sector.

Innovation

Ambitions

Networks:
2023: >50% of households connected with FttH (2025: ~65%)
Security:
2021: 40% of Dutch municipalities monitored for cybersecurity attacks
Healthcare:
2021: 70,000 professionals with secure digital access to healthcare information

Key results

Networks:
2020: 2.78m households connected with FttH
Security:
2020: 5% of Dutch municipalities monitored for cybersecurity attacks
Healthcare:
2020: 69,770 professionals had secure digital access to healthcare information

Material topics

Customer interaction
Data & information protection
Network quality, reliability & availability

Long-term contribution

We help industries with innovative business models, based on the latest state-of-the-art technologies. We enable economic, environmental and social improvements.

Approach

Our technology contributes to a connected society. We provide internet access for all and promote social and digital inclusion. We provide the means to make cities smarter and cleaner, facilitating services such as smart parking and traffic lights, autonomous driving and crowd control.

Society

Ambitions

Social and digital inclusion:
2021: 12,500 clients and patients using healthcare facilities to live with more autonomy
2022: 100% of eligible chronically ill children provided with a KPN Klasgenoot

Key results

Social and digital inclusion:
2020: 11,815 clients and patients used healthcare facilities to live with more autonomy
2020: 100% of eligible chronically ill children were provided with a KPN Klasgenoot
2020: Teletolk carried out 30,925 mediations with more than 228,500 calling minutes
2020: More than 25,000 customers with problematic debts received support in line with the NVVK covenant (debt assistance, administration, etc.)
2020: More than 23,000 times customers referred to the NSR (Nederlandse Schuldhulproute)

Material topics

Customer interaction
Data & information protection
Network quality, reliability & availability

Long-term contribution

We strive to ensure that everyone can benefit from ICT, regardless of location, ability or age. We also want to take the Netherlands into the future by increasing the country's overall level of knowledge and thus boost support for new technology. We pay extra attention to fighting social isolation.

Approach

We deploy our infrastructure and networks to co-create solutions for more sustainable use of the environment. We reduce negative environmental impact by the way we produce, use and recycle our equipment.

Environment

Ambitions

Energy:
2030: Energy consumption by KPN Group reduced by 55% compared to 2010
2025: 20% CO_2e reduction in the chain (scope 3) compared to 2014
2050: Stay 100% climate neutral (scope 1 + 2)
Circularity:
2021: Reuse and recycling: 82%
2025: Circular Operations: ~100%
2025: Only fossil fuel free inflow cars
Helping customers save energy:
2021: Customers save as much energy as 200% of KPN Group's energy consumption

Key results

Energy:
2020: Energy consumption by KPN Group reduced by 37% compared to 2010
2020: CO_2e reduction of 17% in the value chain compared to 2014
2020: 100% climate neutral (scope 1 + 2)
Circularity:
2020: 81% reuse and recycling
Helping customers to save energy:
2020: Customers saved around 570 kilotons of CO_2e emissions, 1,798 tons of PM10 (particulate matter) and EUR 330m in energy costs by using KPN services and products.

Material topics

Supplier selection & good governance
Energy usage

Long-term contribution

We enable our customers to reduce energy consumption in their business while using our services

Our value for stakeholders: Impact on society

Sponsorship

Last year was meant to be a very special one for KPN in terms of sponsorship. As 'the network of the Netherlands', we were due to sponsor the Eurovision Song Festival, the Invictus Games and Sail Amsterdam. This in addition to recurring annual sponsorship activities: in the world of sport (the Dutch Premier League and the Royal Dutch Football Association, the KNVB), in the arts & culture sector (Rijksmuseum) and in society more broadly (KPN Mooiste Contact Fonds). All major attractions, adored by millions, for which KPN was set to provide the communications infrastructure.

All these activities would have contributed to our strong brand image, reputation and business, so from this perspective it was hugely disappointing that all events were canceled. Time for a new approach then, as KPN sponsors in both good times and bad. Guided by Dutch policy on COVID-19, we set about exploring what we could do under the new rules to see how we as a sponsor could offer support and continue to connect.

Sports

Soccer

KPN has been the main sponsor of the Dutch Premier League and partner of the KNVB since 2017. Together with the KNVB, we organized 'Trainen als Oranje' soccer camps for over 700 children. They experienced what it was like to live and train like a player on the Dutch national soccer team at the KNVB campus. The camps complied with all safety rules.

TEAMKPN Sportfonds

Through the TEAMKPN Sportfonds, KPN supports sports teams representing the Netherlands at top sporting events such as the UEFA Cup, the World Cup or the Olympics. Every year, the fund assists one or more Dutch national sports teams financially. In 2020, the women's hockey team, the men's bobsleigh team and the women's beach volleyball team were among the supported sports.

Ice-skating

After 10 successful years, we ended our role as main sponsor of the Royal Dutch Ice-Skating Association (KNSB) on 1 June. However, KPN did provide extra financial support to the COVID-hit skating association. To show its appreciation for our sponsorship, the association ran a farewell campaign, #kpnbedankt, featuring some of its top skaters.

Art and culture

Rijksmuseum

As a main sponsor, KPN aims to make the Rijksmuseum's collection accessible to everyone in the Netherlands, both in the actual museum and online. To ensure that art remains accessible and appealing to younger generations, KPN supports the Rijksmuseum in making all the museum's artworks available to view online for free in high resolution. To allow fans all over the globe to still enjoy their favorite art despite COVID-19, the museum launched online platform 'Rijksmuseum Thuis'. This platform was connected by KPN and includes features such as an app with a high-resolution digital version of all the museum's artworks and a multimedia tour through the Gallery of Honor.

Royal Concertgebouw

Music connects people, which is why we support the Royal Concertgebouw in Amsterdam with our IT products and services. This was especially important in a year where the Royal Concertgebouw had to close for several months due to COVID-19.

Depot Boijmans van Beuningen

KPN is a proud sponsor of the Depot Boijmans Van Beuningen in Rotterdam. Not only is this building storing the Museum Boijmans Van Beuningen's artworks during renovation of the museum, but visitors can also view the artworks here. The best works from KPN's own art collection will be stored and some of them displayed in this unique building, which is expected to open in 2021.

KPN Mooiste Contact Fonds

Connecting lonely people

With more than one million adults saying they feel lonely, loneliness is a major issue in Dutch society. Since 2007, KPN Mooiste Contact Fonds has supported vulnerable groups experiencing loneliness by financing a number of large projects together with NGOs. The foundation is supported by KPN employees, our IT resources and financial assistance.

The education and health sector in the Netherlands was severely affected when the COVID-19 pandemic hit. However, this allowed KPN to show how important 'staying in contact with each other' is. We brought the theater to nursing homes by making the show 'De stille kracht' available online together with Stichting Gouden Dagen and Internationaal Theater Amsterdam.

Through our KlasseContact project, we connect housebound chronically ill children with an IT device in their classroom, the KPN Klasgenoot. We connected 847 chronically ill children to KlasseContact so they could continue to follow their classes at school and stay in contact with their classmates.

The KPN Klasgenoot upgrade to version 2.0 was completed in 2020; it now runs on the latest hardware and software. We also developed the KPN Klasgenoot version 3.0 last year: a smaller, wearable version that comes with a battery, making it suitable for chronically ill secondary school children to follow their classes online with classmates all day.

In 2020, we received 94 voluntary contributions to KPN Mooiste Contact Fonds.

Cultural sector case: Rijksmuseum

Taco Dibbits - General Director, Rijksmuseum

“A Rembrandt in your living room”

"The Rijksmuseum is for the public. Our primary task is to show art to as many people as possible. So if that can't be done physically, you have to find other ways to do it and you have to be creative.

We've been digitalizing our collection for the past 10 years. We photograph all our artworks in high resolution and post them online for everyone to look at free of charge. Some people can't visit our museum because they live too far away or they have health issues, but we want to reach them too.

We had to close our doors during the first lockdown in March. All at once, our visitor numbers fell to zero - quite the surprise seeing as we welcomed 2.7 million visitors in 2019. Fortunately, we could quickly switch to opening our museum online and bring our collection to millions of people at home. Together with KPN, we expanded the basic structure that was already in place.

In addition to speeding up the digitalization of our collection, we started using the internet differently in 2020. For us, it's important to not only to reach our regular visitors, but also to attract new ones. We've learned to use it to engage in dialogue online as well, as that dialogue is something we actively want.

For example, we've updated our website with an interactive called "Stories". This allows people to explore our collection from various perspectives and make their own additions. We're using this new section on our website to try to start a conversation about art. After all, the beauty of an offline museum visit is the shared experience. Why should that be any different with an online visit?"

“We have learned to engage in dialogue online as well”

Nanet Beumer - Head of Digital, Rijksmuseum

"During the lockdown, we developed 'Ontdek Rijksmuseum Meesterwerken' together with KPN. This is a virtual tour of the Rijksmuseum's Gallery of Honor. We also created a video series in which curators talked from home about their favorite work, something that helped us win an audience we'd never reached before. We're also continuing to engage people online while the museum is still closed. That's very special."

Mark Versteegen – Head of Corporate Sponsorships KPN and Director of KPN Mooiste Contact Fonds

“A hybrid offering of live and online will certainly continue”

"2020 was supposed to be one of the finest years for events, both for the Netherlands and for KPN. We had some wonderful campaigns ready, but they all came to nothing.

As well as being the main sponsor of the Eredivisie Football and the Rijksmuseum, which had been expecting record visitor numbers, we were due to sponsor events such as the Eurovision Song Contest, the Invictus Games and SAIL Amsterdam. Together with partner KNVB, we'd planned a major European Championship advertising campaign featuring the Dutch national football team, but the lockdown meant that sport and culture suddenly became of secondary importance.

Despite the financial support they received, the sports and culture sectors had a particularly hard time in 2020. As a sponsor in good times and in bad, we felt it was our duty to think constructively about how we could help our partners. After reallocating the budgets, we all put our shoulders to the wheel and unleashed people's creativity. Thanks to the tremendous efforts of our colleagues and partners, 2020 became a year full of surprising online experiences.

We received many requests from vulnerable groups through KPN Mooiste Contact Fonds. Our Business segment helped arrange Wi-Fi and free laptops for a large number of students who didn't have them. We also collaborated with the International Theater Amsterdam and Stichting Gouden Dagen to make a production 'De stille kracht' available to 1,500 healthcare institutions and helped livestream a Christmas concert by Trijntje Oosterhuis from the Concertgebouw. The responses were heartwarming.

The accelerated digitalization that the Netherlands experienced in 2020 has been quite unbelievable. It has also created revenue models that offer a new perspective to sectors affected by the pandemic. We have seen that people are willing to pay for online visits and expect a hybrid offering of live and online experiences to continue in the future. In a certain sense, the digital experience has become a driver for an actual concert or museum visit.

Regrettably, 2020 was not the year we had hoped for. It did show, however, that it isn't just our technology that connects people but in particular it's our colleagues that connect people. Let's hope we soon have something to celebrate once again."

Our performance: Network infrastructure

Investing in our state-of-the-art networks

We intensified our efforts to leverage and expand our infrastructure in 2020 ramping up the roll-out of our fiber network, modernizing our mobile network, and further rationalizing our IT core.

KPI	Result 2020	Result 2019
# FttH households at year-end	**2.78m**	2.47m
Average 4G download speed at year-end	**97Mbps**	68Mbps
Average maximum download speed broadband fixed at year-end	**377Mbps**	236Mbps

The world is changing rapidly and above all becoming increasingly connected. Data demand continues to grow, with more and more people demanding fast and reliable internet now that working from home has become the new standard. Our network is being used extensively all over the Netherlands. The fact that we have not experienced network problems due to the increase in business and consumer traffic shows how stable and reliable our network is. For many people, having access to best-in-class digital infrastructure is more important than ever. Telecom companies play an important role in facilitating this by building a future-proof and secure infrastructure for future generations. Low latency and superfast networks are key to servicing our customers and being able to earn and retain the public's trust. This is an important license to operate. That is why the first pillar in KPN's strategy is to leverage and expand our network, something we will continue to do by expanding our fiber and 5G network in the Netherlands. Fiber forms the foundation of our 'Accelerate to Grow' strategy.

In recent years, we have built the state-of-the-art network architecture that we have today. The vast majority of our mobile sites are built for high capacity and connected to fiber. One-third of households in the Netherlands are connected to fiber, too. Rolling out fiber creates the opportunity to phase out a great deal of legacy infrastructure. Our 5G mobile network is preparing us for future data flows, real-time communication and massive IoT, and will facilitate new digital solutions for customers. While 4G and prior mobile generations were mostly about coverage, we believe 5G is mostly about industry solutions.

Fiber roll-out ramped up

Data usage will continue to grow enormously in the coming years, not only due to ever more intensive internet use and the increasing number of devices, but also because of the rise of gaming, virtual reality and artificial intelligence. Fiber optics enables this, delivering the best quality and most stable network. We significantly accelerated the roll-out of our fiber-optic network.

KPN's target is to equip more than 50% of Dutch households with fiber optics by the end of 2023, increasing this target to about 65% in 2025. We are investing heavily in our network by further accelerating the fiber roll-out and through the large-scale installation of fiber-optic networks. To facilitate this steep growth we rolled out fiber in 85 projects in all Dutch provinces last year, including the four largest Dutch cities: Amsterdam, Utrecht, Rotterdam and The Hague. By the end of 2020, we had connected 2.78 million fiber-to-the-home (FttH) households, up from 2.47 million a year earlier. We increased the number of new FttH connections to around 10,000 per week from 4,000 at year-end 2019. The average maximum download speed for broadband fixed increased to 377 Mbps by the end of 2020 from 236 Mbps at year-end 2019.

Our performance: Network infrastructure

At the end points of our fiber network - the last stretch between the network and individual households - we continued the switch from active optical network (AON) to passive optical network (PON) technology, allowing us to provide fiber connection to households in a faster and more efficient manner.

We are installing two PON technologies: G-PON, which enables 1 Gbps connections, and XGS-PON, which allows for 10 Gbps connections to homes. Although the 10 Gbps connections are not yet in use, installing the required equipment will prepare us for the future, when demand for broadband capacity will be even higher. We installed 1 Gbps PON connections for ~188k FttH households in 2020, up from ~7k in 2019. Some 93% of mobile sites were upgraded to 10 Gbps by the end of the year.

In July 2020, we successfully performed an end-to-end test using XSG-PON technology, reaching symmetrical download and upload speeds of more than 8 Gbps, demonstrating the super-high speeds our fiber network will be able to handle in the future. This was the first time in the Netherlands that we achieved such high speeds based on PON technology in a normal residential area.

Due to the changing dynamics in the Dutch construction market, we are securing long-term construction capacity to safeguard our roll-out plans. In addition to expanding our fiber network, we are digitalizing the process for business and retail customers, so they can order, activate and manage their fiber subscriptions online.

During the fiber roll-out, we sometimes operate in the same regions as other fiber operators, resulting in overbuild. To try to minimize the effects and risks of overbuild, we are cooperating with parties who also want to participate in a project where possible. Alternatively we also acquired other fiber networks.

The March-April lockdown caused a limited delay to our fiber roll-out, as we were unable to have engineers out on the streets, some of our sub-contractors struggled to survive and the supply of some components was threatened. We worked with our main contractors to maintain roll-out speed, capacity and consequently protect a significant number of jobs involved in the roll-out and maintain the expertise around network build-out in the Netherlands. We are still on track in our ambition to equip more than 50% of the Dutch households with fiber optics by the end of 2023.

CHALLENGE

We constantly work to improve and enhance the quality of the Netherlands' digital infrastructure through large-scale investments. Implementing these improvements can, however, create short-term challenges to the stability of our network. We try to solve this challenge by focusing on service quality and so ensuring customers encounter minimal disruption, even as we make improvements to the back-end of our systems that will bring long-term benefits.

Modernizing our mobile network

We continued modernizing our mobile network and making it 5G-ready. We upgraded 2,162 sites by fitting the latest mobile equipment, reaching 2,803 sites modernized by the end of 2020. This led to significantly improved download speeds and an increase in the energy efficiency of KPN's mobile network. The average 4G download speed increased to 97 Mbps by the end of 2020.

In conjunction with these activities, we also upgraded the backhaul of modernized sites. For sites already connected to fiber, we upgraded the backhaul from 1 Gbps to 10 Gbps. We also took special care of sites that are limited in bandwidth because the use an 'old' microwave link (maximum 370 Mbps). Where fiber was not possible, we replaced the microwave link with a new 4 Gbps microwave link. This work ensures that the backhaul supports 5G and is ready for the future growth of traffic.

We take a cluster-based approach to modernizing the network, swapping out whole neighborhoods or areas within a week. We made a conscious decision to begin with the bigger Dutch cities because we believe 5G is a technology mostly benefiting B2B customers.

We obtained an attractive combination of frequency licenses in the Dutch 5G auction, investing EUR 416m in 2020. These licenses, with a total 75 MHz of spectrum for a period of 20 years, will enable us to further increase mobile data speeds and offer 5G services across the country. We acquired 20 MHz in the 700 MHz band to offer high-quality 5G services with excellent coverage across the Netherlands, as well as 15 MHz in the 1,400 MHz band and 40 MHz in the 2,100 MHz band to immediately increase mobile data speeds for current 4G customers and for future 5G services.

We activated our 5G network on 28 July 2020, launching three services for business customers on 5G technology. The launch was well received by industry analysts. KPN has been recognized as 'outstanding', with the fastest, most innovative and the best data and 5G network in the Netherlands.

We are implementing the new 5G network with the utmost care as the safety of our networks for people and the environment is paramount. The 5G network uses less energy per gigabyte.

Although there is no scientific evidence that the electromagnetic radiation of mobile equipment or base stations poses any health risks, we take concerns about the introduction of 5G very seriously. We strive to be transparent about our 5G initiatives and technology. We monitor developments in scientific research into mobile technology and its effects and provide data for further scientific research. Like all mobile providers, we have signed an agreement with the government regarding maximum radiation levels. The basis for exposure limits has been determined by an international group of independent scientists, the International Commission on Non-Ionizing Radiation Protection (ICNIRP). KPN always adheres to the ICNIRP standards for electromagnetic fields.

The Dutch government has issued a policy that enables it to exclude suppliers from certain countries from critical parts of telecom networks in the Netherlands. Further regulations on technical and other requirements for operations are expected in 2022. KPN has stated it will comply with Dutch rules on this matter. For the renewal of our mobile core network, where all traffic flows of the network converge, we will collaborate with a Western supplier, Ericsson. We have set up a structured process to minimize financial and operational continuity risks. Public discussion about the issue continues, often fuelled by geopolitical tensions.

Modernizing to simplify

Modernization and simplification go hand in hand. To simplify our infrastructure, we aim to reduce the number of lines using older-generation technologies. So far these have declined from around 775k at the end of 2018 to ~43,000 by the end of 2020. We phased out ISDN (1/2) and PSTN multiple services in 2020 and will further rationalize our infrastructure by shutting down more services in 2021. We intend to shut down the 3G network in 2022.

In our copper network, we continued efforts to increase speed by switching customers from ADSL connections to faster technologies such as fiber and vectored VDSL. We continued our work to progress from 20 to four converged IT stacks (customer relationship management systems): two for our B2C segment and two for the B2B segment. This will bring increased efficiency for customers and for KPN.

Our performance: Flexible, simple and converged products and services

Optimizing value creation through integrated propositions

We continued to focus on our flagship KPN brand by pooling our resources, becoming more efficient and reducing costs. This enables us to offer future-proof solutions to a wider group of customers. We will continue our open wholesale policy, giving end-customers a free choice of providers.

KPI	Result 2020	Result 2019
% households in fixed-mobile bundles[1]	50%	49%
Converged penetration postpaid base	65%	63%
% LCE base migrated from legacy services[2]	76%	53%
% SME base migrated from legacy services	87%	74%
Wholesale base (broadband and mobile)	1,836k	1,718k

1 As percentage of broadband customers

2 Percentage as part of current base eligible for migration

Consumer

In 2020, we continued to execute our strategic plan to simplify our brand portfolio and focus on the strong flagship KPN brand. We started this process in 2019 with the aim of pooling our resources to become more efficient and reduce costs, while offering the best of our brands to a wider group of customers.

Improving speed and wireless coverage

The quality and reliability of our network is our top priority. We want to offer the best digital access, the best digital experience and the best digital third-party services. Customers expect more quality on broadband services, mobile network and TV in these challenging times. Also, increased customer usage leads to increasing service demand.

We have seen an increasing number of households move from copper to fiber connection, driven by our accelerated fiber roll-out. We are accelerating fiber roll-out to strengthen our digital access position and our fiber plans are fueling base growth.

Demand for SuperWi-Fi, our device to strengthen in-home Wi-Fi networks, grew during the pandemic. The success of our SuperWi-Fi proposition demonstrates the necessity of good Wi-Fi, driven by heavy internet use at home, often by several members of one household simultaneously.

With our digital access position driven by accelerating fiber, combined with our KPN SuperWi-Fi proposition, we can offer our customers high speeds and reliable connections throughout their homes.

Brand migration

The Telfort customer base has been successfully migrated to the KPN platform, meaning that former Telfort customers now have access to the same services and service level as the KPN customer base. After discontinuing our Telfort brand in 2019, we began reaping the benefits of this strategic shift in 2020. Sales of both our broadband and mobile services picked up, and cost savings began to materialize.

Fixed-mobile convergence

Introduced in 2019 as part of our strategy to converge, simplify and digitalize our products and services, KPN Hussel is a futureproof proposition ready for new innovations and partnerships, like those we have with companies such as Spotify. We will continue this focus on partnerships, as the greater choice they offer is valuable to us and our customers.

We extended the product and service offering of KPN Hussel, a modular proposition that enables consumers and small businesses to combine products and services of their choice in a single subscription.

We also improved our KPN Unlimited Data offering for mobile customers, leading to increased sales and an improved bundle value. Simyo growth supports this growth with a successful promotion on the low end of the market. We saw an increasing postpaid base in the second half of 2020, with ARPU remaining stable.

Intense competitive activity that continued in the fixed broadband market, with three players focusing on converged customers and competition from local fiber operators in rural areas. The number of DSL broadband subscriptions decreased, partly due to our brand strategy and continued competition.

Our converged household base increased to 1,406k, representing 50% of broadband customers (2019: 49%). The converged postpaid customer base grew to 2,347k, representing 65% of postpaid customers (2019: 63%).

Business

In 2020, our key focus in the Business segment was value over volume. We aim to leverage KPN's leading market position, high-quality brand perception and solid reputation to develop more profitable revenues in the years to come. We are focusing on creating a future-proof, simplified product portfolio of standardized, modular and converged propositions that combine network, IT and security services for our Business customers.

By the end of 2020, we had reduced our Business product portfolio by 42% since the beginning of 2019, well on track towards our target of 50% portfolio rationalization by year-end 2021.

Simplifying our portfolio allows us to innovate more quickly for our customers and strengthen our relationships with a focused number of partners.

We continued migrating customers from legacy products to future-proof propositions such as KPN Small Business, KPN EEN MKB, KPN Smart Combinations and KPN Smart Integration.

The pandemic accelerated the digitalization of Dutch businesses, but reduced Dutch economic activity and slowed some new initiatives and IT projects.

Future-proof propositions

We address three main areas of Business customer needs: client interaction, organizational performance and employee productivity. These customer needs are translated into clearly targeted segment propositions that combine network, IT and security services. Our business market portfolio covers access and connectivity, cloud and workspace, and security and business continuity.

Last year we continued rolling out KPN Smart Combinations, a modular and converged proposition for large & corporate enterprises (LCE) that combines connectivity, network, IT and security services. We added Central Firewall to our Secure Networking offering in 2020 and further enriched our Cloud Communications offering by adding Cloud Communications Mitel and Microsoft Teams.

We introduced KPN Smart Integration for the top end of our LCE segment. This proposition integrates and manages products and services from both KPN and other large service providers into a seamless, hassle-free customer experience.

As part of our portfolio simplification, we are phasing out legacy products and services. We shut down ISDN (1/2) single/multiple and PSTN multiple for good in 2020. Many of our Business customers have now switched to future-proof alternatives such as KPN Small Business, KPN EEN MKB, KPN Smart Combinations or KPN Business Connect, which offer improved customer experience and value creation. By the end of 2020, 87% of SME customers and 76% of large enterprise (LE) customers eligible for migration had migrated from traditional fixed-voice or legacy broadband services. These migrations improve customer loyalty as the new propositions enhance the customer experience.

As part of our efforts to simplify and improve the customer experience, we further reduced the number of dedicated IT systems for Business customer processes.

Our performance: Flexible, simple and converged products and services

KPN Security integration
With KPN Security, our complete package of security solutions, we are becoming increasingly visible as one of the biggest players on the Dutch IT security market.

KPN Security serves the entire breadth of the business market, from SMEs to large companies and the government. We are a supplier for GGI-Veilig, which is tasked with increasing the digital resilience of municipalities. For this, we will deliver security products and services to more than 330 municipalities and municipal partnerships across the country.

For small businesses, KPN Security offers mainly off-the-shelf services. Medium-sized companies that want to outsource their security can acquire managed security services from KPN Security, ranging from protection and detection to response and prevention. We offer a broad portfolio of security solutions for LCEs and government authorities. We offer security services in combination with network and ICT services as part of the KPN Smart Combinations and KPN Smart Integration propositions.

Strategic partnerships
Last year we started a multi-year strategic partnership with Microsoft Nederland aimed at helping companies with their digital transformation. This will enable companies to better serve their end-customers, organize operational processes more efficiently and help their employees to work together optimally.

The collaboration combines Microsoft's Azure cloud platform with KPN's services and network in order to offer companies connectivity and scalability, and Microsoft 365 services with KPN's calling capabilities to provide a secure and up-to-date Modern Workplace. KPN and Microsoft are investing in a joint go-to-market approach, and driving innovation to provide state-of-the-art services to business customers.

Our reliable and secure network ensures that everyone can get the most out of Microsoft's services. As one of the biggest supplier of Microsoft 365 services in the Netherlands, we are in a position to be able to respond more quickly to the changing needs of our customers.

CHALLENGE

Our digital transformation is a highly complex venture, consisting of many projects and several moving parts. This means that we can't do everything at the same time or in the same pace. It also demands a lot of KPN employees, who are required to transform themselves, their roles and/or their skills. Keeping all of this on track during a pandemic added another layer of complexity.

Wholesale

Our Wholesale segment is focused on providing access to our widespread fixed and mobile networks in order to enable third-party telecom providers to connect their end-customers.

Following the announcement from the Trade and Industry Appeals Tribunal (CBb) on wholesale fixed-access regulation, KPN reconfirmed its open wholesale policy based on its voluntary offer for ODF, WBA and VULA, and the long-term contracts it has in place with several parties.

The general shift from traditional voice to innovative data-based services continued in 2020. We made further progress on streamlining our product portfolio and migrating wholesale customers from legacy services to future-proof technologies.

We announced the phase-out of copper in areas where KPN already deployed FttH and worked to expand our VULA/WBA service to future fiber roll-out based on passive optical network (PON) technology. In the voice domain, we successfully completed the phase-out of ISDN last year, despite a brief pause to accommodate the surge in phone calls sparked by the first lockdown.

Limited travelling by KPN customers outside the EU and a dearth of tourists visiting the Netherlands significantly depressed revenues from roaming. Revenues from WeChat Go in mobile also reduced.

Growth areas
Demand for access to our fixed and mobile networks continued to grow in 2020. We reconfirmed several mobile virtual network operator (MVNO) partnerships during the year.

In terms of mobile access, we saw growth in postpaid revenues. The overall trend is of rising demand for postpaid mobile subscriptions – shrinking the gap with prepaid services – as it becomes easier for users to monitor their costs online.

We made fresh steps in digitalizing our offering. New launches in 2020 included a portal with single sign-on for multiple services, where we can address all service interruptions in one place, and the provisioning of important information services Carrier Info Product and Functional Product Info through APIs.

Demand for our Wholesale business' carrier billing activities increased in 2020. Carrier billing is a service that enables users to pay through KPN for services such as the Google Play Store, Apple's iOS operating system and Sony games, if they do not have a credit card. Our messaging services grew as automated identification via SMS messages became more widespread.

In terms of Wholesale media services, we launched a business TV service together with our Business segment in 2020.

NL-ix continued to develop its converged exchange proposition, introduced in 2019, fulfilling the need of large digital-driven companies for managed and secure data interconnectivity between their networks, data centers and main application and security providers.

Business sector case: Nederlandse Spoorwegen

Geert van der Hoek - Director Data Innovation & Analysis NS

“Avoiding busy trains for safety reasons”

"Two years ago we developed the Zitplaatszoeker (Seat Seeker), to improve passenger distribution in trains. Passengers sometimes felt that a train was overcrowded even though there was still more than enough room at the front or rear. The pandemic has given this crowding and distribution information an extra new function. It's no longer just about indicating where the available seats are; it's about safety and confidence. Information about crowding and distribution helps give passengers the confidence to board a train again and use public transport in these difficult times.

The importance of data is much higher on NS’s agenda now because of COVID-19. Often we already had the data itself but weren't always sure what we could do with it. We have accelerated our transformation into a data-driven organisation. There’s always been a lot of talk about technologies like advanced analytics and artificial intelligence, but now they're being used on an ever bigger scale. We've also started to cooperating far more frequently and effectively, lowering the walls between departments and exchanging data with chain partners.

“Working with the same combined dataset”

In the past, the same data could sometimes be found in different forms at several places within NS. Now we're all working with the same combined dataset. This means we can use information from, for example, weight sensors in the rails and CO_2 sensors in the air conditioning system to get an indication of how busy a train is where. It's especially important in times of change to ensure your data management is in good shape, so that you can act quickly.

At the beginning of last year, we didn't expect to see such an acceleration in data digitalization in 2020. Now, one of the most important issues for NS is to regain the public's confidence in travelling by train. The most accurate possible crowd information, based on current data, is very important for this."

Leo van der Meulen - Business Consultant Advanced Analytics NS

"Before COVID-19, NS worked with three-month projections. Now the period we use has become five weeks, and we're very busy developing a model that uses today's data to predict how busy it will be tomorrow. What we'd eventually like to achieve is the ability to improve the crowding prediction on the day itself, for example by using check-in and check-out information from public transport cards or information about mobile phone use in the train."

Winifred Andriessen - Director Advanced Analytics KPN

“Responsible data use and automated decision-making”

"Our department is made up of data scientists who turn large volumes of data into valuable insights and more efficient decision-making. This is done by using models and algorithms, which we embed in processes and products, so that we can further automate and digitalize. The end goal is to make decision-making data-driven and automated wherever possible, supported by a model management tool to operationalize and manage AI (artificial intelligence) models at scale and in a responsible way. We accelerated on this in 2020, so both our internal customers and our suppliers have been able to take advantage of it.

A good example is our fiber roll- out. Previously, creating a design to convert a neighborhood to fiber took at least a week. Using models, we've been able to automate this to a large extent. We base these models on large volumes of data relating to matters such as the exact structure of the streets, the number of trees and the existing cabling. This allows us to quickly calculate how to optimize the installation of new cabling. For example by efficient digging, as little tree drilling as possible, and smart use of existing cabling and equipment in technical buildings.

We're also optimizing our services in the area of customer contact. For example, we're digitalizing most customer contacts, such as phone calls, of which we process some 800,000 per month, as well as chats and emails. With an AI model, call information is anonymized and categorized, eliminating the need to manually log a call. Relevant information from the conversation is stored automatically as well. We're using this to start a pilot to make the summary immediately available in the customer service system. So when a customer calls again, a summary of their previous conversation appears on the customer service agent’s screen straight away. This will allow us to better serve our customers and provide more personalized assistance.

KPN is fully aware of the importance of using of digitalization and artificial intelligence responsibly. We have set up the KPN Responsible AI Lab together with the national Innovation Center for Artificial Intelligence (ICAI) and the Jheronimus Academy of Data Science (JADS). At this public-private research lab, KPN and JADS work together on PhD research on the cutting edge of data science, technology, decision-making, privacy and compliance, focusing on responsible use of AI. The aim of the KPN Responsible AI Lab is to use AI to develop business solutions that are transparent and handle privacy and personal data with care."

Our performance: Focused innovation and digitalization

Leading the digital transformation

We see innovation as a key enabler for developing new propositions based on evolving customer needs. We stimulate innovations with the latest safe technologies and are focused on innovations in the fields of safety, healthcare, agriculture and sustainability, which we believe are of great value to society.

KPI	Result 2020	Result 2019
IoT revenues	€ 59m	€ 53m
M2M subscribers (#SIMs)	~7.5m	~6.3m
Patent families in KPN portfolio	328	320

Through our solutions, we can help the Netherlands progress in areas such as digital working, reducing energy use and enhancing our digital infrastructure security. Our networks connects everyone and everything, and we are always exploring what new role our technology can play in society. KPN Ventures, KPN Technology Innovation Roadmaps & Architecture and KPN Liaison Management Scaleups work together closely in order to realize impactful innovations and collaborations for the Dutch society.

KPN Ventures

KPN Ventures is our venture capital investment fund. It invests, both directly and indirectly, in innovative European technology companies to build value-creating partnerships. We aim to accelerate innovation and growth by giving our partners access to capital, industry expertise, technical infrastructure, and professional networks and channels. Our innovation focus areas are security, connected things (such as the Internet of Things and smart home), data-driven digital business models and IT services, such as digital health.

The main focus for KPN Ventures in 2020 was to support its existing portfolio companies. Due to the COVID-19 pandemic, some of our portfolio companies were affected in their sales performance, primarily in the second quarter, but also rebounded impressively in and after the third quarter. KPN occupies a board position at the vast majority of our portfolio companies to support strategic decision-making and provide operational and commercial support where possible.

Security	Connected things (IoT and smart home)	Data-driven digital business models	IT services (e.g.digital healthcare)
Cybersprint (2018)	Wirepas (2019)	Sentiance (2017)	Pharmeon (2019)
ZecOps (2018)	Minut (2019)	Cloudify (2018)	Sensara (2017)
EclecticIQ (2016)	Viloc (2016)	SettleMint (2019)	CardioSecur (2017)
	Actility (2015)	Smart Photonics (2020)	

Security
KPN Ventures participated in follow-up investment rounds for threat intelligence platform provider EclecticIQ and digital risk protection company Cybersprint. Already a distribution partner for Cybersprint, KPN Security also sealed a commercial partnership with Cybersprint to start using its technology for KPN itself.

Data-driven digital business models
KPN Ventures supported the follow-up investment rounds of Sentiance in 2020. We participated, together with other parties such as the Dutch Ministry of Economic Affairs & Climate, in a new investment round for Smart Photonics, a promising Dutch tech company producing photonic chips.

IT services

KPN Ventures participated in a follow-up investment round for Sensara, the smart solution provider for care institutions and home care organizations. KPN Ventures worked intensively with Pharmeon, a provider of websites and patient portals to first-line care providers such as general practitioners, dentists and pharmacists. With KPN Ventures assistance, Pharmeon was able to further develop its UwZorgOnline digital patient engagement platform, which facilitates communication and data exchange between patients and care providers. KPN Ventures also helped Pharmeon to make strategic decisions to support its future success.

Investing in other funds that focus on the early-stage financing of commercial spin-offs from university research centers helps expand KPN's network of potential innovative technology partners. In 2020, KPN Ventures invested in Speedinvest, a pan-European technology investment fund based in Austria that is focused on early-stage startups in Germany, Austria and Switzerland. KPN Ventures has now partnered with nine external investment funds across Europe.

KPN Technology Innovation Roadmaps & Architecture

KPN Technology Innovation Roadmaps & Architecture determines the architecture of tomorrow, working closely with customers, developers, partners and suppliers. It is our go-to department for translating innovations into a sustainable, digital and profitable network, using KPN field labs as the ecosystem for future technology. In the KPN field labs, we transform visionary ideas into concrete architecture or services.

KPN field labs

The KPN 5G field labs have been transformed into general field labs, focusing on new innovative technology in sectors such as agriculture, industrial, urban, and mobility - and since October 2020 the health sector.

Rural field lab Drenthe - FWA with households: One possible technical alternative for laying fiber in rural areas is fixed wireless access (based on 3.5 GHz spectrum), which would provide internet service wirelessly. At the KPN 5G field lab in Drenthe, we conducted a proof of concept of 5G FWA together with a few households in Valthermond whose home/work internet service is provided by a KPN 5G test network.

Urban field lab - the Johan Cruijff Arena: One of the largest 5G indoor coverage networks has been built at the Johan Cruijff Arena in Amsterdam. In this stadium, KPN is testing urban use cases such as enhanced mobile broadband (>1Gbps), gaming and enhanced priority for business-critical applications such as bodycams and payment terminals. The enhanced priority use cases were intended to be used for UEFA 2020, but, like the tournament itself, were postponed due to COVID-19.

Blueprint: KPN is a participant in the 5G Blueprint consortium that will conduct research into the technology, organization and business case for remote-controlled logistics and transport in the Dutch-Belgian border region. Data exchange and the use of remote-controlled vehicles and vessels in the border area of Vlissingen-Ghent-Antwerp started in September 2020, and the consortium will examine how logistics can be made more efficient and sustainable with 5G. The project aims to create a blueprint for a pan-European roll-out of telecommunications such as 5G for logistics sectors.

Mobility field lab - Concorda, 5G Mobix Truckplatooning: We conducted several truck platooning tests using 5G on public roads in 2020. We also used commercially available equipment while driving a vehicle remotely at the Automotive Campus in Helmond. Together with several partners, KPN tested the latest release of 5G standardization with low latency, new IoT implementation and more options to configure the network for network slicing. By adding a 5G standalone core network, KPN can provide performance guarantees for critical services by virtually isolating a slice of capacity without disrupting the standard user experience of other customers.

Industry field lab - KPN and Shell: At our industry field labs with Shell in Rotterdam (process industry) and other partners at the Brainport Industries Campus in Eindhoven (production industry, Industry 4.0), we are testing the possibilities for 5G network technology to facilitate the digitalization of industrial work processes for greater efficiency, flexibility and safety. Prime use cases include remote assistance for field/factory workers via video and augmented reality, and the control of automatic guided vehicles (AGVs) in factories and warehouses. The next step will see KPN trialing on-premise edge computing, which will enable even lower latency for these industry use cases.

KPN Innovation Playground

Last year we launched the KPN Innovation Playground, an open innovation lab providing hands-on access to KPN's latest technologies and those of our suppliers of hardware and other products. The KPN Innovation Playground is a technology hub where producers and developers can develop and test their new services and products on the KPN network, with the benefit of KPN's security solutions, workshops, supervision and advice. The low-key and informal contact at the hub helps foster new ideas and perspectives, which can lead to new products and services.

Our performance: Focused innovation and digitalization

Partnership with universities

We work together with several Dutch universities. The most important goal for KPN in these working relationships is to enable thought leadership and positioning in relevant research areas. We do this through strategic cooperation with top universities and engagement with data and network science talents through Master and PhD thesis projects. Subjects vary from how a future network will look to how KPN can stay a frontrunner in emerging digital ecosystems.

KPN Liaison Management Scaleups

KPN Liaison Management Scaleups supports startups, scaleups and other partners to connect with KPN and provide a joint platform to expertise, infrastructure, our partners and customers, and financial support. By joining forces with ambitious technology companies, we work on the applications of tomorrow. That way, we can provide our customers more quickly with better and more innovative products.

KPN Liaison Management Scaleups had several new collaborations in 2020. The department worked together with companies such as Benocs, which provides next-generation traffic optimization and analytics, OptNet, which is helping us to prevent network disturbances through predictive maintenance, and Speaksee, which provides a solution enabling deaf and hearing-impaired KPN-employees to effectively join meetings.

KPN Liaison Management Scaleups also works together with innovative companies to create 5G ecosystems to make our 5G propositions more relevant in the areas of smart industry, critical communications, mobility, health, agriculture and drone use. Moreover, we collaborate with several AI companies to improve our processes, including with a Dutch AI company, and companies reselling their APIs in the API Store.

In 2020, we organized our quarterly Startup Evening, an event where external corporates and investors have the opportunity to speed date with startups and scaleups, to foster the startup ecosystem. One of our other recurring events was the Network Tech edition of the KPN Circus. Ten international network tech scaleups were given the opportunity to present themselves to our KPN network teams and management, plus non-competing telcos in order to explore network partnerships.

We arranged various smaller events focusing on a specific industry, too, including pitch events and speed dates in the areas of 5G, cyber security, healthcare, sustainability and more. These events gave our business colleagues from the corresponding departments the chance to explore potential collaborations. Lastly, we had a retail enhancement challenge to match retail startups with our big retail customers and KPN Retail.

New innovation projects

We developed a range of new propositions in 2020 that are in either the pilot phase or introduction phase. One such proposition is Mobile Connect.

Based on a GSMA standard, Mobile Connect is a simple and secure tool for password-free login that helps reduce digital friction and makes online fraud much more difficult. The first two Mobile Connect pilot customers were onboarded in 2020 and KPN also started implementing the tool in its own processes.

Another new proposition stems from KPN becoming a founding member of the Dutch Drone Delta in 2020. This coalition aims to contribute to the market development of urban air mobility in the Netherlands. To guarantee safe and efficient unmanned drone traffic requires a reliable and stable network at drone flight altitude. Together with the Dutch Drone Delta and its partners, KPN is testing 5G connectivity and its application priority functionality, which can enable prioritization of drone connectivity traffic on the network. Within the Medical Drone Service (MDS) initiative, test flights are carried out to transport blood by drone. KPN provides the mobile connectivity for the test flights and performs the necessary network measurements.

We also further marketed several propositions in 2020 through our API Store, a one-stop shop for a range of standardized APIs. With a strong focus on customers' digital product needs, the API Store saw significant growth in sales and acquired new customers including Funatic and WeSeeDo.

Smart Traffic Lights is another notable KPN proposition, this time dedicated to connected roadside infrastructure. This service enables greater reliability of crucial elements in traffic infrastructure and enhances the roll-out speed of smart traffic light controllers. KPN has several Smart Traffic Lights projects in progress with various municipalities, provinces and suppliers of intelligent controllers.

Digitalization

By digitalizing our processes, we can offer better, faster and more personal services to our customers. Use of the Internet of Things (IoT) is playing an increasingly important role in this. Our IoT revenue grew to EUR 59m (2019: EUR 53m) and the M2M subscriptions increased to 7.5m. We took, a number of major steps in 2020 to optimize, automate and personalize our services through digitization.

Optimization

To optimize our network, we use algorithms when drawing up roll-out plans for fiber optic and network cabling. Data-driven recommendations help our planners with configurations and installations to get the best out of the network, reducing the time and cost investment in the cable roll-out. To this end, we have developed a dashboard to advise planners which actions should be undertaken to achieve the best possible result at the lowest cost in order to increase the capacity of the network by adjusting in configuration and/or the new network elements that need to be installed.

Customer contacts at our Customer Contact Center are automatically digitalized. By analyzing frequent customer calls, we get more insights into how we can best help our customers. This forms the basis for data-driven customer journeys and the automation of business processes. One example of this is the automatic email classification and routing within the corporate customer service market.

Automation

The Service Quality Center is working on a pilot that combines alarms with each other and with the network inventory, to detect which cable sections are most susceptible to breaking. The system also detects other problems such as defective DSLAM cards, interrupted sessions or deteriorating speeds, after which automatic tickets are created to resolve the incident.

Personalization

We are using digitalization in our TV services to personalize customers' the viewing experiences. We are using machine learning in a pilot to match the interests of customers with relevant content, and so make their viewing experience more relevant, attractive and personal.

Data driven solutions

To enable customers to respond more quickly to business events and to share date with each other, we developed the KPN Data Services Hub. Although the first project, Talking Traffic, has ended in 2019, our customer base is still growing. Examples of our customers' use cases are the optimization of training and scouting activities, the collection of log files for companies to support security monitoring, and the development of data-driven business models.

KPN was one of the first members to join the Dutch Data Sharing Coalition that launched in February 2020 to facilitate data sharing across sectors. One of the use cases that will be used to learn and boost data sharing across sectors is the weeding robot use case initiated in the KPN 5G field lab in Valthermont.

KPN has committed to the TKI Dinalog initiative DASLOGIS as an enabling infrastructure partner. It provides flexibility, extendibility and personalization to support the three main types of logistics data sharing: sharing transaction data for operations optimization, sharing data for data analytics, and sharing supply chain data for real-time visibility. The project will be based on the generic and internationally standardized International Data Spaces (IDS) reference architecture as developed by the International Data Spaces Association (IDSA), augmented and tailored to Dutch logistics needs where applicable.

Intellectual property

KPN's current portfolio of intellectual property rights consists of 247 registered trademarks relating to our core brands and approximately 328 patent families. Around 73 of the patent families that KPN owns are deemed essential for the commercial use of telecommunication technology and services, including in 5G and virtual reality. Throughout 2020, two of KPN's patent positions were confirmed through unappealable court decisions by the CAFC in the USA and the German Federal Supreme Court. We take appropriate steps to protect our intellectual property rights and generate value from these rights.

KPN uses a combination of patents, trademarks, trade secrets, copyrights, database protection, confidentiality agreements with employees and third parties, and protective contractual provisions. We continue to invest in the growth of our intellectual property rights portfolio through various means including our targeted long-term research and development program in close cooperation with TNO-ICT. The projects focus on 5G, extending to 6G, virtual reality and TV/video applications, and the use of AI in this.

Our performance: Safeguarded privacy and security

Embedding ethical awareness and responsibility for privacy

It is our responsibility to do everything we can to strengthen customer trust in our ability to safeguard their privacy and security. We want everyone to enjoy the benefits of connectivity without having to worry about information security or infringement of their privacy, especially during times of increased digitalization.

KPI	Result 2020	Result 2019
% of Dutch people who believe their data is safe with KPN	66%	68%
% of Dutch municipalities monitored for cybersecurity attacks	5%	N/a

Privacy

It is crucial that customers can trust us to handle their data with great care and in a way that puts their interests first. At KPN, we see it as self-evident that we abide by all relevant privacy laws and regulations. Indeed, our commitment goes further than legislation or compliance. We see respect for privacy as a crucial component of the trustworthiness and reliability we want to offer our customers.

In 2020, 66% of Dutch people said they believe their information is safe with KPN (2019: 68%). KPN remains ahead of the competition when it comes to security of privacy and personal data. Research shows that KPN is regarded by consumers as the safest company among telecom companies when it comes to handling data. The decrease from 68% in 2019 to 66% in 2020 is not significant. Good communication about privacy policy and data protection remains important. This year, media coverage (about cybercrime and data leaks) and COVID 19 (including changes in privacy legislation) once again ensure a higher level of consumer awareness of privacy in a number of specific areas.

Privacy awareness among employees

We take measures to embed ethical awareness and responsibility for privacy in the mindset of our employees. All our people are subject to the KPN Code of Conduct, which includes clear privacy guidelines, particularly relating to how to deal with customer information.

New employees must complete our compliance and integrity e-learning program, Spot On, as well as several other online privacy trainings, including the privacy and cybersecurity workouts. In 2020, we introduced a new edition of our privacy awareness e-learning training, which all employees must do once every two years. Our Human Resource Privacy Statement sets out KPN's rules and principles for the handling and compliant processing of employee data. These initiatives ensure all staff are up to speed on privacy matters in their work.

Privacy by design

Our business is guided by the principle of 'privacy by design'. This means we consider privacy risk and protection through every stage of designing new products or business models. In 2020, we set up the Privacy Council, consisting of representatives from the business and the Compliance, Privacy & Ethics team. The Privacy Council aims to speed up decision-making about all privacy-related issues and make sure any issues can quickly be addressed.

To make it easier for customers to indicate their privacy preferences for our products and services, we intend to group questions and options on this subject in one single place on our website. In 2020, we made the necessary technical preparations for this centralized privacy hub, which will be implemented in 2021.

In 2020, we received 224 reported incidents concerning privacy. We reported two data leaks to the Dutch Data Protection Authority, both of which had a limited impact on customers. We recorded no complaints about significant privacy breaches.

CHALLENGE

Following the outbreak of COVID-19, Dutch government agencies and the European Commission asked us to make mobile phone user data available to help the authorities assess changes in mobility patterns and detect large gatherings of people, allowing them to adjust measures to stem the pandemic.

While we indicated our willingness to contribute to the fight against COVID-19, we could not comply with this request due to the strict privacy provisions of the Dutch Telecommunications Act. Over the course of 2020, the government proposed new legislation to remove these legal barriers, consulting our privacy experts in the process. We are committed to helping governments and society tackle the pandemic, and have joined several initiatives to this end (see Security below), while strictly adhering to our privacy policy.

Lawful intercept

We respect our customers' right to privacy. At the same time, we are legally obliged to disclose certain information, initially obtained by intercept, to national investigation agencies. Our infrastructure must facilitate this and we are obliged to cooperate with law enforcement agencies as specified in the Dutch Telecommunications Act.

To help achieve this, a liaison officer is available 24/7 to facilitate interaction with law enforcement authorities for all KPN brands. We assess incoming warrants and carry out checks to filter out any uncertainties. If we find discrepancies, we reject the warrant, inform the agency involved and follow the relevant procedures. In 2020, a mismatch was found in 1.3% of warrants received. Of the interception orders, 99.6% concerned telephone numbers, and in 0.4% of cases we were ordered to intercept IP addresses.

Within the context of KPN's Notice and Take Down Code of Conduct, KPN received 7 complaints in 2020. Most of these complaints regarded copyright and intellectual property disputes. In none of the cases did KPN provide the requested identity information.

Security

The number of cybersecurity attacks continues to rise, with attacks becoming increasingly sophisticated. To protect our systems and data, and those of our customers, we need to be constantly vigilant.

Our Chief Information Security Office (CISO) is organized into four teams, which work according to the KPN security lifecycle: prevent, detect, respond, verify and invent. The CISO Office sets a KPN Security Policy to prevent vulnerabilities and incidents. The CISO Red Team of ethical hackers conducts security testing of new products and proactively identifies weaknesses and detects vulnerabilities across the organization. The CISO Blue Team is responsible for continuously monitoring our networks and infrastructures and detecting security threats and vulnerabilities in a timely manner. The KPN Computer Emergency Response Team (KPN-CERT) provides rapid incident response, while the CISO DevOps team is responsible for development, research and security analytics and reporting.

Strengthening our proactive and collaborative approach

Over the past few years, we have created strong foundations for resilient security procedures at KPN. Taking into account the wider context of how products and services are used, which is also what hackers do, will enhance our security risk assessment and mitigation. It will make us more resilient and better able to identify and respond to new threats at an early stage. This will benefit us and our customers.

This approach requires businesses and departments within KPN, as well as external parties such as national and local governments, to cooperate more closely. KPN has set up a structured process to cope with geopolitical developments that bear on our supply chain.

In 2020, we designed plans to speed up security checks of our products and services. We expect this to enable us to improve our time-to-market.

To boost awareness internally, we continued our mandatory security online Spot-On training and ran a mock phishing email exercise for our employees. The aim was to make them realize how cybercriminals operate and how easy it is to be tempted to click on a link to seemingly relevant information or open attachments.

In 2020, more than 15,462 processed virus notifications were detected based on information from trusted partners.

Making our society safer

We share our security knowledge and innovation with the world around us to help improve security in society. When hospitals were overwhelmed with COVID-19 patients in the

Our performance: Safeguarded privacy and security

spring of 2020, we joined the Dutch 'We help hospitals' initiative (www.wijhelpenziekenhuizen.nl) to help block cyberattacks against hospitals. This was crucial as the pandemic triggered a marked increase in cyberattacks. KPN provided around 100 hours of free consultancy and other cybersecurity services to hospitals. Our Red Team tested the back-end infrastructure of the Dutch government's coronavirus app. We continued our collaboration with the Dutch government at national level, as well as with municipalities, to enhance cybersecurity, and rolled out our security services to all municipalities to make the Netherlands safer. In 2020 we monitored 5% of Dutch municipalities for cybersecurity attacks, which is less than the ambition of 40%. In 2021, we expect to take a big step forward on this project.

We launched Managed Firewall, a centrally managed firewall to help companies and other organizations protect their systems and data against cyberattacks. Crucially, this service takes the complex and cumbersome task of managing and updating firewalls out of customers' hands. Our new Managed Identity & Access service helps companies and other organizations properly manage access to business-sensitive information in their systems, and thus boost their cybersecurity.

We continued to deploy automated processes to detect and categorize security issues in our first line of defense. This means relatively common security problems can be identified and resolved automatically, giving our expert cybersecurity teams more time to resolve complex security problems. We are exploring how we can apply AI to tackle more cybersecurity issues.

Phishing risk increased in 2020 as cybercriminals sought to take advantage of the spike in people working from home. Malicious parties sent significantly more phishing emails, hoping to gain access to company networks. In response, we sharpened our focus on end-point protection for both our workspaces and mobile devices, and those of our customers. Our Chief Information Security Office and KPN Security stepped up security research aimed at detecting attacks early on.

Keeping quantum technology secure

KPN has been supporting research into post-quantum cryptography for several years. Quantum computing will allow cybercriminals to break the cryptography we use today to keep digital communication safe. One of our aims is to modify current cryptographic protocols to make them quantum-resistant. To this end, 2020 saw us complete a joint research project with Radboud University and Eindhoven University of Technology, which shows that the post-quantum cryptographic scheme the researchers tested – the so-called PQ-Wireguard – outperforms other cryptographic models by up to a factor of 1,000. This research was submitted for peer review in 2020. If approved, it will be a major contribution to the standardization of next-generation, post-quantum cryptography.

We continued our cooperation with QuTech, a Dutch research institute for quantum computing and quantum internet at Delft University of Technology, which aims to make the quantum internet a reality. The quantum internet aims to provide virtually unbreakable privacy and a foundation of secure communication. In 2020, we established a quantum technology plan, outlining our involvement in this technology in the coming years.

Security case: Safety regions

Tijs van Lieshout - Chairman of the safety regions

“Access to the available free beds at the touch of a button”

"If we'd come up with this pandemic as a scenario for an exercise, no one would have believed it. A pandemic from China, the production of protective equipment coming to a standstill, and all at the same time as the winter sports season and carnival? Come on - that’s too far-fetched!

We, the safety regions, are at the heart of the Netherlands' crisis management. The COVID-19 pandemic has required unified action by the 25 safety regions, along with the national government, and we've never felt more united. Fortunately, we have been able to save a lot of time by holding most of the meetings digitally. We have people in Maastricht, Groningen, Middelburg and other places, so if you have weekly meetings, it's more efficient if you don't have to get together physically.

At a national level, we have established an operations center where, among other things, we collect information from hospitals, police and the Ministry of Health, Welfare & Sport. We process that data into integrated reports for the state and the Netherlands' public health service (GGD). We only want access to that information; we do not store it. But when we want access, the data must be available within a few seconds. This can give you an understanding of the risks at an early stage to adjust the policy.

We'd been dreaming of a platform like this for years and now we've achieved it in double-quick time. We were all on the same page: the resources were within easy reach and attention was focused on them. Without the pandemic, we would never have achieved this so quickly. Whether it's food, water or something else, there will be another crisis - and this platform will ensure we're better prepared. In my view, KPN will be a strategic partner in this, helping with further developments and advising on our information position.”

“We dreamt of such a platform for years”

Eric Lakenman - Chairman BOA Bond

“The measures changed rapidly at the start of the pandemic and they also differed from region to region. That made enforcement difficult. Fortunately, law enforcement officers are accustomed to employing non-adversarial interaction: they engaged with people first and only issued a fine only if nothing else worked. This approach ensures that no more than 5% of the people deliberately break the rules.”

Anja de Vos-Biemans - KPN Regional Director, Southern Netherlands

“Digital security is conditional”

"A safety region is characterized by the close cooperation between emergency services, authorities, companies and citizens. In 2020, that cooperation was thoroughly put to the test and the situation proved once again that a robust ICT network plays an essential role in this cooperation. As such, our customers and the 25 safety regions therefore count on us and trust us.

The pandemic increased the pressure on everyone to speed up digitalization. We also received lots of questions from the safety regions as a result. We needed to act fast - which is thankfully something we're very capable of doing. Not only do we have a technical network but we also have a human network that focuses on solving problems.

In times of crisis, KPN's regional directors generally perform a 'gateway' function. Last year, we were frequently contacted directly by top Dutch companies and authorities to help them fight fires. For example, there was an increase in the number of hacks. Short lines of communication are especially important then because in times of crisis you often have to go that extra mile, beyond existing procedures and solutions.

The COVID-19 crisis has really helped raise awareness about the vulnerability of digitalization. With so many people now working from home in the Netherlands, we have all experienced the importance of digitalization - and how vulnerable it can be - first hand. The next step is for all of us to also work from home in the most efficient manner. Digital security is an absolute prerequisite for this.

There's so much more that can be achieved, especially in SMEs that have 10-50 employees. This has been one of the hardest hit sectors and many SMEs are struggling to keep their heads above water. For these companies, safety is often not yet the top priority. With KPN EEN, our service for SMEs, we can provide a solution. KPN EEN MKB provides connections that are not only good and fast but, most importantly, are totally secure."

Our performance: Sustainable employability

The network behind the network

KPN's people are key to our transformation. We are creating an organization that is simpler and more effective, inclusive and diverse. Recruiting, developing and retaining the right people and skills will make us a stronger, more agile and profitable business.

KPI	Result 2020	Result 2019
Employee survey score for engagement	86%	77%
Overall % women at KPN	21%	21%
% women at KPN boards	36%	29%

People who make an impact

We strive to support, stimulate and develop our people, enabling them to make an impact on their colleagues, our customers, our business and society at large. We have had a Chief People Officer in our Board of Management since 2019, leading the drive to shape the culture of KPN, engage employees and manage both the 'hard' and 'soft' elements of performance.

As KPN's digital transformation gathers pace, we are implementing a comprehensive people strategy in which employee experience, business needs and our role in society are paramount. We are investing in our people and in transforming the organization and structure to achieve the sustainable business growth ambitions set out in our strategy.

Change, employee mobility and leadership are key elements in achieving our transformation, and these were the main themes that guided our people initiatives in 2020.

Driving digitalization

Digitalization is about more than just technology: people are equally crucial. We support employees and invest in their capabilities so they can embody the digital transformation of KPN and its business.

We further digitalized our recruitment process in 2020 by launching a new recruitment site and on-boarding app. The app enables new employees to start their onboarding online with ID verification.

The lockdown accelerated the digitalization of employee cooperation and training. We are now better equipped than ever with efficient and effective tools and a wide range of online courses that enable people to learn and develop, at whatever time and location suits them.

Remote working became the new norm for most employees as the year progressed. We expect to move to a sustainable blend of virtual and in-person experiences. We will use the momentum behind remote working and create a blend that brings together the best of both the digital and real worlds.

COVID-19 impact

When COVID-19 struck, the health and safety of employees was our number one priority. We moved fast to ensure the health of our employees and provide them with the technology and tools they needed to work from home as effectively as possible, and to remain engaged.

Before the outbreak, a large number of our people already worked partially from home. During the lockdown, we noted the benefits of more staff working from home: time saved on commuting, less distraction resulting in more efficient working, lower impact on the environment and potential cost savings.

Our performance: Sustainable employability

Our employees missed interacting with colleagues, however, and not everyone had the luxury of a comfortable, suitable workplace at home. COVID-19 made it more difficult to onboard new employees and, as summer's hopes of an improvement to the situation ebbed in the autumn, the challenge became to address negative factors of home-working such as reduced personal contact with colleagues, increased number of online meetings and a less comfortable workplace.

Overall, however, the mindset is clearly shifting to work more from home. Given this, we enable office staff to split their working week between the office and home. The new office-home balance will have various consequences, ranging from office space and company car policy to the skills, management and culture needed for a less physical, more virtual organization – not to mention a greater focus on preserving people's vitality, mental health and sense of belonging. We are keen to learn from the experiences of 2020 and to move carefully towards a future-proof flexible way of working.

Mobility and matching

Throughout 2020, we focused on strengthening the internal mobility of our employees. Internal mobility helps retain talent and enhance engagement as it offers growth and development opportunities for employees, making KPN an even more attractive employer.

It is important to keep looking ahead, to identify in advance which parts of our business are set to grow or shrink. Employees who are or may be affected by a reorganization and for whom there is a suitable in-house position are redeployed instead of being made redundant. We invested in this last year with the Match! Team of internal mobility advisors and reskilling employees to growth areas, supported by our Match! platform. By helping people understand and use their talents to the fullest, and equipping them with new skills and capabilities, we prevent redundancies and benefit our company.

CHALLENGE

Achieving the right balance between internal mobility and bringing new talent into the organization is an ongoing dilemma. We firmly believe in retaining talent and technical skills. We make sure we thoroughly assess our people's talents and potential, and give them plenty of opportunities to develop, so they can find new roles at KPN when vacancies arise. We do, however, recognize the need to keep KPN dynamic, and to keep challenging ourselves and our thinking by recruiting for some roles externally.

Leadership and talent

Good leadership contributes to the growth of our people, which in turn does make a difference to customer experience. Leaders play a key role in setting corporate culture and encouraging employees to keep pace with and support the change needed to create a future-proof organization. Leaders of high-profile companies, like KPN, also set the tone in terms of social engagement.

In 2020, we rolled out new KPN leadership profiles: the elements we believe make up the style of leadership needed to help KPN transform further. In support of these new profiles we offered a framework of development opportunities to leaders throughout the organization. We also created Network 300 for KPN's top 300 leaders to engage them and by extension their employees more closely in KPN's strategy and transformation.

We have decoupled remuneration from performance, in order to give their employees the space to be completely open in discussions about personal development. We expect that it will be easier to give and receive feedback when there are no consequences for a salary increase.

For the long term, KPN has to invest in young talents. With our award-winning strategic Young Talent program, we try to stay attractive as an employer in the war for talent. This program was named the 'Best Traineeship' for the second year running in 2020. We also received the Intermediair award for favorite employer in the Dutch telecom industry in 2020.

Employee engagement

We are committed to engaging our employees and making them proud. We want to be recognized for that, both in-house and externally, and so make KPN a great place to work, now and in the future.

Around 68% of staff participated in our employee engagement surveys in 2020. The last survey showed that 86% of respondents feel engaged at KPN, which is an increase of 9% points compared to 2019. The survey revealed an increase in pride in the company, trust in the board's decision-making and employee willingness to go the extra mile.

Each individual employee is responsible for their own vitality and health. As an employer, we want to support our employees by giving them a working environment and opportunities that enable them to take that responsibility. In 2020, we continued to offer our employees a budget of EUR 1,500 to spend on personal development.

Diversity and inclusivity

We want to be an appealing, safe, inclusive workplace where every person can be themselves. We aim to offer equal opportunities for a successful career. We are expanding our focus from gender diversity to other diversity dimensions, to ensure that a wide range of people, cultures, skills and competences can contribute fully to KPN. We endeavour to create a sustainable culture where people's differences are valued and put to good use, bringing out the best in our people and our company. We included empowering inclusiveness as a skill in the new leadership profile. We also took steps to embed diversity and inclusion more in our HR processes, making them an integral part of our recruitment and mobility work.

Despite our efforts to be a safe and inclusive workplace, there were 231 reported incidents concerning discrimination or aggression involving employees in our own operations (2019: 231), mainly directed towards our employees from outside the company.

Gender diversity

Our ambition is to have at least 30% women at and above scale 12 by 2023. In addition, we aim to have 30% women in top management roles by the end of 2021 and to achieve 25% women in our overall workforce by 2022. Last year, we saw an increase in the percentage of women in top management and a rise in the number of women at and above scale 12.

We run activities such as mentoring and talent programs and diverse communications on the intranet to inform, inspire and create awareness on this topic. KPN believes that investing in diversity in IT and technical jobs is important, so we have a specific focus on attracting women to the technical departments of our company. We do this through our internal women's network and organizing inspiring in-house events.

We value equal remuneration between men and women. In order to gain insight into whether there is a structural difference in pay between men and women, we conducted an internal analysis on the basis of several components including, amongst others, salary, duration of employment and scale, from which no systematic difference in male-female pay could be found.

LGBTQI+ and cultural diversity

We are committed to creating a workplace where lesbian, gay, bisexual and transgender, queer, intersexual people and people with other sexual and/or gender identities (LGBTQI+) can be themselves and are valued. Our platform KPN Pride addresses LGBTQI+ issues directly related to working at KPN.

In 2020, we ran a publicity campaign during Pride Amsterdam around the inclusion of queer, black and transgender people. KPN sponsors the foundation Student Pride NL, which strives to contribute to the creation of a safe study climate at universities, colleges for higher vocational training and during internships for all students, regardless of sexual orientation and gender identity.

To raise employee awareness about diversity and inclusion, we organized a Diversity Days program under the motto 'Inclusion belongs to us all'.

We are highly aware that we need to become more diverse from a cultural and socio-economic point of view. We established the internal network Kleurrijk KPN in 2020. This network aims to increase understanding and respect for each other by talking about different backgrounds and sharing which rituals, preferences, interests and customs belong to these backgrounds.

Social entrepreneurship

Government authorities stipulate many requirements for social return on investment (SROI) in their contracts in order to stimulate the market for social impact. KPN adheres to these criteria and is intrinsically motivated to include people with poor job prospects.

KPN hired 15 employees with poor job prospects in 2020, slightly below our usual annual number of 20 because of COVID-19. We offer these employees training at an intermediate vocational (MBO) level combined with work experience in our Customer Service department in Amsterdam. They can graduate within one year at MBO level.

During 2020, KPN hired 15 employees with poor job prospects, slightly below our usual annual number of 20 because of COVID-19. We offer these employees training at an intermediate vocational (MBO) level combined with professional work in the 'Leer en Werkbedrijf' via Randstad Participatie at our Customer Service department in Amsterdam. The program lasts one year and aims at graduation at MBO level. Later in 2020, we started with another group of 17 people with similar challenges on the job market at our office in Groningen.

Our performance: Sustainable employability

Pension

During 2020, government officials, unions and employers reached a definitive agreement about a new pension system. This pension agreement contains agreements on a number of changes to the Dutch pension system, including the retirement age, but also regarding pension schemes. Current benefit agreements will eventually cease under the new agreement. Two new pension contracts have been introduced, namely an extension of the current Act on Improved Defined Contribution Schemes (Wet Verbeterde Premieregeling, Wvp) and 'the new pension agreement'. Both contracts offer less certainty than before. These changes will have consequences for participants who are accruing pension, as well as former employees and retirees. Following debate in parliament, legislation and regulations are expected to be finalized by the end of 2021 and companies will be able to switch their plans to the new accrual basis from 1 January 2022, but no later than 1 January 2026.

Human rights

We explicitly endorse the United Nations Guiding Principles on businesses and human rights. The obligation to respect human rights is the basis for our way of working and is reflected in our Code of Conduct and in the requirements we impose on our suppliers. We monitor the number of reports of human rights violations externally and internally. In 2020, there was 1 report concerning human rights violations involving an employee in our own operations (2019: 0). Appropriate measures have been taken.

The table below provides an overview of the relevant information on human rights policies for our main three different stakeholder groups.

Reference table on human rights policies and outcomes

	Materiality	Our policy and outcomes	KPIs	Risks and mitigating measures
Customers	Material topics: Data & information protection and Customer interaction Other topic: Responsible operations see Appendix 3: Transparency, materiality and stakeholder engagement	Our policy and the outcome of our policy is described in the chapter Safeguarded privacy and security (p. 46), chapter Impact on society (p. 28) and chapter Network infrastructure (p. 33). Privacy and security. For more details, see: https://www.kpn.com/algemeen/missie-en-privacystatement/onze-missie.htm	Safeguarded privacy and security (p. 46) and Appendix 2: Connectivity of non-financial information	Compliance and risk (p. 73) and Appendix 4: List of top risks
Employees	Other topic: Attractive working conditions KPN's corporate governance & human rights compliance see Appendix 3: Transparency, materiality and stakeholder engagement	Our policy and the outcome of our policy is described in this paragraph. For more details, see: https://jobs.kpn.com/over-ons/onze-mensen/human-rights/ Topic 'Privacy and security' at https://jobs.kpn.com/nl/over-ons/	Our performance: Sustainable employability (p. 51) and Appendix 2: Connectivity of non-financial information	Compliance and risk (p. 73) and Appendix 4:List of top risks
Supply chain	Material topic: Supplier selection & good governance Other topic: KPN's corporate governance & human rights compliance see Appendix 3: Transparency, materiality and stakeholder engagement	Our policy and the outcome of our policy is described in chapter Environmental performance and responsible supply chain (p. 55). For more details, see: How we identify low/medium/ high risk suppliers, see: https://overons.kpn/content/downloads/Supply-Chain.pdf What we expect from our suppliers on human rights, see: https://www.overons.kpn/content/downloads/KPN_SUPPLIER-CODE%ADOF-CONDUCT.pdf	Environmental performance and responsible supply chain (p. 55). Appendix 8: Supply chain, and Appendix 2: Connectivity of non-financial information	Compliance and risk (p. 73) and Appendix 4: List of top risks

Our performance: Environmental performance and responsible supply chain

Collaborating towards a sustainable value chain

Over the past decade, we have positioned ourselves as one of the world's greenest telecom companies, driven by our belief that sustainable business is better business. To maintain this position, we set ourselves far-reaching goals by continually reducing our impact on the environment. Supplier engagement plays an important role in mitigating adverse impacts across the value chain and finding the solutions needed to achieve our ambitious agenda.

KPI	Result 2020	Result 2019
% reduction in KPN Group energy consumption compared to base year 2010	37%	30%
Reduction of value chain CO_2e (scope 3) compared to base year 2014	17%	16%
Products with improved design for circularity	9	4
% reuse and recycling	81%	78%[1]

1 Restated – see Appendix 7, Table 10.

Ambitions on future-proof energy and zero waste

Through our approach to sustainability, we aim to influence the environmental impact of our total supply chain, from suppliers to customers. This includes our procurement process, operations, and the impact of our products and services before, during and after use.

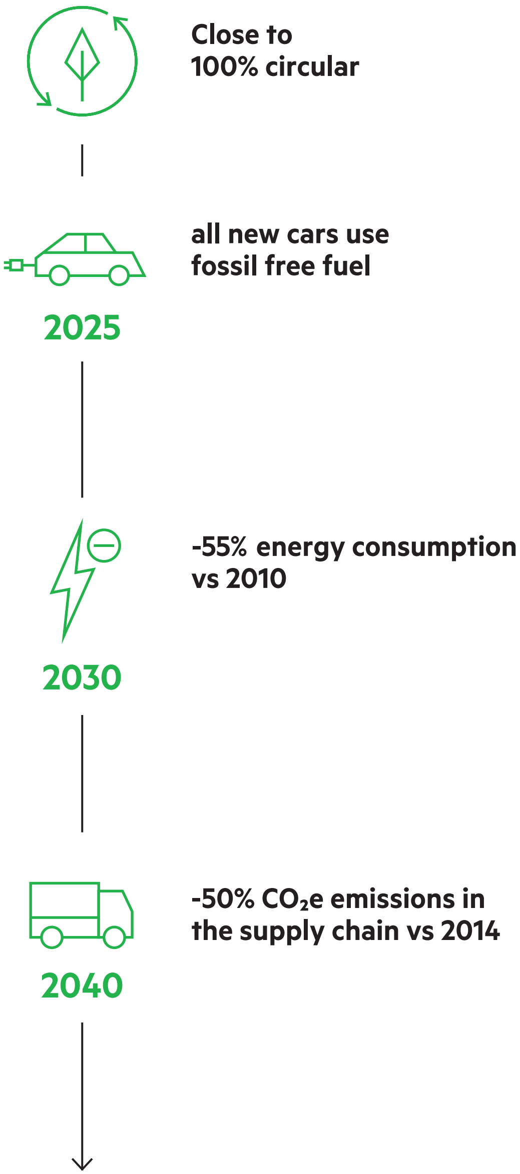
Our long-term ambition is for zero waste, so our goal is to be close to 100% circular by 2025. We have set intermediate targets and use a roadmap to track our progress in reducing impact of our products and materials.

For inflow of materials, we have set a target to redesign for circularity a minimum of 15 typical KPN products, for example by using recycled material. These include in-home and outdoor equipment.

For outflow of waste and materials, we aim to maximize reuse and recycling, and avoid incineration and landfill. For KPN owned customer equipment, our circular ambition is a closed-loop supply chain. We aim to save energy and reduce use of materials by replacing some of our hardware with software.

We will reduce CO_2e emissions from our company-car fleet by gradually introducing fossil fuel free vehicles. From 2025, all the vehicles we add to our fleet will be fossil fuel free.

Our performance: Environmental performance and responsible supply chain



By 2030, we aim to reduce our energy consumption by 55% compared to 2010. KPN commits to reduce scope 1 and scope 2 greenhouse gas emissions by 100% by 2030 from a 2010 base year. The company's long-term target is to maintain yearly zero emissions from 2030 to 2050. In addition, KPN will reduce its scope 3 emissions by 20% by 2025 and by 50% by 2040, from a 2014 base year. The targets as approved by the Science Based Targets initiative cover greenhouse gas emissions from company operations (scopes 1 and 2) and are consistent with reductions required to keep global warming to 1.5°C, in line with the Paris Agreement.

As KPN's own operations are climate-neutral, all our services are low-carbon services. By using our cloud services, video conferencing and audio conferencing, our business customers can meet online, reducing the need to commute or use office space. Our long-term goal is to avoid as much energy via our services as we consume via our fleet, electricity and value chain.

The following sections report on our performance in relation to the objectives above. For the fifth time in a row, KPN was ranked as one of the top five most sustainable telecom companies in the world according to the DJSI, with a strong score on climate strategy. We also received an A-ranking from CDP in 2020.

Detailed environmental figures, including intensity figures, targets and avoided energy consumption by our customers can be found in Appendix 7: Environmental figures (p. 213). An overview of major KPIs is shown in Appendix 2: Connectivity of non-financial information (p. 182), calculation methods in Appendix 3: Transparency, materiality and stakeholder engagement (p. 185) and GRI application in Appendix 10: GRI index (p. 221).

CO_2e emissions and energy management

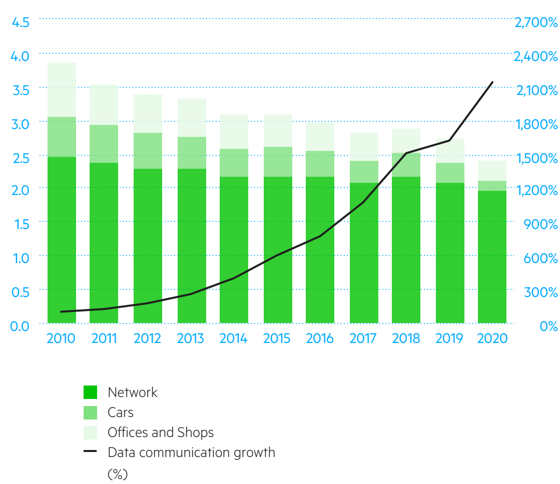
CO_2e emissions own operations Scope 1 and 2 (in kTon)

	2020	2019	2010 base year	2020	2019	2010 base year
	Gross scope 1 and scope 2 location based			Net scope 1 and scope 2 market based		
Scope 1 NL (direct own emissions)	16.8	26.3	58.8	-	-	58.8
Scope 2 NL (indirect own emissions)[1]	273.6	294.7	347.0	-	-	35.9
KPN NL	290.4	321.1	405.7	-	-	94.7
KPN non-NL entities	-	-	25.0	-	-	25.0
KPN Group	290.4	321.1	430.7	-	-	119.7

1 Due to the new methodology of calculation CO_2e emission factors of the gridmix NL we restated for 2019 and base year emissions.

At KPN, our own operations are climate-neutral. We use 100% green electricity generated by local and European wind farms. Other CO_2e emissions (6%) from gas (buildings), gasoline and petrol (cars) and emergency power are compensated by REDD+ forest compensation projects. If we were not using green energy, our gross scope 1 and scope 2 location-based CO_2e emissions would be 290kTon CO_2e.

Energy consumption (PJ) compared to data communication growth (%)



Our energy consumption in 2020 was 2.428 petajoules. Compared to base year 2010, this amounts to a reduction of 37%, while the data communication volume has increased almost 21-fold in the same period.

Our energy savings in the network were mostly related to fixed-network rationalization and the migration of mobile network equipment to next-generation equipment. We are also improving our capability to forecast long-term energy usage per type of infrastructure.

Our fixed and mobile networks account for most of our electricity consumption (96%). As part of our network modernization and simplification we are phasing out older generation technologies and transferring customers and services to new-generation technologies. We saw a net reduction in the electricity consumption of our networks of 32 GWh compared to 2019. We continue to improve the quality and speed of our fixed and mobile networks.

As part of our sustainability ambition, our network components are migrating to cloud solutions and network function virtualization. A pilot case on server eco-mode shows a further potential of 7% energy savings on top of virtualized servers.

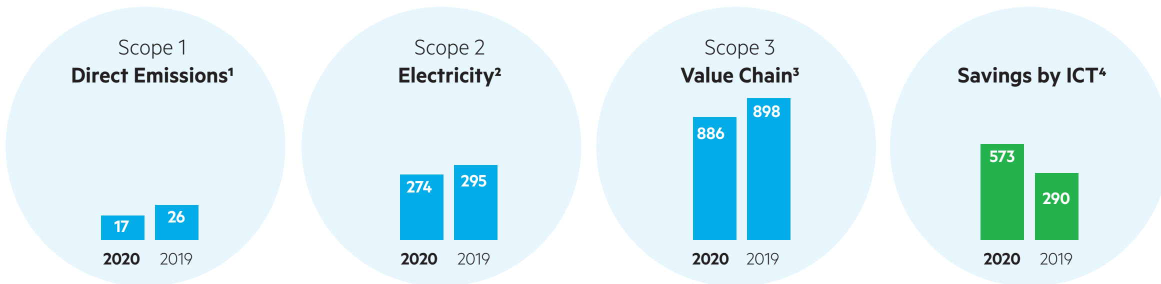
We continued our efforts in our Energy Innovation Lab, using AI applications to optimize the energy storage of green energy sources and facilitate local exchange. The stored energy is used to provide energy when the sun is not shining. KPN joined Troef, a consortium of 10 Dutch companies and institutions that aims to accelerate the energy transition in the Netherlands with the application of the 'Internet of Energy'. The consortium is developing a new layered energy ecosystem for this purpose, with which sustainable energy can be exchanged transparently and optimally between buildings and areas, generating the lowest possible CO_2e emissions.

Our offices have saved 63% in energy compared to 2010 in several ways: an energy-saving program, optimizing workspace, and using less office space as people worked from home for most of the year, as a result of the COVID-19 lock-downs.

In 2020, our absolute savings on car fuel compared to 2010 was 73% In 2020, we saved more than double the amount of used fuel compared to 2019, due to COVID-19 travel and commuting restrictions. In 2020, we added 158 electric cars and 107 biogas cars as part of our fleet transformation, which equates to an inflow of 46% fossil fuel free cars (lease and engineers). This is higher than our 2020 target of 35%.

Our performance: Environmental performance and responsible supply chain

Overview of own emissions (scope 1 and 2), value chain emissions (scope 3) and savings by ICT
(CO_2e in kTon)



1 Gross emissions, mainly relating to our fleet; our net emissions are zero with compensation of fossil fuel cars
2 Location based emissions, relating to our usage of electricity; our market based emissions are zero
3 Upstream and downstream emissions in our value chain
4 Savings realized through services used by our customers

Our emissions in the supply chain (scope 3 emissions) are 886 kTon CO_2e. Our value chain emissions improved by 17% compared to base year 2014. We engage with suppliers on carbon reduction in the value chain. This is covered by the scope extension of our ISO 14001 certificate with energymanagement and carbon reduction management.

CO_2e savings for customers from using our ICT services almost doubled in 2020 compared to the previous year, as use of our services increased in the COVID-19 crisis. For 2021, we currently estimate this effect to be the average of 2019 and 2020, as office workers will work partly from home, partly from the office. We measure this avoided energy consumption by calculating the impact on our Consumer and Business customers for specific products and services (see Appendix 3 and Appendix 7, table 9). We realized 309% savings in 2020 versus our own energy usage.

Using these services helped our customers avoid around 570,000 tons of CO_2e emissions and 1798 tons of PM_{10} emissions, and to save around EUR 330m in energy costs. Most of these savings were due to reduced car fuel consumption (230 million liters). This is the equivalent of the fuel that 290,000 cars use in a year.

See Appendix 3 for further information on our methodology to measure direct emissions (scope 1), electricity (scope 2), value chain emissions (scope 3) and savings by ICT. Scope 1, 2 and 3 are reported in line with the Greenhouse Gas Protocol.

Our risks and opportunities related to climate change and compliance with new environmental legislations are incorporated in our risk management and control systems. Please see chapter Compliance and risk (p. 73) and Appendix 4 for an overview of our top risks. We have taken into account the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), which include matters such as governance, climate strategy, risk and opportunity assessment, and key performance indicators (see overview in Appendix 3).

Becoming circular in our operations

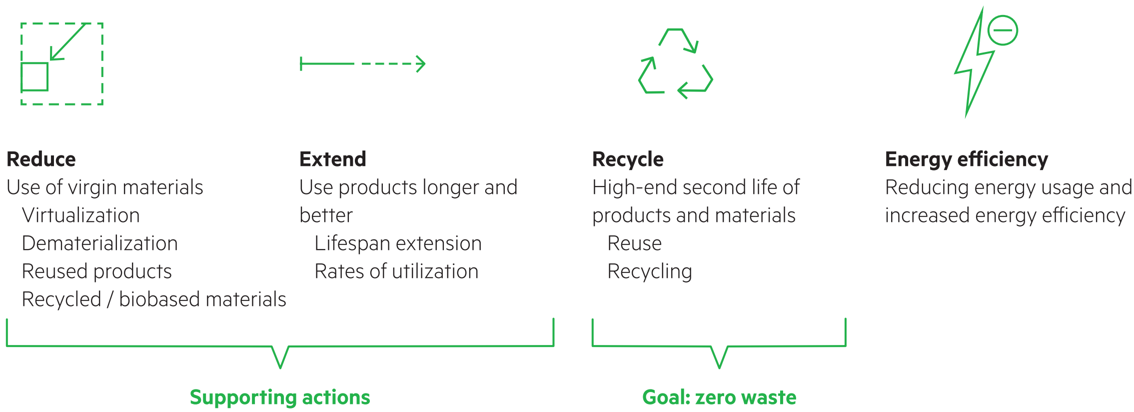
KPN is committed to the principles of a circular economy, which means we aim to use fewer materials, enhance product lifespans and take measures to reduce our waste production to zero. Our suppliers play a major part in the extent to which KPN can operate as a circular company. As such, we take their environmental and social performance into account. We collaborate with knowledge partners such as universities and the Platform for Accelerating Circular Economy to increase our knowledge of which plastics and metals can be recycled or separated.

For inflow of materials we have to date introduced 9 products with improved circular design. In 2020, we introduced our new modem and network termination unit with a casing of recycled plastic. We also ran a pilot on a fiber-optic cable that is not only smaller in diameter, but also uses 90% recycled plastic. With product passports, we collaborate with suppliers to achieve more reuse and recycling based on eco-design analysis.

For outflow of waste and materials, we collaborate with third parties in our value chain to improve waste reduction and separation, and optimize reuse and recycling rates. Internally, we focus on reusing parts for network maintenance. Our reuse and recycling rate improved from 78% in 2019 to 81% in 2020. This is mainly driven by improved performance in the network domain.

Most customer-related products are modems, TV set-top boxes or mobile handsets. For modems and TV set-top boxes, standardization is a good way to ensure reuse and upgrading. In an effort to close the loops in our supply chain, we improved our return rate from 74% to 92%.

Circular economy approach



To improve the circularity of our product portfolio, we continue to offer refurbished phones. Our customers can also choose to have their mobile handsets repaired through our repair service and can get advice on how to reuse their previous handsets. Our mobile subscribers can now opt for a digital SIM card, the eSIM. One important advantage of the eSIM is that you no longer need a plastic SIM card, which saves plastic. In addition, the plastic SIM card was sent by post - something that is unnecessary with the eSIM.

CHALLENGE

We have a dilemma when it comes to extending the lifespan of equipment. Our efforts in the area of material efficiency potentially conflict with our efforts to enhance energy efficiency, as this involves replacing equipment with newer, more energy-efficient equipment. We have started to conduct life cycle analysis to gather insight in the environmental footprint during the lifecycle of a selected product.

Procurement and suppliers

Our criteria for selecting suppliers

KPN's procurement policy guides us in sourcing, contracting and managing our suppliers. As a large company purchasing many products and services, we strive to do business only with suppliers who comply with our Supplier Code of Conduct. This code sets out social and environmental requirements for suppliers. It is inspired by the Charter of the United Nations and based on the core conventions of the International Labor Organization (ILO). The code contains conditions relating to human rights, labor conditions, privacy, safety, environment, bribery and corruption. It forms part of our general purchasing conditions.

In addition to requirements in our code, we apply ESG criteria in our process to select suppliers. This means we assess whether they have integrated the principles of ESG into their business and management system. These ESG criteria encompass four themes: environment; labor and human rights (which include health and safety, working conditions, social dialogue, child labor, forced labor and human trafficking, diversity, discrimination and external stakeholder human rights); ethics; and sustainable procurement.

Our sourcing process is based on a competitive comparison of suppliers. It applies economic, business, ethical and the following ESG criteria:

- Compliance with KPN's Supplier Code of Conduct
- Conflict minerals: We ask our suppliers to undertake reasonable due diligence within their supply chain to ensure the raw materials used in their product are sourced only from mines and smelters outside the 'conflict region' in the Democratic Republic of Congo or mines and smelters that have been certified by an independent third party as 'conflict-free' if sourced within the 'conflict region'
- Promoting the reduction of virgin materials, i.e. new materials not previously used
- Promoting the reuse and recycling of KPN products to reduce landfill and help KPN shift to a circular business model, in line with our ambition to be a fully circular company by 2025
- Extending the lifecycle of products
- Promoting the energy efficiency of KPN products

As well as the criteria mentioned above, we look at the impact suppliers may have on the environment in the communities where

Our performance: Environmental performance and responsible supply chain

they operate and at the working conditions of their staff. We categorize suppliers based on their local or regional, social and environmental impact. For more details, see Appendix 8: Supply chain (p. 218).

Procurement policy and risk management

We adjusted our procurement policy in 2020, introducing a new process for assessing suppliers on geopolitical risks. Before starting a tender process, we now need approval from our Strategic Investment Board to consider a supplier to participate.

COVID-19 compelled our procurement department to take measures. We monitored and analyzed the extent to which the pandemic could disrupt our supply chain and reported on these risks to a special team, set up to coordinate KPN's response. Responding to this risk, suppliers quickly diversified their supply base, ordering parts and finished products from manufacturers in different countries. We contacted our top 20 suppliers to assess the measures they were taking to mitigate supply chain risks, and stayed in weekly contact with several of them to discuss supply chain disruption risks.

EcoVadis, which provides us with sustainability ratings for our suppliers, assessed the extent to which our suppliers were exposed to and capable of mitigating supply chain risks. EcoVadis also advised on measures suppliers could take to mitigate these risks.

Sustainability checks

Applying sustainability criteria

Annually we aim to rate our top 100 suppliers and all our new suppliers through EcoVadis, enabling us to assess their sustainability performance. The average EcoVadis sustainability rating of our suppliers is significantly higher than the overall average score of the tens of thousands of suppliers EcoVadis assesses. We expect our suppliers to score at least 35/100. If the outcome of the assessment report is a score of less than 35 points, a supplier must draw up an improvement plan to mitigate identified risks or shortfalls for the purpose of achieving a score of at least 35 points in a subsequent assessment.

It is our ambition to assign a weighting to ESG criteria in our purchasing process in the near future. This will make it easier to reward suppliers who invest more in ESG and achieve better results than others in this regard. We will develop this ESG weighting together with fellow members of the Joint Audit Cooperation (JAC), an association of 17 telecom operators.

Together with other JAC members, we strive for standardization of social and environmental criteria, including criteria related to recycling, promoting a circular economy and fighting climate change. Last year, we started discussions with other organizations to explore how we can achieve standardization, which would make it easier for suppliers worldwide to meet ESG criteria.

Social audits

Once contracts are closed and deliveries commence, we regularly audit our critical suppliers to check if their products and services meet our ESG criteria. We conduct these audits together with JAC. Our aim is to audit critical suppliers every two to four years.

Our audit activities suffered delays in 2020 because of travel restrictions in some of the high-risk countries during the COVID-19 pandemic. 32% of our Tier I, Tier II, Tier III and Tier IV suppliers were audited. Between 2014 and 2020, audits were conducted of 82% of our high-risk suppliers. Together with other JAC members, 537 audits were carried out in production plants (Tier I, II, III, and IV) in Asia, North America, Latin America, Eastern and Western Europe and Oceania, covering a total of more than 1.3 million workers. Most audited suppliers were manufacturers of devices and appliances, network appliances and IT equipment.

Fixing shortcomings through corrective action plans

The table below shows the numbers of non-conformities recorded during on-site audits conducted in 2015-2020.

	2020	2019	2018	2017	2016	2015
Business Ethics	2	3	4	11	7	19
Discrimination	-	2	-	1	-	-
Disciplinary practices	-	-	1	-	2	-
Environment	8	17	8	12	18	15
Freedom of association	-	1	1	1	1	2
Health & safety	10	39	23	27	31	45
Labor	-	-	4	-	2	5
Unlawful labor	-	-	5	1	-	8
Wages & compensation	-	3	4	3	6	5
Working hours	1	6	7	15	16	9
Other	-	-	-	1	-	-
Total	**21**	**71**	**57**	**72**	**83**	**108**

For every non-conformity encountered, we drew up a corrective action plan (CAP). These plans outline measures to resolve issues according to a strict timeline. The suppliers and their local production sites are responsible for executing the plans. JAC members monitor their implementation on a monthly basis. Because of the lower number of audits during the pandemic, the number of CAPs was also lower than usual.

CAPs include clear deadlines, with the aim of completing all corrective actions within 12 months. Although all our suppliers are committed to completing their CAPs, we have found that some issues are hard to resolve within a year. In 2020, we closed 91% of all non-conformities raised between 2017 and 2019.

Promoting human rights in the supply chain

Together with JAC, KPN launched an initiative to enhance transparency in the supply chain focused on living wage. To further perpetuate the JAC guidelines on forced labour and ensure compliance, the JAC has established a special workstream that will focus on this topic.

However, due to a lack of transparency in the supply chain, it is hard for KPN and its peers to assess whether any equipment and devices they purchase contain products or product parts that were made or assembled at locations associated with alleged human rights violations.

Our valuable assets

Overview of our capitals to operate

Our organization is fueled by six key capitals, enabling us to contribute to digital transformation. Each of the capitals is vital to maximize the value we create for our organization, our stakeholders and society at large in the short and long term.

Loyal customer base and digital era demands

We aim to build a satisfied customer base, providing customer journeys designed to accommodate the digital needs of our customers, ranging from consumers to large corporate enterprises.

	2020	2019
Consumer and Business postpaid customer base	**5,490k**	5,425k
Consumer and Business broadband customer base	**3,141k**	3,163k
Interactive TV customer base	**2,161k**	2,170k
Fixed-mobile households	**1,406k**	1,402k
Wholesale broadband customer base	**1,046k**	957k

Strong partnerships and supplier base

We join forces with ambitious technology companies to work on the applications of tomorrow, providing better and more innovative products to our customers while reducing adverse impacts across the supply chain.

	2020	2019
Partnering innovative startups & entrepreneurs	**55**	~57
Partnering research centers & universities	**6**	4
KPN Ventures fund size	**€ 70m**	€ 70m
# of contracted suppliers	**1,435**	1,497

Future-proof infrastructure and mobile spectrum

We connect telecom and IT activities through investments, partnerships and research in innovations strengthening the capacity of our network and IT infrastructure.

	2020	2019
FttH households	**2.78m**	2.47m
Modernized mobile sites	**2,803**	641
Average max download speed broadband fixed	**377 Mbps**	236 Mbps
Average 4G download speed	**97 Mbps**	68 Mbps

Skilled and motivated workforce

We create a more simple, effective and inclusive organization by acquiring, developing and retaining the right people and skills to become a stronger, more agile and profitable business.

	2020	2019
Full-time domestic personnel	**10,102**	11,248
Average training cost in EUR per FTE	**€ 1,507**	€ 2,047
Employee score for engagement	**86%**	77%

Solid financial basis

We focus on mass-market revenue growth and cost savings aiming to realize a return on investment for our capital providers that outperforms the cost of capital while solidifying our financial and competitive position.

	2020	2019
Return on Capital Employed	**10.1%**	9.3%
Market capitalization	**€ 10.5bn**	€ 11.1bn
Leverage ratio	**2.3x**	2.2x
Credit ratings (Moody's/S&P/Fitch)	**Baa3/BBB/BBB**	Baa3/BBB/BBB

Green energy

We mitigate our adverse environmental impacts driven by our belief that sustainable business is better business and expressed in our climate-neutral operations and our commitment to a circular economy.

	2020	2019
Green electricity consumption	**100%**	100%
Energy consumption	**2.428 PJ**	2.728 PJ

Education case: Gymnasium Novum

Michel Zorge - Rector Gymnasium Novum, Voorburg

“Students are becoming independent and teachers digitally savvy”

"By the second week of school closures, we had already set up a new schedule: half-hour online classes until noon. Students could spend the afternoon doing their homework or group assignments.

All our students had laptops even before the COVID-19 pandemic. Both teachers and students knew there were digital tools out there, but unfortunately, we did almost nothing with them. About 80% of employees knew about the tools, but had no practical experience of using them. Because of COVID-19, we've made huge advances in distance learning in particular - students no longer need to be physically present at school to participate in class.

Teachers have found creative solutions for group classes, for example by using interactive PowerPoint presentations. Students have been listening in from home and can participating in quizzes or joining a group virtually for a shared assignment.

We've found that some teachers are struggling to master digital tools. Tools that were always there in the background are now mandatory. Students, on the other hand, have mastered the digital environment very quickly. However, they have found it more difficult to work independently, take initiative and plan, all of which are typical of distance learning.

It has become more important for every student to have a good broadband connection. The lack of this, or of good hardware at home, unfortunately means fewer opportunities to stay involved and keep up. If the facilities for taking those lessons are insufficient, then there is a good chance that pupils will now fall behind in their education more than before.

“If it weren't for COVID-19 we wouldn't have gotten this far so quickly”

The pandemic has certainly had one benefit: both students and teachers have rapidly become more familiar with the digital world of tomorrow, as well as the 21st-century skills that that world demands. If it weren't for COVID-19, we wouldn't have gotten this far so quickly."

Nop Velthuizen - Physics teacher Gymnasium Novum, Voorburg

"During the pandemic I started making video lessons that I post on YouTube. This works so well that I'm going to continue doing it when the pandemic is over. Students will then always have something to fall back on."

Lisette Oosterbroek - VP People Experience & Organizational Development, KPN

“Moving towards a more hybrid working model”

"COVID-19 and the crisis it caused had major impact on everyone, and KPN was no exception. We felt its effects as an organization and as people. When the first signs came from Italy in February 2020, we immediately set up a crisis team with a specific taskforce focusing on people and health. The impact of the crisis was large: we took a fairly quick decision to allow 8,000 employees, normally working from different offices, to work exclusively from home overnight.

That transition went quite smoothly because we've been applying the New Way of Working since 2008 and around 20-30% of the employees were already working from home regularly. However, when the schools closed, it became a lot harder for many employees. We responded to this by making it possible for people to take additional leave, so they had more room to organize their family lives. We agreed that every time the schools closed, we would offer this possibility again. We also immediately turned a lot of our attention to activities for staying connected with one another, and especially for staying fit and energetic: from online pub quizzes and cooking workshops to actions like Mindboost or Steptember, where we all pulled together for charitable causes.

The second lockdown was tough for many people again, but we were happy to see that the schools had learned a lot from the past year. Online lessons are better prepared and parents are better able to handle homeschooling. Again, we are offering people the room to organize their home lives with our favorable leave arrangements. Among our employees, we've seen a great example of a parent making smart use of our leave arrangements. He now makes time to teach several children from his own children's class.

During the summer, we investigated and discussed how we want to work when the crisis is over. Research showed that more than 70% of employees would ideally prefer to work from home three days a week and in the office two days. We are looking at which steps we can take when, moving step by step towards the future. At the same time, we are constantly researching what works best, taking a learning approach, including together with other companies through the Anders Werken, Anders Reizen coalition. What is certain is that we are moving towards a more hybrid working model; the function of offices will change, we will work more from home, and sustainable travel will become the norm.

We have created roadmaps for employees to return partially to the office in phases when the moment comes, so they can meet up, brainstorm and engage in teambuilding. Almost nobody wants to work exclusively at home. Humans weren't made for that. I certainly wasn't: I'm looking forward to a good balance in the future, a win-win. Working at home some days for the things that can be done from home, but also definitely meeting again face-to-face ‘in real life’. Catching up over a cup of coffee in the office, but no longer sitting in traffic jams every day staring at red brake lights."

Corporate governance

Steering the company

The corporate governance framework of KPN is in line with the requirements of the Dutch Civil Code, the Dutch Corporate Governance Code and applicable laws and regulations, including securities laws, and is aligned with our strategy. KPN is also governed by its Articles of Association and internal procedures, such as the by-laws of the Board of Management and the by-laws of the Supervisory Board.

Legal structure of the company

Royal KPN N.V. is a public limited liability company established under the laws of the Netherlands, with ordinary shares listed on Euronext Amsterdam. The Articles of Association of KPN were last amended on 20 April 2018. KPN has a two-tier management structure with a board of management and a supervisory board. KPN qualifies as a 'large company' (structuurvennootschap) within the meaning of the Dutch Civil Code and applies the relevant rules of Dutch corporate law. The Board of Management is entrusted with the management of the company. The Supervisory Board oversees strategic and commercial policymaking by the Board of Management and the way in which it manages and directs KPN's operations. In the performance of their duties, the members of the Board of Management and the Supervisory Board are guided by the interests of the company and the enterprise connected with it, and take the relevant stakeholder interests into account. The Board of Management is accountable to the General Meeting of Shareholders in accordance with Dutch legislation. See Note 24 to the Consolidated Financial Statements for details of KPN's legal structure.

Shareholders

Share capital, listings and indices

KPN's authorized share capital totals EUR 720m, divided into nine billion ordinary shares of EUR 4ct each and nine billion preference shares B of EUR 4ct each. As of 31 December 2020, a total of 4,202,844,404 ordinary shares were outstanding. Since 13 June 1994, KPN's ordinary shares have been listed on Euronext Amsterdam (ticker: KPN). KPN has a Level I ADR program, which allows investors to trade KPN ADRs in the United States on the over-the-counter market (ticker symbol: KKPNY). KPN shares are included in a number of leading indices, including the AEX, the EURO STOXX Telecommunications Index and the STOXX Europe 600 Telecommunications Index.

General Meeting of Shareholders

The General Meeting of Shareholders holds all powers that have not been granted to other company bodies. It has the authority to appoint members of the Supervisory Board upon binding nomination by the Supervisory Board and to dismiss the Supervisory Board. The General Meeting of Shareholders furthermore adopts the Financial Statements, releases the members of the Board of Management and Supervisory Board from liability, determines the dividend, determines the remuneration for members of the Supervisory Board and approves the remuneration policy and share (option) plans for the Board of Management. Furthermore, certain decisions are subject to the approval of the General Meeting of Shareholders, including decisions entailing a significant change in the identity or character of the company or its business and corporate matters, such as amendments to the Articles of Association of the company, a (de)merger or the dissolution of the company, and the issuance of shares or reduction of the issued capital of the company.

Within four months of the end of every fiscal year, the Board of Management prepares Financial Statements, accompanied by an Integrated Annual Report. The Financial Statements are submitted to the Supervisory Board for approval, and subsequently (within six months of the end of the fiscal year) to the Annual General Meeting of Shareholders (AGM) for adoption, and to the Central Works Council for information purposes. Adoption of the Financial Statements does not automatically discharge the Board of Management or the Supervisory Board from liability. This requires a separate resolution by the AGM. Further General Meetings of Shareholders are held as often as the Supervisory Board or Board of Management deem necessary. The Board of Management and the Supervisory Board set the agenda of the General Meetings of Shareholders. Shareholders who individually or collectively represent at least 1% of the issued capital or who, according to the Official Price List of Euronext Amsterdam, represent at least a value of EUR 50m have the right to propose items for the agenda, within the boundaries of the law. Every shareholder has the right to attend a General Meeting of Shareholders, in person or through written proxy, to address the meeting and to exercise voting rights.

Obligations to disclose holdings

Pursuant to the Dutch Financial Supervision Act (Wft, Wet op het financieel toezicht), legal entities as well as natural persons must immediately notify the Dutch Authority for the Financial Markets (AFM) when a shareholding reaches, exceeds or falls below certain thresholds of the issued capital. The AFM incorporates these notifications in the public register, which is available on its website. See Note 23 to the Financial Statements for notified KPN shareholdings as at 31 December 2020. Please see 'Composition of the boards' (p. 82) for information on insider transactions and share ownership by the members of the Board of Management and Supervisory Board.

Purchase of shares in the company's own capital and issuance of new shares

With the general aim of flexibility in financing of the company, the AGM authorized the Board of Management to purchase shares in the company's own capital and also decided to reduce the issued capital through cancellation of own shares held by the company by a number that could be determined by the Board of Management. Furthermore, the AGM also designated the Board of Management as the body authorized to issue ordinary shares and to grant rights to subscribe for ordinary shares and to restrict or exclude statutory pre-emptive rights of existing shareholders upon such issuance or granting of rights. The above authorities and decisions are limited to a maximum of 10% of the issued capital as of 15 April 2020 and are applicable until 15 October 2021. Resolutions by the Board of Management implementing the above are subject to the approval of the Supervisory Board. The authorities were not used during 2020.

Supervisory Board

The Supervisory Board supervises and advises the Board of Management, guided by the interests of the company and the enterprise connected therewith and taking into account the interests of the stakeholders. Major investments, acquisitions and various corporate matters are subject to Supervisory Board approval.

Members of the Supervisory Board are appointed by the General Meeting of Shareholders upon binding nomination by the Supervisory Board. The Central Works Council has an enhanced right to recommend persons for nomination to the Supervisory Board for up to one-third of its members. The Supervisory Board must nominate the recommended persons unless it is of the opinion that any such person would be unsuitable to fulfill the duties of a Supervisory Board member or such appointment would cause the Supervisory Board to be improperly constituted. Pursuant to a specific arrangement with América Móvil, América Móvil has the right to designate one person to be nominated by the Supervisory Board for appointment as a member of the Supervisory Board. According to the Articles of Association, the Supervisory Board must comprise of at least five and not more than nine members. Members of the Supervisory Board resign according to a schedule set by the Supervisory Board. A member steps down at the first AGM following their first term in office. In accordance with the Dutch Corporate Governance Code, members of the Supervisory Board can be reappointed once for a four-year term and thereafter for a maximum of two terms of two years, provided specific reasons for such further reappointments are given. The Supervisory Board has determined its 'profile', defining the basic principles for its composition. All nominees for election to the Supervisory Board must fit this profile. According to this profile, the Supervisory Board must be composed in such a way that members of the Supervisory Board are able to operate independently of each other and of the Board of Management. The profile is available on KPN's website.

The by-laws of the Supervisory Board comprise, among other things, rules regarding the members' duties, powers, working methods and decision-making, what decisions by the Board of Management it must approve, training and conflict handling. The by-laws are available on KPN's website.

Committees of the Supervisory Board

The Supervisory Board has four committees: the Audit Committee, the Remuneration Committee, the Nominating & Corporate Governance Committee and the Strategy & Organization Committee. These committees assist the Supervisory Board in its decision-making and report their findings to the Supervisory Board. Their tasks are laid down in terms of reference, which are available on KPN's website. Further information on the activities of the committees in 2020 can be found in the Supervisory Board Report.

Board of Management

The Board of Management is responsible for setting KPN's strategy and for managing KPN's strategic, commercial, financial, operational, ESG and organizational matters. The Board of Management is accountable for its performance to the Supervisory Board and to the shareholders of the company. In performing their duties, the Board of Management focusses on long-term value creation for the company and the enterprise connected with it, taking into account the interests of the stakeholders.

The members of the Board of Management are appointed and dismissed by the Supervisory Board. Members of the Board of Management are appointed for a four-year term, which ends at the first AGM after that term expires. The by-laws of the Board of Management contain, among other things, rules regarding the members' duties, powers, working methods and decision-making and conflict-handling. The by-laws are available on KPN's website.

ESG

Environmental, social and governance (ESG) criteria are embedded in KPN's organizational structure. ESG themes are defined and approved by the Board of Management, including their ambitions and KPIs. Every ESG theme is assigned to

Corporate governance

a member of the senior management who, as theme owner, is responsible for stakeholder dialogue, targets, progress and results. Each theme owner heads a committee, consisting of management of the key departments involved in this theme. The theme owners report to KPN's CSR Manager, who is responsible for the overall reporting, approach and cohesion. The CSR Manager reports to the Director of Corporate Communication & CSR, who in turn reports to the CEO. Four times a year, ESG data is included in the overall set of business KPIs that is reported to and discussed with the Board of Management. In order to obtain sufficient outside reflection, stakeholder dialogues are held with external experts to advise KPN on its approach to ESG in general and more in-depth on the ESG themes. Climate-related risks and opportunities are considered integral to the governance of operations and ESG themes. Further details on governance and risk can be found in chapter 'Compliance and risk'.

Compliance with the Dutch Corporate Governance Code

KPN complies with all best practices of the Dutch Corporate Governance Code. An overview of all principles and best practices of the Dutch Corporate Governance Code as well as KPN's application of these in accordance with the 'comply or explain' principle is available on KPN's website.

Conflict of interest

The handling of conflicts of interest between the company and members of the Board of Management or Supervisory Board is governed by Dutch law, the relevant provisions of the Dutch Corporate Governance Code and the by-laws of the respective boards. A board member is required to immediately report any (potential) conflict of interest that is of material significance to the company and/or to the member concerned, to the chairman of the Supervisory Board (or, in case of the chairman, to the vice-chairman of the Supervisory Board). The relevant board member shall not take part in discussions or decision-making on a subject in which they have a conflict of interest. Decisions to enter into transactions in which there are conflicts of interest with members of each of these company bodies that are of material significance to the company or such member require the approval of the Supervisory Board. There were no conflicts of interest in 2020.

For the Statement by the Board of Management and Responsibility Statement, see page 81.

Employee participation

KPN has implemented employee participation in accordance with the provisions of the Dutch Works Councils Act. Constructive employee participation is an integral part of our organization and allows employees to be involved in organizational matters in various ways and to have a say in their work. Employee participation is an important value for KPN and a part of its culture. To align employee participation processes with KPN's practices, we have established several individual work councils, specific to different business segments. These works councils are all represented in the Central Works Council, that is competent for subjects of common interest or subjects that concern a majority of the works councils. The Central Works Council interacts with the CEO, whereas individual works councils for each business segment interact with the director of that segment.

External auditor

The external auditor is responsible for the audit of the Financial Statements. The AGM appoints the external auditor on a yearly basis, upon a proposal by the Supervisory Board. The external auditor reports to the Board of Management, the Audit Committee and the Supervisory Board to discuss findings pertaining to their agreed procedures for the quarterly financial results and audit of the annual financial results. The external auditor attends the AGM to answer questions pertaining to the Combined Independent Auditor's Report, as included in the Integrated Annual Report. The Audit Committee approves every engagement of the external auditor, after pre-approval by the internal auditor, to ensure the external auditor's independence. All Audit Committee meetings were attended by the external auditor. For the role of the internal auditor, see page 79.

Foundation Preference Shares B KPN (Stichting Preferente Aandelen B KPN)

KPN has granted a call option, which is not limited in time, to the Foundation Preference Shares B KPN (the Foundation), to acquire a number of preference shares B in KPN, which have the same voting rights as ordinary shares, not exceeding the total issued number of ordinary shares, minus one share and minus any shares already issued to the Foundation. Upon exercise of the call option, 25% of the nominal value of EUR 4ct per Class B preference share needs to be paid by the Foundation. According to its Articles of Association, the statutory goal of the Foundation is "to protect KPN's interests (which includes the interests of stakeholders, such as customers, shareholders and employees), by, among others, protecting KPN from influences that may threaten its continuity, independence and identity". Consequently, in the event of any circumstances where the company is subject to influences as described above and taking public security considerations into account, the board of the Foundation may decide to exercise the call option, with a view to enabling the company to determine its position in relation to the circumstances as referred to above, and seek alternatives. The board of the Foundation is of the opinion that under normal circumstances it should not exercise its voting rights for longer than a limited period. The members of the board of the Foundation are A.P. Aris (Chairwoman), F. van der Wel, P.N. Wakkie and F.J.G.M. Cremers. The Board of Management has concluded that the board of the Foundation is independent from KPN in accordance with parts c and d of the first subsection of article 5:71 of the Dutch Financial Supervision Act.

The views of the board of the Foundation, summarized above, are published on the Foundation's website (www.prefs-kpn.nl).

Tax and regulations

Monitoring developments and compliance proactively

KPN is subject to taxation and sector specific regulations, which are monitored proactively. Embedded in KPN's Tax Strategy and Policy, KPN follows a tax approach in which principles of mutual trust, understanding and transparency are elementary. Combined with continuous dialogue with the government and active participation in representative associations, this approach is inspired by best practice around tax governance and compliance. Sector specific regulations are monitored proactively.

Tax profile & current tax position

Tax profile

KPN's Corporate tax department manages all relevant taxes and secures optimal use of subsidy opportunities, whereby KPN adheres to its Tax Strategy and Policy (see ir.kpn.com).

It is important to KPN to create sufficient tax awareness throughout the organization. Therefore, KPN regularly organizes meetings, knowledge updates and training, to ensure employees act with integrity and adhere to KPN's tax strategy and policy. An important pillar to its tax strategy and policy is KPN's Tax Control Framework (TCF). The TCF is an integrated part of KPN's control environment as described in chapter Compliance and risk (page 73). As part of the financial objectives (page 77) , the effectiveness of the TCF is confirmed by the statement of the Board (page 81).

As the TCF is part of the financial objective, KPN's tax department is responsible to effectively identify, assess and manage the main tax risks of the company (first line of defense). Risk Management and Compliance departments (second line) and KPN Audit (third line) monitor and review the effectiveness of the TCF. The TCF effectiveness is monitored and evaluated every quarter and is once a year challenged to ensure a dynamical and up-to-date control environment. Tax risks identified are explained in Appendix 4 (p. 198) (including countermeasures). The whistleblower policy (page 74) also applies to tax. Misconduct or suspicion thereof relating to tax should be reported.

Current tax position

The relation with the Dutch tax authorities is based on the principles of mutual trust, understanding and transparency. KPN is self-assessing and discusses in a pro-active and transparent manner current and potential future tax issues with the Dutch tax authorities. In line with their new policy, that applies for the 100 largest and most complex organizations, the Dutch tax authorities have replaced the covenant with KPN for an Individual Monitoring Plan ("Individueel Toezicht Plan") in 2020. As the relation between the Dutch tax authorities and KPN will continue to be based on aforementioned principles, KPN does not anticipate a significant changes as a result.

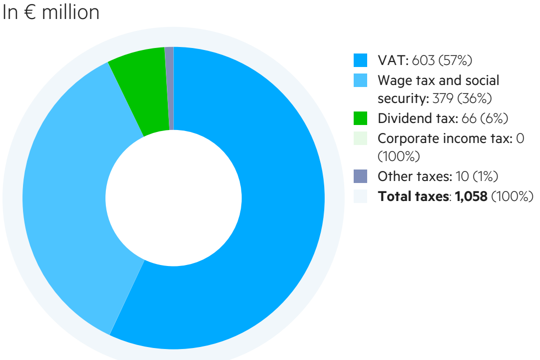
In 2020, the following main developments and projects were relevant to KPN from a tax perspective:

- Changed Dutch corporate income tax rates; for 2021 a change in corporate income tax rates from 21.5% back to 25% has been enacted during Q4 2020 which impacts the valuation of our deferred tax asset (see note 8 Taxation).
- In 2020, an uncertain tax position (UTP) has been recognized as a result of discussions with the Dutch tax authorities on how the calculation of the innovation box (iBox) was made. For more details see note 8 Taxation.
- In 2020, the Dutch and Irish Government settled a mutual agreement procedure on the allocation of income between The Netherlands and Ireland on the insurance activities of KPN through an Irish entity for the years 2014 and 2015. The net impact on the results of KPN is limited. For the years 2016 and further KPN is considering to start a new procedure as the insurance activities of the Irish entity have changed since Q4 2016. KPN is confident that this procedure will be settled in favour of KPN. Furthermore, it will be investigated whether the outcome of the mutual agreement procedure influences the remittance of insurance tax for the respective years.
- Based on the VAT decree regarding the VAT treatment of vouchers that applies as of 2019, KPN discontinued the lower remittance of VAT as of 2019. KPN has filed notices of objections with regard to the VAT calculation methodology of vouchers. The Dutch tax authorities have rejected these notices of objections and KPN appealed to this decision of the Dutch tax authorities (see note 20 Contract liabilities, trade and other payables and Appendix 4 List of top risks).
- WBSO R&D tax credit: KPN is continuously monitoring its innovation activities to substantiate the R&D tax credit for labour costs.

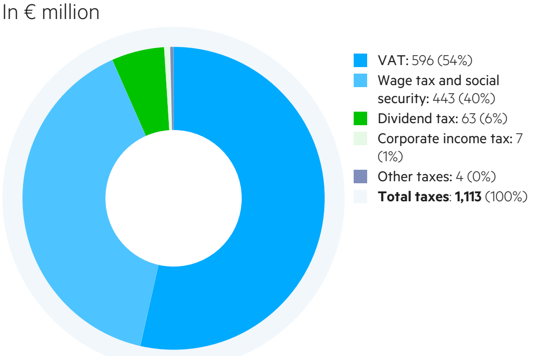
Tax contribution

Taxes paid by KPN include:
- Taxes paid by KPN - Corporate income taxes and other taxes (e.g. real estate tax)
- Taxes collected and paid by KPN as outcome of its activities - VAT, wage tax and social security, dividend tax and other taxes (e.g. energy tax)

2020
In € million



2019
In € million



Forward-looking

Based on current projections, KPN expects to fully utilize its Dutch realized and unrealized losses well within the expiration limits of applicable tax law. Due to fiscal unity loss compensation rules, certain profits within KPN group are no longer eligible to be offset against the currently available losses. Furthermore, the Dutch Government passed new legislation, but not yet enacted, changing the method to utilize losses: as from 2022 losses can be offset to 50% of the taxable profit of a certain year, however, losses will no longer be time-barred. Once enacted, KPN will need more time to utilize all available losses and, based on current projections, remains to do so in the foreseeable future. Based on the above, KPN will be in a corporate income tax paying position as from 2021.

The Dutch Government also implemented new tax regulations on liquidation losses. Based on these new regulations, KPN expects no impact on the use of its (unrealized) liquidation losses. Unrealized losses are anticipated to be realized within the next 2 years. If not offset against taxable profits already in the year of realization, these losses are available for loss carry forward and, based on current projections, expected to be offset against available profits within the foreseeable future.

In 2020 KPN started new ruling negotiations with respect to the innovation box incentive with the Dutch tax authorities. The outcome of these negotiations may also influence future effective tax rates and may impact the value of KPN's deferred tax position.

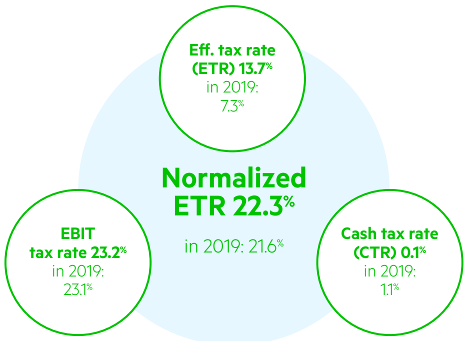
KPN will continue to extend and optimize its tax control framework, supported by simplification and automation. KPN expects to improve current processes and to simplify and automate these processes and embed them in KPN's common administrative processes and controls in near future.

KPN appealed to the decision of the Dutch tax authorities with regard to the VAT calculation methodology regarding vouchers and a court procedure will follow. For further details see also note 20 Contract liabilities, trade and other payables.

KPN continues active participation of representative associations that seek to develop best practice around tax related disclosures. Furthermore, KPN is closely monitoring developments on tax, such as the initiative of The Dutch government to explore a reform of the Corporate Income Tax Act.

Tax and regulations

Tax metrics 2020



The reported difference between the effective tax rate and the cash tax rate is mainly caused by the impact of available tax losses (carry forward). See also note 8 Taxation. The reported corporate income taxes paid relate to taxable profits that cannot be offset against these losses (payable by entities not part of the relevant tax group or due to applicable rules for tax groups). The EBIT tax rate is lower than the statutory rate mainly due to the impact of the innovation box facility.

Regulation affects our business

KPN is subject to sector-specific regulation and enforcement thereof by regulatory authorities, such as the Netherlands Authority for Consumers and Markets (ACM). As described in the chapter 'Compliance and risk', KPN's internal risk management and control systems are designed to minimize the risk of non-compliance with regulation.

European developments

Regulation of the electronic communications markets is largely based on European legislation. The EU's roaming and open internet access regulations are directly applicable in all member states. The application of the regulation of operators with significant market power is enforced nationally, but under coordination of the European Commission. Licensing regimes for frequencies are based on national law. Increasingly, also other regulation (such as privacy law and content-related law) has an impact.

The national implementation of the 2018 European Electronic Communications Code, which amends the regulation for the electronic communications sector, will be in two stages. Some new powers on mapping, new powers to enforce symmetric access regulation and lowering of switching barriers have taken force per 21 December 2020. Symmetrical access obligations aim to allow competitors to ask for connections in local situations where replication is not feasible (due to e.g. zoning restrictions) or where replicability is not economically possible. BEREC has issued Guidelines in December 2020 to ensure a harmonized approach on this new obligation by regulators across Europe. The remaining part of the 2018 Code is still pending and will be realized later in 2021. The scope of this part of the amended regulation is extended to all interpersonal communications services (including over-the-top), thereby creating an increased level playing field for comparable services. A draft new e-Privacy Regulation (in addition to the General Data Protection Regulation, replacing the existing e-Privacy Directive) is still being discussed by the EU institutions. Various legislative instruments that may have impact on KPN (though sometimes to a lesser extent) are still being discussed (such as a draft e-Evidence Regulation).

Security concerns based on geopolitical developments

Both at the European and national level increased attention has been given to security concerns in relation to control over telecom operators via investment and to potential security risks in networks. A Foreign Direct Investment Screening Regulation has come into effect per 11 October 2020, aimed at information exchange between EU member states on potential risks for national security and public order in relation to investments.

At national level, a sector specific Act has been adopted, which creates new powers for the government to prevent undesirable control (related to security risks for public order or national security) over telecom operators which have a significant role in the market. And on security requirements for mobile networks regulations have been published which include powers for the minister to impose specific security requirements for network equipment and to mandate operators not to use equipment from certain vendors in specifically designated critical parts of their networks.

Spectrum licenses

The 700, 1,400 (L-band) and 2,100 MHz bands have been auctioned in 2020. The 3.5GHz band will be auctioned in 2022. The timing of allocation of the 26 GHz band is not yet clear. The government intends to proceed with this latter allocation in the coming years, while also noting advice from the Dutch Health Council (Gezondheidsraad) on further research.

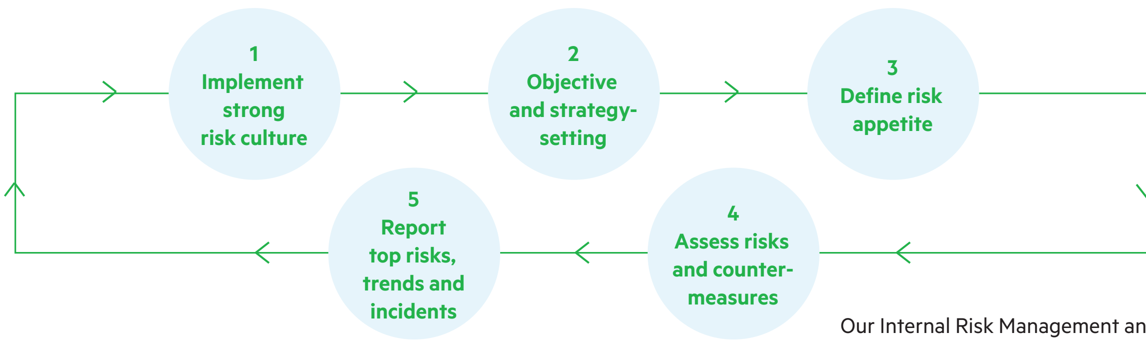
Market analysis decisions in the Netherlands

On almost all telecom markets ex ante regulations have been lifted. This includes the broadband access market analysis following an annulment in Court in March 2020. ACM, however, still investigates possibilities for interventions. These investigations can still affect KPN in some fixed markets. And of course, the fixed and mobile call termination services are still regulated.

Compliance and risk

Maintaining effective risk management

Deploying effective risk management is a key success factor for realizing our company's objectives. For this reason, KPN has implemented robust Internal Risk Management and Control Systems.



Our Internal Risk Management and Control Systems and methodology

Maintaining effective Internal Risk Management and Control Systems requires a continuous and iterative process involving several steps. A strong risk culture and control environment form an important foundation of our control systems. After setting the strategy, the Board of Management defines its willingness to accept risks (risk appetite) in the pursuit of strategic objectives. Management subsequently assesses the main risks that could hinder the realization of the strategic objectives and defines and implements countermeasures to mitigate such risks, taking into account the risk appetite.

Periodically, KPN's performance, top risks, countermeasures, trends and incidents are reported to and discussed with the Board of Management, which defines further remedial actions if necessary.

1. Implement a strong risk culture (control environment)

KPN strives for a business culture in which compliance and integrity are self-evident for all employees. We realize this through actions including the following:

- The KPN Code of Conduct (the Code) applies to all KPN employees, including the Board of Management, the Supervisory Board and temporary staff. It describes how we work in an open, transparent, honest and socially responsible way. We communicate the Code on our corporate website (ir.kpn.com), our intranet, via a mandatory e-learning training for all employees and via online learning interventions ('workouts') that target specific segments of the employee population. We have a stringent approach to bribery and corruption, fraud and all other forms of (illegal) misconduct, including facilitation payments. The effectiveness of, and compliance with, the Code is structurally assessed by:
  – Actively detecting and investigating any alleged misconduct and taking appropriate disciplinary action if misconduct is substantiated
  – Monitoring that all staff (both internal and external) have completed the e-learning training for the Code
  – Structural reporting of incidents to the Board of Management and to the Supervisory Board
- To strengthen awareness and the tone at the top and at other management levels, we frequently conduct fraud risk assessments, including a risk assessment on attitude and behavior, and provide integrity training.
- To emphasize our desired company culture and behavior and to create awareness in the business, we have implemented a communication and training program on compliance and integrity subjects. Information that is important to share because of (changes to) applicable policies, laws or regulations or because of a necessity or demand in business (risk or need-based) is shared through e-learning, workshop or classroom training.

Compliance and risk

- The Business Control Framework (BCF) comprises all corporate policies and guidelines that are mandatory for all of KPN's segments and entities. In 2019, KPN conducted a complete review of the BCF and updated the policies where necessary.
- KPN requires all employees, and encourages external parties, to report (anonymously, if desired) any misconduct by KPN employees (or suspicion of this). Our whistleblower policy complies with the Dutch Whistleblower Act.
- We periodically measure the state of our organizational culture, compliance and integrity as perceived by our employees and report results as well as plans for improvement to senior management, and initiate responses, if deemed necessary.

COVID-19 and risk management

Why was the risk of a pandemic not included in our previous list of top risks?

The 2019 Integrated Annual Report did not include a global pandemic such as COVID-19 in our list of principal risks. Although the risk of a pandemic and the related consequences for KPN are in our risk universe, the likelihood of such an event was deemed to be remote and, looking at previous outbreaks like SARS in 2002-2004 and MERS in 2012, the impact for KPN and our service delivery was limited. Based on these assessments, the pandemic risk was not included in Appendix 4 of the 2019 Integrated Annual Report.

How has COVID-19 changed our risk management practices?

The speed at which the COVID-19 virus spread and its huge impact on countries and the global economy made us aware that we should devote more time and attention to the category of 'risks with a (very) low likelihood'. We will revisit other risks in that category and will analyze to what extent we are sufficiently prepared for such events. During the risk assessments, we will not only focus on the mainstream risks that are relevant for the telecom industry, but also pay more attention to risks with a low or very low likelihood (including a combination of those risks) that could impact our business activities, service levels, reputation or long-term value creation.

2. Objective and strategy-setting

KPN's objectives and strategy are described on page 12. During the objective and strategy-setting process, senior management takes into account the company's known risks and opportunities, and its risk appetite (see next step). The objectives and strategy are discussed with the Supervisory Board.

3. Define risk appetite

Pursuing any business objective inevitably leads to taking risks. Risks can jeopardize achieving those objectives in various ways. Each type of risk encountered is dealt with in a manner that matches the risk appetite of the Board of Management. The risk appetite is the total residual impact of risks that KPN is willing to accept in the pursuit of its (strategic) objectives. The risk appetite per strategic objective or risk area is determined annually by the Board of Management. These risk areas comprise themes such as financial, operational, strategic, compliance and (information) security themes.

Risk areas with a low risk appetite, and hence a low acceptable residual risk, require strong risk management and strong internal controls. Risk areas with a high risk appetite require relatively less risk management and internal control effort. Our main risks and our response to those risks are summarized on p. 78 of this Integrated Annual Report.

KPN has a prudent risk appetite, which can be described per risk category as follows:

- Strategic risks: in the pursuit of our strategic objectives, KPN is willing to accept reasonable risks in a responsible way, taking into account our stakeholders' interests.
- Operational risks: KPN is committed to a high quality of customer service resulting in an increasing NPS. We aim to limit the number of interruptions in our networks, services and systems as much as possible. We implement strict policies to keep our customer data private, safe and secure.
- Financial risks: we strive for the right balance between a prudent financing policy, sufficient investments in the business and fair shareholder remuneration. KPN is committed to an investment-grade credit profile. See Note 12 to the Financial Statements. For tax matters, KPN has defined a detailed tax risk appetite dashboard.
- Compliance risks: we are committed to fully complying with relevant laws and regulations and have a zero tolerance approach to bribery and corruption, fraud and all other forms of (illegal) misconduct.
- Financial reporting risks: we have effective control frameworks in place to minimize the risk of material misstatements and errors in our Financial Statements.

4. Assess risks and countermeasures

KPN has implemented effective Internal Risk Management and Control Systems to manage its main risks. The main part of these systems comprises seven KPN Internal Control Systems, that cover the most relevant risk areas for KPN, as summarized in the table below:

KPN Control System	Control system objective
Liquidity Management and Financial Framework	To maintain sufficient liquidity for continuity purposes and maintaining financial flexibility
Year Plan & Year Outlook	To create value
Network Service Levels	To maintain customer service delivery levels
RFR GRIP Framework	To maintain investor trust
Compliance Frameworks	To maintain licenses to operate
Main Non-Financial KPIs	To measure strategic success & integrated reporting
IT Security & Continuity	To mitigate cyber threats

For each category of objectives (strategic, operational, sustainability, financial, compliance and reliable financial reporting) KPN has defined different control systems.

Strategic objectives

Every year, we assess the top risks at group (top-down approach) and segment level (bottom-up approach), and, if necessary, we implement countermeasures to mitigate them within the defined risk appetite. We conducted risk assessments with our Commercial and Operations segments, as well as with selected staff functions in the Corporate Center in 2020. The business objectives are detailed in a strategic business plan. Every quarter, segments perform a 'most likely' forecast four to six quarters ahead on their main financials and key performance indicators (the rolling forecast). Segments update the main risks and opportunities, resulting in a bandwidth of outcomes around expected performance. Each month, segment management discusses their actual performance with the Board of Management.

Operational objectives

KPN has business continuity plans in place to safeguard the continuity of services to customers and critical systems and processes. To manage our information security and privacy risks, we have implemented the KPN Security Policy as part of the BCF. For more details, see chapter Privacy and security (p. 46).

We have implemented ISO standards in designated areas to certify operational processes. Additionally, we continuously simplify and digitalize services and processes. We implemented quality improvement plans where necessary.

Our main suppliers comply with our Supplier Code of Conduct. Via this code, suppliers confirm that they support and respect the protection of internationally proclaimed human rights and operate in the spirit of the Charter of the United Nations (e.g. by preventing discrimination, child labor or forced labor, and by recognizing and respecting the environment in their business operations). Compliance with environmental law is covered by our ISO14001 certificate.

Sustainability objectives

Risks related to climate change and compliance with new environmental legislation are incorporated in our risk management and control systems. For example, flooding risks (caused by heavy rainfall or rising sea levels) or continuing drought and heat could damage our networks and systems. As such, these risks are managed in KPN's business continuity strategy. With our climate-neutral performance for our own operations and continued focus on absolute energy reduction, we are in a very good position to meet new regulations and customers' expectations, see chapter Environmental performance and responsible supply chain (p. 55). Read more in Appendix 3 Transparency, materiality and stakeholder engagement on our alignment in our reporting with the TCFD framework (Task Force on Climate-related Financial Disclosures).

Scenario analyses for climate risks

In 2020, KPN performed a climate effect assessment, the objective of which was to analyze the vulnerability of our critical infrastructure to changing climate effects. The critical infrastructure reviewed included the metro core locations and national nodes. If these locations are hit by changing climate effects, it could pose a high risks of significant service disruptions. The analysis was conducted by combining KPN location data and the data from the Dutch Climate Impact Atlas (https://www.klimaateffectatlas.nl/en/).

Compliance and risk

We examined the following climate effect risks during the analyses:

- Flooding, caused by rising sea levels and rivers, sometimes resulting in dike breaches
- Waterlogging caused by extreme precipitation
- Forest fires
- Heatwaves and urban warming
- Subsidence caused by a continuing drought and decline in groundwater levels

The analyses provided an indication of the magnitude of the abovementioned climate effects on an area. For the locations that have a high risks of flooding, extreme precipitation or heatwaves, additional countermeasures – based on sound cost/benefit considerations – will be investigated. Such measures could consist of moving hardware to higher levels in buildings, implementing water barriers or installing additional cooling equipment. Additionally, in 2021 we will start a pilot in Rotterdam to replace paving with green areas on some of the higher risk locations, in order to improve the rainwater drainage and reduce urban warming while simultaneously helping to improve biodiversity.

Figure 1 - High risk of flooding

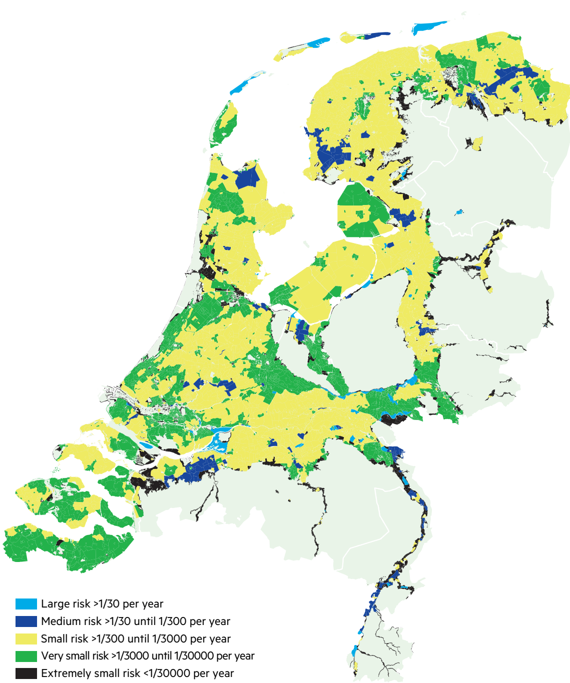
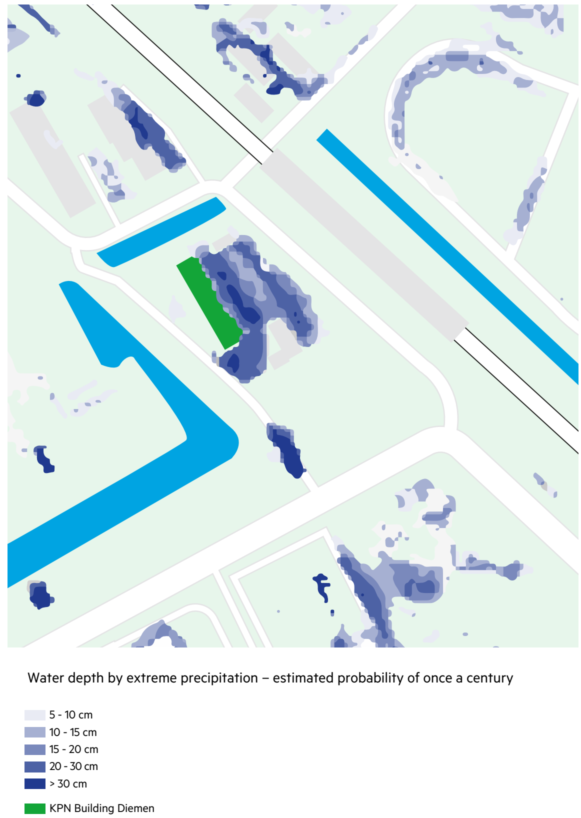


Figure 2 - Example of high risk of extreme precipitation - Metro core Diemen Eekholt



Circularity

The circular economy aims to reduce the impact of the materials used in our products and services we put on market. This strategy not only reduces risks to the availability of future materials and the risk of price volatility, but also prepares our company for future market demands, given that society aims to become more sustainable and reduce its carbon footprint. At the same time circular business models mean rethinking our business and devising new innovations arise. We have also noticed the importance of a leading sustainable strategy to attract and retain talent. For more information, see chapter Environmental performance and responsible supply chain (p. 55).

Sustainable employability

For more information, see chapter Sustainable employability (p. 51).

Financial objectives
KPN's Corporate Treasury department manages risks related to cash positions, finance agreements, credit ratings, currency and interest exposures and counterparty risks, and non-life insurance (see Note 12 to the Financial Statements). Corporate Treasury has defined policies with clear boundaries for these risks. Compliance with these policies is monitored frequently.

As part of KPN's tax strategy, the Corporate Tax department recommends the most tax-efficient and responsible approach in the interest of all stakeholders, while adhering to KPN's tax policy and complying with all relevant tax laws and regulations. This determines KPN's overall tax risk appetite. As KPN proactively engages with Dutch and other tax authorities, tax exposures, if any, are contained and under control. Besides potential tax exposure, reputational risk is always part of the consideration to apply particular tax planning. See also the separate chapter Tax and regulations (p. 70).

Compliance objectives
Our compliance risk assessment (CRA) framework comprises an integrated framework that oversees risks mainly related to compliance with telecommunications, competition, consumer, financial services (e.g. credit) and privacy legislation. Additionally, we monitor compliance with Solvency II requirements (KPN Insurance). For compliance risks, we have implemented relevant processes and controls that are continuously monitored. For risks related to our regulated business, compliance controls are tested by dedicated staff all year round.

Reliable financial reporting objectives
Our internal controls for Reliable Financial Reporting (also known as RFR GRIP Framework) ensure that material misstatements in KPN's Financial Statements are prevented or detected in a timely manner. Each quarter, Risk Management and KPN Audit assess the overall effectiveness of the controls before publication of the quarterly figures. The Review Committee examines all reports and documents containing financial information that is intended for external publication, to ensure that these fairly represent KPN's financial position and results.

5. Report top risks, trends and incidents

Segment management provides the Board of Management with a quarterly assurance letter regarding the reliability of their financial reporting, the effectiveness of their internal controls over financial reporting, risk management and compliance with telecommunication laws, internal policies and other laws and regulations. Twice a year, Corporate Control reports top risks and countermeasures to the Board of Management, including main improvement actions, if any.

Summary of main risks and countermeasures
The table on page 78 provides a summary of KPN's main risks and countermeasures, including the expected trends and impact. It also lists a selection of KPIs that are used to monitor the development of the risks and the realization of our risk appetite. The KPIs are frequently monitored in KPN's planning and control cycle and discussed in the Board of Management's business reviews with segment management, including improvement actions where necessary. This is important as the risks of strong competition, service interruptions, threats to confidentiality, integrity or availability of networks, new regulatory decisions and geopolitical development for suppliers might directly affect our external stakeholders and the value that we create.

For a more extensive list of our risks and countermeasures, see Appendix 4.

This extensive list also reflects three emerging risks that KPN identifies for the near term:
- Geopolitical volatility, driven by rising international tensions, protectionism and security concerns, may impact our ability to do business in any part of the world. These concerns could lead to international bans and other sanctions on suppliers of hardware and software. See also Appendix 4.
- The increase in new entrants offering alternative or private networks, e.g. for telecom or IoT services. Due to these alternative networks, customers are no longer dependent on the networks of existing providers, which could lead to higher churn in the longer run and lower cash flows to finance new investments. KPN addresses this upcoming risk by accelerating the fiber roll-out and offering distinctive 5G services for B2B customers. See also Appendix 4.
- Continued climate changes in the future could lead to rising sea levels, extreme rainfall or extreme heat and drought. These weather conditions could disrupt our systems and networks and consequently could negatively affect the quality of our services and customer satisfaction. KPN manages this emerging risk by investing in a high quality and resilient design of our networks and by performing scenario analyses for climate risks. Additionally, KPN has a strong Business Continuity Management program, with adequate back-up and recovery plans in case of emergencies. See also Appendix 4.

As stated in section 3 sub 1.c of the Non-financial Information Disclosure Decree (Besluit bekendmaking niet-financiële informatie) of 14 March 2017, KPN has identified and assessed its main risks regarding environmental, social and personnel matters, human rights and anti-bribery and corruption. For more details on these risks, see Appendix 4.

The table in Appendix 3 provides an overview of parties for whom we consider ourselves responsible for the implementation of our non-financial policy.

Compliance and risk

Main risks

Strategic objective	Risk	Risk category and risk appetite	Main countermeasures (summary)	Impact
Accelerate to grow; Grow & strengthen customer footprint	Strong competition from current competitors or new market entrants, or new emerging disruptive technologies. Trend: →[1]	Strategic risk KPN is willing to accept reasonable risks in a responsible way.	• Offer converged services such as KPN ÉÉN MKB and KPN Hussel • Implement the best converged smart infrastructure e.g. by accelerating fiber roll-out and full modernization of mobile network and improving in-home Wi-Fi coverage • Improve customer experience by optimizing and digitalization of customer journeys • Improve NPS and offer high quality of service to customers • Develop new additional services for customers, such as super Wi-Fi	High: the described risk could lead to lower profitability as well as lower market shares. In the longer run, it could impact our continuity. **Monitoring KPI:** Market shares Service revenues
Leverage & expand superior network; Simplify & streamline operating model	Damage, service interruptions, operational issues in KPN's technical infrastructure and IT Insufficient transformation progress by reducing complexity, legacy and costs in KPN's operations. Trend: →[1]	Operational risk KPN is committed to a high quality of customer services and to limit disruptions as much as possible.	• Accelerating fiber roll-out and full modernization of mobile network, moving to All IP • Operations stability program to ensure availability of our (critical) services • Business Continuity Management, back-up and recovery plans in case of emergencies • Implement lean operating model, including digitalization, rationalization of networks, IT and portfolio	Medium-High; the incidents could negatively impact KPN's customer satisfaction, reputation and profitability. **Monitoring KPI:** NPS Network availability # Major incidents
Leverage & expand superior network	Cyber attacks or terrorism: Generic threats by malicious actors to the security of KPN's networks, IT and (customer) data. Trend: ↗[2]	Operational risk KPN is committed to limiting incidents as much as possible and implements strict policies to keep our customer data private, safe and secure.	• Implementation of baseline security measures according to the KPN Security Policy • Continuous improvement of security according to the KPN Security Lifecycle • Enhanced risk intelligence and increased network visibility • Continuous development of security capabilities (people and tools) • Execution of strategic security actions, e.g. Permanent Vulnerability Management	High; the incidents could lead to loss/theft of customer data, higher costs, penalties and reputational damage. This risk could impact our continuity. **Monitoring KPI:** Severity and number of security incidents # data leakages
Generic, Accelerate to grow	New regulatory decisions in the EU and the Netherlands. Non-compliance with regulation, including privacy and tax regulations. Trend: →[1]	Compliance risk KPN is committed to full compliance with relevant laws and regulations.	• Proactive stakeholder and reputation management including dialogue with regulators • Strengthening the effectiveness of the compliance organization and internal controls • Proactive internal compliance investigations	Medium; the risk could affect KPN's future operations and profitability and cause reputational damage. **Monitoring KPI:** Fines # incidents reported to regulators
Leverage & expand superior network	Geopolitical developments for suppliers, which could trigger security, business continuity and reputational risks. New regulations or bans could lead to higher investment costs in future. Trend: ↗[2]	Strategic/Operational risks KPN is committed to a high quality of customer services and to limit disruptions as much as possible.	• Conduct frequent threat analyses and closely monitor latest global and political developments • Perform scenario analyses during network design to assess potential implications of geopolitical developments • Prepare fall back scenarios and policies if KPN can no longer acquire or use hardware and software from specific suppliers and avoid dependence on single vendors or countries for critical or vital services	High; the risk could lead to higher business continuity and security incidents, reputation damage and higher investments and costs. **Monitoring KPI:** N/a

1 → Risk is stable

2 ↗ Risk is increasing

Reference table on bribery and corruption

	Our policy and outcomes	Risks and mitigating measures
Customers and employees	This paragraph describes our policy and the outcome of our policy. For more details, see: Subcode 2 - How we interact with third parties: https://ir.kpn.com/websites/kpn/English/7050/code-of-conduct.html	See Compliance and risk, Appendix 4, GRI
Supply chain	Our policy and the outcome of our policy is described in 'Environmental performance and responsible supply chain' (p. 55). For more details, see: https://overons.kpn/content/downloads/KPN_SUPPLIER-CODE-OF-CONDUCT.pdf, art 5.1, 5.2	Appendix 2, Appendix 4

Bribery and corruption

We expect our employees to report any suspicion of non-compliance with the Code of Conduct. Following a report, an expert from KPN Corporate Security Office and/or KPN Compliance, Privacy & Ethics investigates the potential violation. The outcome may lead to disciplinary action. The severity of the disciplinary action is determined by the nature and circumstances of the incident, and may include termination of employment.

In addition to internal reporting options, employees can also use the SpeakUp Line, an anonymous reporting procedure managed by an independent organization.

In 2020, we performed a limited annual fraud risk assessment (FRA) in order to comply with internal and external fraud regulations, to increase fraud risk awareness and to evaluate the existing controls for fraud in the control framework.

In 2020, we identified 178 internal fraud cases (2019: 207). These concerned such things as the theft of goods and damaging of properties. We imposed sanctions and took action to repair the shortcomings in procedures and systems in order to prevent similar issues in the future. As a result, 13 employees had their contract terminated. In 21 cases, we prematurely terminated the contracts of temporary staff. Furthermore, in 2020 KPN was informed of a bribery incident attempted by one of the subcontractors of one of our suppliers. The supplier investigated the incident, leading to termination of the contract of the subcontractor and actions to prevent similar incidents in the future. Our KPN Security Policy on Incident Management describes how we deal with incidents if they occur. The KPN Corporate Security Office has a procedure in place to investigate reported incidences of internal fraud by employees.

Our stringent approach to bribery and corruption is based on multiple policies, as listed in the table below. We distinguish between bribery and corruption in the supply chain and bribery and corruption among customers and employees (such as fraud, verbal abuse or discrimination).

Governance of risk management and compliance – three lines of defense

Although the Board of Management is ultimately responsible for risk management and compliance, it is business management's duty to effectively identify, assess and manage the main risks of the company, in line with the steps discussed in the previous paragraphs (first line of defense). The Risk Management and Compliance departments (second line) are responsible for the design of the risk management and compliance policies, and for supporting and challenging business management in their assessment and management of top risks. KPN Audit (third line) performs, where necessary, independent reviews of the design and operational effectiveness of the Internal Risk Management and Control Systems. The main results of both the risk assessments and the evaluation of the Internal Risk Management and Control Systems are shared with the Audit Committee of the Supervisory Board and discussed with the external auditor.

Internal audit

KPN's internal audit function (KPN Audit) assesses, in line with Dutch Corporate Governance requirements, the design and effectiveness of the Internal Risk Management and Control Systems and provides assurance to both the Board of Management and the Audit Committee concerning the 'in control status' of KPN's organization and processes. Moreover, KPN Audit conducts ad-hoc financial, information technology, strategic and operational audits and special investigations. KPN Audit conducts its activities in a manner based on continuous evaluation of perceived business risks and has full and unrestricted access to all activities, documents, records, properties and staff. The Chief Auditor reports to KPN's CEO, and quarterly KPN Audit reports are submitted to and discussed with both the Board of Management and the Audit Committee. KPN Audit liaises extensively with the external auditor, among other bodies, based on International Standard on Auditing 610.

Description and evaluation of the Internal Risk Management and Control Systems

As stated in principle 1.2 of the Dutch Corporate Governance Code and related best practice provisions, KPN has designed and implemented Internal Risk Management and Control Systems to

Compliance and risk

identify and manage the risks associated with the company's strategy and activities. In 2020, KPN Audit systematically assessed the effectiveness of these systems. A summary of the main Internal Risk Management and Control Systems is provided in the preceding paragraphs.

During the assessment of the design and operating effectiveness of the systems, certain weaknesses, deficiencies and improvement actions were identified and implemented. If deemed appropriate, alternative procedures were conducted to obtain the required assurance. None of these weaknesses or deficiencies were classified as a major failing, as referred to in best practice provision 1.4.2 sub iii.

Statement by the Board of Management and Responsibility Statement

Statement by the Board of Management

The Board of Management is responsible for the effectiveness of the design and operation of KPN's Internal Risk Management and Control Systems. These have been designed to manage the risks that may prevent KPN from achieving its objectives. However, these Internal Risk Management and Control Systems cannot provide absolute assurance that material misstatements, fraud and violations of laws and regulations have been avoided.

The Board of Management reviewed and analyzed:
- The strategic, operational, financial, financial reporting and regulatory and compliance risks, as discussed in section 'Summary of main risks and countermeasures' on pages 77 and 78
- The design and operational effectiveness of the Internal Risk Management and Control Systems, as discussed on pages 73 to 77 of this Integrated Annual Report

The results of this review and analysis were shared with the Audit Committee and Supervisory Board and discussed with KPN's external auditors.

With reference to best practice provision 1.4.3 of the Dutch Corporate Governance Code and the chapter 'Compliance and risk', including Appendix 4, in this Integrated Annual Report, the Board of Management states that, to the best of its knowledge:

i. This Integrated Annual Report provides sufficient insights into major failings in the effectiveness of the Internal Risk Management and Control Systems. There are no major failings to report (see also paragraph 'Description and evaluation of the Internal Risk Management and Control Systems' on page 79).

ii. The aforementioned systems provide reasonable assurance that the financial reporting, as included in the Financial Statements on pages 106 to 170, does not contain any material inaccuracies.

iii. Based on the current state of affairs, it is justified that the financial reporting, as included in the Financial Statements on pages 106 to 170, is prepared on a going concern basis.

iv. This Integrated Annual Report states those material risks and uncertainties that are relevant to the expectation of the company's continuity for the period of 12 months after the preparation of this report.

Responsibility Statement

With reference to section 5.25c paragraph 2c of the Financial Markets Supervision Act, the Board of Management states that, to the best of its knowledge:
- The Financial Statements of 2020 give a true and fair view of the assets, liabilities, financial position and profit or loss of KPN and its consolidated companies.
- The Integrated Annual Report gives a true and fair review of KPN's position as at 31 December 2020, the development during 2020 of KPN and its group companies included in the Financial Statements, together with a description of the top risks KPN faces.

Rotterdam, 19 February 2021

Joost Farwerck
Chairman of the Board of Management and Chief Executive Officer

Chris Figee
Member of the Board of Management and Chief Financial Officer

Jean-Pascal Van Overbeke
Member of the Board of Management and Chief Consumer Market

Marieke Snoep
Member of the Board of Management and Chief Business Market

Babak Fouladi
Member of the Board of Management and Chief Technology and Digital Officer

Hilde Garssen
Member of the Board of Management and Chief People Officer

Composition of the boards

Board of Management

The Board of Management manages KPN's strategic, commercial, financial, CSR and organizational matters. The Board of Management currently consists of six members.

Mr. Figee was appointed as member of the Board of Management and CFO on 1 February 2020. Mr. De Jager resigned as CFO on 1 February 2020 and as member of the Board of Management on 1 March 2020.

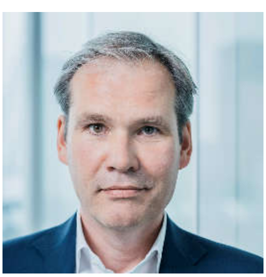
All members of the Board of Management comply with clause 2:132a of the Dutch Civil Code, which limits the number of positions on a supervisory or management board that a director may hold.

Composition of the Board of Management

Name	Position	Year of birth	Start of term	End of current term
J.F.E. Farwerck	Chairman of the Board of Management and Chief Executive Officer	1965	April 2013/ April 2017/[1] December 2019[1]	2024
H.C. Figee	Board member and Chief Financial Officer	1972	February 2020	2024
J.-P. Van Overbeke	Board member and Chief Consumer Market	1965	December 2019	2024
M.W.M. Snoep	Board member and Chief Business Market	1971	December 2019	2024
B. Fouladi	Board member and Chief Technology & Digital Officer	1969	December 2019	2024
H. Garssen	Board member and Chief People Officer	1973	December 2019	2024

1 Reappointment

Joost Farwerck



Mr. Farwerck was appointed Chairman of the Board of Management and Chief Executive Officer on 1 October 2019. He has been a member of the Board of Management since 10 April 2013. Mr. Farwerck started working at KPN in 1994 and held senior management positions in various divisions. In February 2012, he was appointed as Managing Director Netherlands, so becoming responsible for all of KPN's activities in the Netherlands. In September 2014, he became Chief Operating Officer and took on responsibility for KPN's operating activities. Mr. Farwerck is a member of the board of FME, a member of the Cyber Security Council and a member of the Advisory Board Stichting Lezen & Schrijven. Mr. Farwerck is a Dutch citizen.

Chris Figee

Mr. Figee has been a member of the Board of Management and Chief Financial Officer since 1 February 2020. Prior to his appointment at KPN, Mr. Figee was CFO of ASR Nederland. Before joining ASR, Mr. Figee worked for five years at Achmea, most recently as a member of the Achmea Group Committee and Director of Group Finance. In 1999, he joined McKinsey, where he rose to the role of partner in 2006, a role he fulfilled until he joined Achmea in 2009. Mr. Figee started his career at Aegon, where he held various positions, including that of Senior Portfolio Manager. Mr. Figee is currently also a member of the Supervisory Board of UNICEF Netherlands and a member of the Economic Board Zuid-Holland. Mr. Figee is a Dutch citizen.

Jean-Pascal Van Overbeke

Mr. Van Overbeke has been a member of the Board of Management since 1 December 2019 and Chief Consumer Market since 1 September 2018. In this role, he oversees the day-to-day operations of KPN's Consumer activities. Prior to joining KPN, Mr. Van Overbeke served as Executive Director of SFR from 2016 to 2018. Before that, he was Deputy Group CEO of Lebara, Group Chief Operating Officer at Maxis Communications Group, and Chief Marketing Officer and Chief Commercial Officer at Orange. In his earlier career, he was Head of Trade Marketing, Director Marketing Residential Market and Director Strategy & Transformation Programs at Mobistar. Mr. Van Overbeke is a Belgian citizen.

Marieke Snoep

Ms. Snoep has been a member of the Board of Management since 1 December 2019. She was appointed as Chief Business Market effective on 1 February 2019. As Chief Business Market, Ms. Snoep oversees the day-to-day operations of KPN's Business activities. She has more than 25 years of strategic and commercial experience in the Dutch telecommunications market. Prior to joining KPN, Ms. Snoep was a member of the board of T-Mobile Netherlands from 2012. In her earlier career, she held consultancy roles with Solvision (currently Ordina) and Atos Origin. Ms. Snoep is an active member of topvrouwen.nl, a member of the board of NLDigital and a member of the board of KPN Mooiste Contact Fonds. Ms. Snoep is a Dutch citizen.

Babak Fouladi

Mr. Fouladi has been a member of the Board of Management since 1 December 2019. He was appointed Chief Technology & Digital Officer on 4 December 2018. In this role, he is responsible for KPN's network technologies and the digitalization of processes and services. Prior to joining KPN, Mr. Fouladi served as Group Chief Technology and Information Officer at MTN Group (South Africa) from 2016. Before that, he formed part of the executive team as Chief Technology Officer of Vodafone Spain and Vodafone Romania. He was also Director for IT Development and Vice President for Multimedia & System Integration in the UK and later Vice President, Systems Integration in Russia for Ericsson. Mr. Fouladi is a British citizen.

Hilde Garssen

Ms. Garssen has been a member of the Board of Management since 1 December 2019. She was appointed Chief People Officer on 10 December 2018. Prior to joining KPN, Ms. Garssen served as Senior Managing Director Business Services at ABN AMRO Bank for over two years. Since 1998, she has held numerous HR roles at ABN AMRO Bank, including Chief Human Resources Officer and Managing Director Change, Integration & Management Group Coordination & Reward. Ms. Garssen is a member of the Board of VNO-NCW and a member of the board of KPN Mooiste Contact Fonds. Ms. Garssen is a Dutch citizen.

Composition of the boards

Supervisory Board

The Supervisory Board oversees strategic and commercial policymaking by the Board of Management and the way in which it manages and directs KPN's operations. KPN's Supervisory Board currently consists of eight members.

At the AGM on 15 April 2020, Ms. Guillouard was appointed as member of the Supervisory Board and Mr. Van Bommel stepped down as he had reached the end of his four-year term of office.

At the Extraordinary General Meeting of Shareholders on 10 September 2020, Mr. Plater was appointed as member of the Supervisory Board. Mr. Plater was nominated for this appointment by América Móvil pursuant to specific arrangements in relation to the shareholding of América Móvil in KPN. Mr. Plater succeeds Mr. García Moreno Elizondo, who stepped down as member of the Supervisory Board on 10 September 2020. As he was nominated for this position by América Móvil, Mr. Plater is not considered independent within the meaning of the Dutch Corporate Governance Code.

All members of the Supervisory Board comply with clause 2:142a of the Dutch Civil Code, which limits the number of positions on a supervisory or management board that a director may hold.

Two vacancies will arise at the closure of the AGM of Shareholders in 2021, as Mr. Haank and Mr. Overbeek will be stepping down, having reached the end of their four-year term of office. Mr. Spanbroek, General Counsel and Company Secretary, acts as secretary to the Supervisory Board.

Name	Year of birth	Start of term	End of current term	Audit Committee	Nominating & Corporate Governance Committee	Remuneration Committee	Strategy & Organization Committee
D.W. Sickinghe (Chairman Supervisory Board)	1958	9 April 2014 18 April 2018[2]	2022		C[1]	x	x
C.R.A. Guillouard	1965	15 April 2020	2024	x			x
D.J. Haank (Vice-Chairman)	1953	7 April 2009 10 April 2013[2] 12 April 2017[2]	2021	C[1]	x	x	
P.F. Hartman	1949	15 April 2015 10 April 2019[2]	2023		x	C[1]	
E.J.C. Overbeek	1967	4 September 2017	2021				C[1]
A.D. Plater	1967	10 September 2020	2025	x			x
J.C.M. Sap	1963	15 April 2015 10 April 2019[2]	2023	x		x	
C.J.G. Zuiderwijk	1962	9 April 2014 18 April 2018[2]	2022		x	x	

1 C: Chairman

2 Reappointment

Duco W. Sickinghe

Mr. Sickinghe was reappointed as a member of the Supervisory Board on 18 April 2018 and has chaired the Supervisory Board since 15 April 2015. His current second term of office ends in 2022. Mr. Sickinghe is Managing Director of Fortino Capital. He is also Chairman of the Supervisory Board of Van Eeghen Group and a member of the board of Unibreda. Mr. Sickinghe was previously CEO and a member of the Board of Telenet from 2001 to 2013. Prior to that, he held various management positions at Hewlett-Packard, NeXT Computer and Wolters Kluwer, and was the founder of Software Direct. Mr. Sickinghe is a Dutch citizen.

Catherine R.A. Guillouard

Ms. Guillouard was appointed member of the Supervisory Board on 15 April 2020. Her current (first) term of office ends in 2024. Ms. Guillouard is Chief Executive Officer of RATP Group. Her previous roles include various positions at Air France, including that of CFO, the position of CFO at satellite company Eutelsat Communications and the position of CFO and Deputy CEO of the electrical parts distribution company Rexel. In addition to her role at RATP Group, Ms Guillouard is also a non-executive director at Airbus SE and a board member at Systra Group. Ms. Guillouard is a French citizen.

Derk J. Haank

Mr. Haank was reappointed as a member of the Supervisory Board on 12 April 2017 and is its Vice-Chairman. His current (third) term of office ends in 2021. Mr. Haank is Chairman of the Supervisory Board of TomTom, a member of the Supervisory Board of Singel Uitgeverijen, a member of the Supervisory Board of Albelli and a non-executive board member of SPI Technologies Singapore. Mr. Haank was the CEO of SpringerNature, and prior to that the CEO of Elsevier Science and an Executive Board member of Reed Elsevier. Mr. Haank is a Dutch citizen.

Peter F. Hartman

Mr. Hartman was reappointed as a member of the Supervisory Board on 10 April 2019. His current second term of office ends in 2023. Mr. Hartman is the chairman of the Supervisory Board of Texel Airport, a member of the advisory board of AviationGlass & Technology and a member of the Advisory Board of Mainblades Inspections. He was Vice-Chairman of the Supervisory Board of Air France/KLM Group from 2013 to 2017. Before that, he spent 40 years working for KLM, the last seven of those as CEO. Mr. Hartman is a Dutch citizen.

Composition of the boards

Edzard J.C. Overbeek

Mr. Overbeek was appointed member of the Supervisory Board on 4 September 2017. His current first term of office ends in 2021. Mr. Overbeek is CEO of HERE Technologies. Having spent nearly 30 years in the ICT industry, Mr. Overbeek has gained extensive experience in the global digital and communication industry. Prior to joining HERE Technologies, he held several management roles at Cisco, including leading the global services organization and the Asia-Pacific, Japan & China region. Mr. Overbeek is a Dutch citizen.

Alejandro D. Plater

Mr. Plater was appointed as a member of the Supervisory Board on 10 September 2020. His current first term of office ends in 2025. Mr. Plater is Group COO at A1 Telekom Austria Group, where he has been working since 2015. Prior to joining A1 Telekom Austria Group, Mr. Plater worked for 18 years for Ericsson in Mexico, Sweden and Argentina. Earlier in his career, Mr. Plater worked at insurance companies Sud América Seguras and Chubb & Son. As part of his position at A1 Telekom Austria Group, Mr. Plater is the chairman or a member of the supervisory board of various subsidiaries of this group. Mr. Plater is an Argentinian and a Swedish citizen.

Jolande C.M. Sap

Ms. Sap was reappointed member of the Supervisory Board on 10 April 2019. Her current second term of office ends in 2023. Ms. Sap is dedicated to making the business world and society at large more sustainable. She holds several supervisory board and other board-level posts, including member of the Supervisory Board of KPMG Netherlands , chair of the Supervisory Board of Arkin, non-executive director of Renewi PLC,and Board member of the Dutch Emissions Authority. Between 2008 and 2012, Ms. Sap represented the Dutch Green party, GroenLinks, in the lower house of the Dutch parliament, during the last two years of which she was party leader. Before that, she worked as an economist in the fields of science, policy and business. Ms. Sap is a Dutch citizen.

Claudia J.G. Zuiderwijk

Ms. Zuiderwijk was reappointed member of the Supervisory Board on 18 April 2018 and her current second term of office ends in 2022. Ms. Zuiderwijk is chair of the Board of Management of the Gemeentelijk Vervoer Bedrijf Amsterdam (GVB). Prior to that, she was chair of the Board of Management of the Chamber of Commerce. She is also a member of the supervisory board of APG. Between 1993 and 2003, Ms. Zuiderwijk worked at PinkRoccade, holding various management positions. Thereafter, Ms. Zuiderwijk was chair of the board of the Hilversum hospital and – following the merger with the Gooi Noord hospital – chair of the board of Tergooi hospitals. Ms. Zuiderwijk was also a member of the Innovation Platform of the Dutch government (2007-2010) and a member of the Care Innovation Platform of the Dutch Ministry of Health (2008-2010). Ms. Zuiderwijk is a Dutch citizen.

Insider transactions

KPN employees who have access to inside information because of their role, profession or duties, including all members of the Board of Management and the Supervisory Board, are subject to the Code of Conduct 'Inside Information'. This Code of Conduct comprises rules for the possession of and transactions in KPN securities by such employees. Members of the Board of Management and Supervisory Board are also subject to reporting obligations to the AFM. The following table provides an overview of transactions in 2020 by members of KPN's Board of Management and Supervisory Board.

Date	Name	Transaction	Price per share
4 February	J.F.E. Farwerck	Bought 40,000 ordinary KPN shares	EUR 2.52
4 February	H. Garssen	Bought 19,750 ordinary KPN shares	EUR 2.52
4 February	J.-P. van Overbeke	Bought 19,700 ordinary KPN shares	EUR 2.52
4 February	M.W.M. Snoep	Bought 10,000 ordinary KPN shares	EUR 2.52
13 April	J.F.E. Farwerck	Vesting of 63.78% of the 202,396 conditional KPN shares awarded as LTI 2017 into 81,172 ordinary KPN shares (after sale of part of the shares to finance the income tax)	EUR -
16 April	J.F.E. Farwerck	Award of 535,132 conditional KPN shares as LTI 2020	EUR -
16 April	H.C. Figee	Award of 275,211 conditional KPN shares as LTI 2020	EUR -
16 April	B. Fouladi	Award of 265,018 conditional KPN shares as LTI 2020	EUR -
16 April	H. Garssen	Award of 203,860 conditional KPN shares as LTI 2020	EUR -
16 April	J.-P. van Overbeke	Award of 265,018 conditional KPN shares as LTI 2020	EUR -
16 April	M. Snoep	Award of 265,018 conditional KPN shares as LTI 2020	EUR -
23 April	J.F.E. Farwerck	Award of 61,957 ordinary KPN shares as STI 2019	EUR -
23 April	B. Fouladi	Award of 5,450 ordinary KPN shares as STI 2019	EUR -
23 April	H. Garssen	Award of 3,240 ordinary KPN shares as STI 2019	EUR -
23 April	J.-P. van Overbeke	Award of 5,450 ordinary KPN shares as STI 2019	EUR -
23 April	M.W.M. Snoep	Award of 4,211 ordinary KPN shares as STI 2019	EUR -
7 May	M.W.M. Snoep	Bought 11,000 ordinary KPN shares	EUR 2.07
24 November	J.F.E. Farwerck	Bought 50,000 ordinary KPN shares	EUR 2.48
24 November	H.C. Figee	Bought 40,000 ordinary KPN shares	EUR 2.49
24 November	B. Fouladi	Bought 10,000 ordinary KPN shares	EUR 2.48
24 November	H. Garssen	Bought 10,000 ordinary KPN shares	EUR 2.50
24 November	J.-P. van Overbeke	Bought 10,000 ordinary KPN shares	EUR 2.50
24 November	M. Snoep	Bought 10,000 ordinary KPN shares	EUR 2.49

Composition of the boards

Share ownership Board of Management[1]

Number of ordinary shares	31 December 2020	31 December 2019
J.F.E. Farwerck	640,282	407,153
H.C. Figee	40,000	
J.-P. Van Overbeke	35,150	
M.W.M. Snoep	35,211	
B. Fouladi	15,450	
H. Garssen	32,990	

1 Shares held by current members of the Board of Management (including vested shares in lock-up period). Share ownership relates to ordinary shares. A share ownership applies, under which the members of the Board of Management are encouraged to acquire company shares equal to 150% of the annual fixed compensation for members of the Board of Management (excluding CEO) and 250% of the annual fixed compensation for the CEO.

Share ownership Supervisory Board

Number of ordinary shares	31 December 2020	31 December 2019
D.W. Sickinghe	380,000	380,000
D.J. Haank	24,351	24,351

Report by the Supervisory Board

Supervisory Board Report

The year 2020

The year 2020 shook the world to its foundations. The impact of the pandemic was unparalleled, affecting everyone on the planet. We all felt - and continue to feel - its effects deeply, whether for personal health reasons or the social and economic impact of the measures taken to control the outbreak. Although the emergence of vaccination programs suggests there is light at the end of the tunnel, the effects of this humanitarian and economic crisis will be felt for many years to come.

Amidst this crisis, KPN fully embraced its role as the network of the Netherlands. Our networks ensured that critical sectors such as healthcare, education and the government could continue to play their vital role for society. Business, home-working, shopping, our connection to the whole world – they all relied heavily on our services. Our people kept everyone connected, ensuring increased demands for online social interaction were met.

The Supervisory Board closely monitored the company in its efforts to support customers and the country as a whole, while maintaining its course in the execution and updating of its strategy. Our main focus was on the well-being of KPN employees, continued services to our customers and the impact of the crisis on our results and value creation.

We commend the Board of Management for its expeditious and pragmatic approach in these turbulent times, and for inspiring the company's staff to go all out to connect everyone in the Netherlands to a sustainable future. The CEO adopted a highly appreciated pragmatic and hands-on approach to stay in touch with employees. We are proud of our people and their achievements. Employee engagement ratings improved considerably despite the challenging situation.

Strategy and business

Despite the challenges the pandemic presented, the company was able to make good progress on the implementation of its strategy. The Supervisory Board monitored the developments and progress made throughout the year.

The fiber roll-out really gained momentum last year, with around 300,000 households added to the company's fiber footprint, and this momentum continues to build. Although this roll-out requires significant investment, the Supervisory Board believes this accelerated investment is the foundation of KPN's long-term value creation potential, and so supports it.

Commercial, operational and financial results were reviewed at least each quarter. The Supervisory Board was pleased to note clear indications of a turnaround in the consumer market and supported actions taken to also improve the trend in the business market. Although the impact of the COVID-19-related measures was clearly visible, notably in the business market, the company was still able to reach its financial guidance for the year.

Another key milestone was the launch of 5G, in combination with the ongoing modernization of the mobile network. The Supervisory Board paid particular attention to the spectrum auction in early summer. Given the materiality of this topic, the board discussed the business case, auction approach and financial scenarios at length. Considering the high entry prices set by the government, the Supervisory Board was satisfied with the outcome of the auction.

The Supervisory Board received regular updates on public affairs, most notably around regulations and the geopolitical context. The board is aware that individuals may have concerns about the safety of electromagnetic fields for mobile communication and endorsed strict compliance with the relevant standards.

The Supervisory Board paid particular attention to leadership development in 2020, regularly discussing management's activities in this area. The board teamed up with the CEO and Chief People Office to review the leadership pipeline and succession planning. Although the company continued to reduce its workforce – a trend that is expected to continue in coming years given the ongoing competitive pressure and digitalization of the industry – such reductions were generally done with respect for the people involved and their often long service at KPN.

In the second half of the year, the Supervisory Board was closely involved in updating the strategy, presented on 24 November, as 'Accelerate to Grow'. In its strategy review, the Supervisory Board paid particular attention to the enhanced fiber roll-out and the impact of the required investment on the company's financial framework of the company, as well as to the expectation of revenue growth in the mass markets (Consumer, SME and Wholesale), the digitalization required to meet customer expectations and the leadership required to execute plans, as well as ESG aspects of the strategy, including energy reduction and circularity, diversity and social inclusion. We believe KPN is making good progress in these fields and is contributing to society in a meaningful way.

The Supervisory Board fully endorses the strategy presented. It believes the company is in a very strong position to create

Report by the Supervisory Board

long-term value, and has found a proper balance between the interests of the various stakeholders.

The Supervisory Board continued to have regular contact with the Central Works Council in 2020, also holding open meetings with employees and management so as to stay in touch with the company as much as possible. We appreciate the open and professional relationship between the Central Works Council, the Board of Management and the Supervisory Board.

About the Supervisory Board

The composition of the Supervisory Board changed last year with the departure and subsequent replacement of two of its members. In April, in accordance with the rotation schedule of the Supervisory Board, Mr. van Bommel stepped down, and was succeeded by Ms. Guillouard. In September, Mr. García Moreno Elizondo resigned from the Supervisory Board at his own request and was succeeded by Mr. Plater. With these new appointments, the Supervisory Board continued to have a good mix of backgrounds and experience, supporting a diverse view on a wide range of topics. For an overview of the current skills and competences in the Supervisory Board, please refer to the skills matrix. See Note 23 of the Consolidated Financial Statements for information on related party transactions.

Skills / Characteristics	Duco Sickinghe	Derk Haank	Catherine Guillouard	Alejandro Plater	Claudia Zuiderwijk	Peter Hartman	Jolande Sap	Edzard Overbeek
Business leadership	x	x	x	x	x	x		x
Industry knowledge (Telco)	x		x	x				x
Industry knowledge (IT)	x				x			x
Commercial	x	x	x	x	x	x		x
Operational	x		x	x	x	x		x
Employment / social relations					x	x	x	
Society / government relations			x		x	x	x	
ESG	x				x	x	x	
Financial markets	x	x	x	x				
Finance, Audit & Risk	x	x	x			x	x	
Financial experts (Dutch CGC)			x					
International experience	x	x	x	x		x		x
Executive / non-executive								
(Full time) Executive position at other company	x		x	x	x			x
Mainly non-executive role		x				x	x	
Diversity								
Male	x	x		x		x		x
Female			x		x		x	

At all times, the composition of the Supervisory Board was such that the members were able to act critically and independently of one another, the Board of Management and any particular interest involved, as provided for under best practice provisions 2.1.7 to 2.1.9 of the Dutch Corporate Governance Code. Throughout the year, seven members of the Supervisory Board, including the Chairman, were independent from the company within the meaning of these provisions. Mr. García Moreno Elizondo and his successor Mr. Plater, who were nominated by América Móvil, are not considered independent under provision 2.1.8 of the Dutch Corporate Governance Code.

Mr. Haank will have reached the end of his third term of office at the end of the 2021 AGM and will therefore step down and not be nominated for reappointment. The Supervisory Board is grateful to Mr. Haank for his 12-year contribution to the company and with his extensive business knowledge. Mr. Overbeek will also reach the end of his first term of office at the end of the 2021 AGM; he has indicated that he is available for reappointment.

For the vacancy arising, the Supervisory Board has nominated Mr. van de Aast, a well experienced Dutch executive, who has headed major companies such as Reed Business, VolkerWessels and Imtech and currently acts on the supervisory boards of NS Group (chairman), Signify (vice-chairman) and Witteveen+Bos.

Also in light of the upcoming retirements of Mr. Haank, Mr. Sickinghe (2022) and Mr. Hartman (2023), the Supervisory Board considered his strong experience in business leadership, and his well-embedded position in Dutch business and society, a great benefit for the company and the board. The Supervisory Board also intends to nominate Mr. Overbeek for reappointment, given his extensive experience, valuable insights in the digitalization of the industry and valued contribution to the Supervisory Board in his first term. The Central Works Council and Board of Management support the nominations. Please also refer to the below nomination activities by the Nominating & Corporate Governance Committee.

Since April 2020, the Supervisory Board has consisted of three women and five men, and so complies with the (upcoming) legislation that requires at least 1/3 female members on a Supervisory Board. We continue to endorse the principle, whether enacted or not, that a board should be diverse in terms of gender, skills and experience. Our skills matrix, as outlined above, helps us evaluate our own diversity and set the right profile for vacancies. We note that the Board of Management also currently consists of 1/3 female members, as well as 1/3 non-Dutch members.

The Supervisory Board evaluates its own performance annually. Last year's evaluation was carried out in the spring and was led by the vice-chairman of the board. The evaluation was based on interviews with the members of the Supervisory Board in combination with a written questionnaire. The findings were discussed in a board meeting. One key observation was that the board members were considerably occupied with and focused on events around and following the unexpected departure of the previous CEO. The Supervisory Board also touched on the position of the Strategy & Organization Committee to review the strategy execution and prepare strategic discussions in the full Supervisory Board.

Meetings

The Supervisory Board met on 10 occasions in 2020, seven of which were regularly scheduled meetings. The board met on a few extra occasions in the spring to review the impact of the COVID-19 pandemic on KPN.

Overall attendance at the Supervisory Board meetings was 95%. The table below provides an overview of attendance per member of the Supervisory Board and committee. In the event members could not join a meeting, the chairman discussed the matters at hand before and/or after the meeting as standard practice in order to obtain the input and views of all Supervisory Board members. Members of the Supervisory Board were also in frequent contact outside of formal board meetings.

Name	Board (10)	Audit (5)	Remco (5)	Nomco (7)	SOC (1)[61]
Mr. Van Bommel[2]	100%	100%			
Mr. García Moreno Elizondo[3]	100%	100%			100%
Mr. Hartman	100%		100%	100%	
Mr. Haank[4]	90%	100%	80%	86%	
Mr. Overbeek	100%				100%
Ms. Sap	90%	100%	100%		
Mr. Sickinghe	100%		100%	100%	100%
Ms. Zuiderwijk	90%		100%	100%	
Ms. Guillouard[5]	83%	75%			100%
Mr. Plater[6]	100%	100%			
Total	**95%**	**95%**	**96%**	**96%**	**100%**

1 The Strategy & Organization Committee functions as a standing sounding committee on strategic matters for the Board of Management. During 2020, it held one formal meetings and its members had ad hoc contacts with the CEO or other members of the Board of Management on specific matters related to the strategy.

2 Member until 14/4/2020

3 Member until 10/9/2020

4 Mr. Haank left the SOC and joined the Audit Committee per 14/4/2020

5 Member as of 14/4/2020 – due to conflicting meetings scheduled prior to her appointment, Ms. Guillouard was not able to attend all meetings

6 Member as of 10/9/2020

Supervisory Board meetings normally commence with a closed session, in which only the board members and the CEO participate. In the quarterly meetings, this closed session is typically followed by a meeting in which the full Board of Management is present. This 'open' part of the meeting typically starts with presentations by management on the state of the business, followed by a discussion on one or more strategic or otherwise relevant topics, the review of the quarterly disclosures and any decisions that need to be taken. When deemed relevant, the meetings may also end with a 'closed' part.

Report by the Supervisory Board

Committee Reporting

The Supervisory Board has established four Committees that prepare deliberation and decision making in the full board: the Audit Committee, the Remuneration Committee (RemCo), the Nomination and Corporate Governance Committee (NomCo) and the Strategy and Organization Committee (SOC). The main considerations and conclusions of each Committee were shared with the full Supervisory Board and the meeting documents and minutes are available to all members of the Supervisory Board, which takes the finals decision in all matters.

Audit Committee

The Audit Committee had five meetings in 2020, all of which were also attended at least in part by the CFO, the external auditor Ernst & Young Accountants LLP (EY), the internal auditor and the Director Corporate Control. The Chairman of the Supervisory Board frequently attended the meetings as a permanent invitee. The Audit Committee – as well as the Chairman of the Supervisory Board – met separately with the external auditor.

In line with its tasks, the Audit Committee reviews and discusses all financially relevant matters that are presented to the Supervisory Board, most notably the quarterly and annual financial results and reports and (the financial and risk-related aspects of) the business plan. It focuses on the effectiveness and outcome of the company's internal control framework and the risk management systems, for which it receives and reviews reports by the internal auditor, the Compliance Office and the Review Committee. Each quarter, the Audit Committee also reviews the conclusions of the external auditor, as included in its board report. Overall, the committee is satisfied with the processes around external reporting as operated by the company, as is also confirmed by the reports from the internal and external auditors. One point of attention related to assurances to specific requirements by business customers (third-party reporting), where improvements were ongoing. The committee reviews the audit plans annually and subsequently submits them to the full Supervisory Board for its approval.

In 2020, the Audit Committee focused on the company's financing, also in light of the uncertain economic situation. It approved and monitored the set-up of a commercial paper program as well as the issuance of a EUR 600m bond under the company's global medium-term note program. As part of the updated strategic plan, the Audit Committee extensively reviewed and discussed with management the impact of the proposed strategy on the financial framework, notably on Capex and free cash flow.

The Audit Committee also discussed other topics within its scope, including compliance, fraud management, tax and cyber-security. The committee regularly reviews the company's Capex budget. In 2020, it met with the newly appointed Data Protection Officer and discussed KPN's approach to privacy.

The Audit Committee reviewed the performance evaluation of EY in 2020. It concluded, also based on input from management and the internal auditor, that EY had done a good job, had sufficient objectivity and independence, being both critical when necessary, and constructive when possible. It therefore recommended to the full Supervisory Board to nominate EY for appointment at the 2021 General Meeting of Shareholders as the company's independent external auditor for the financial year 2022.

Strategy & Organization Committee

The Strategy & Organization Committee functions as a standing sounding committee on strategic matters for the Board of Management. It held one formal meeting in 2020, in which it focused mainly on 5G and related business models. Committee members also occasionally served as a sounding board for the CEO and other members of the Board of Management on specific matters related to the strategy, and most notably in the update of the strategy in the second half of the year. Main topics for discussion were the accelerated fiber roll-out, the investments in the mobile network, and further potential strategic opportunities that management from time-to-time explored.

Remuneration Committee

The Remuneration Committee met five times in 2020. The CEO and Chief People Officer attended parts of the committee meetings. The committee assisted the Supervisory Board in executing and reviewing KPN's remuneration policy and ensuring that members of the Board of Management are compensated consistently with that policy.

In April, the AGM approved an updated remuneration policy for the Board of Management and the Supervisory Board. The policy had been brought in line with the requirements of the Shareholder Rights Directive (SRD II) as well as the latest insights and best practices. The committee is pleased to note that the updated remuneration report received overwhelming support of more than 97% of the votes cast at the newly introduced 'advisory vote'.

As part of its annually recurring tasks, the committee defined the level of pay-out for individual members of the Board of Management as part of the STI plan 2019 and LTI grant 2017, and determined the financial and non-financial targets and performance criteria for the STI and LTI plans 2020 for the Board of Management. In the second half of the year, the committee received updates on anticipated pay-out levels and the plans and scenarios in this respect. Based on an evaluation of the latest insights, it concluded that no amendments to the policy were necessary at this point in time.

The committee considered whether the COVID-19 pandemic would be a reason to take specific measures related to the remuneration of the members of the Board of Management. It noted that the impact of the crisis on the company's financial results, although present, has been relatively limited. The company had not made use of government support (NOW-program). Furthermore, it had lived up to its remuneration commitments to its employees, as well as to its commitments on shareholder remuneration. The company has not made use of government support (NOW-program) and has met its remuneration commitments to employees, as well as its commitments to shareholder remuneration with a growing regular dividend to be paid over 2020. For this reason, the committee concluded that there were no reasons to deviate from the agreed executive remuneration schemes.

During an annual evaluation meeting with the individual members of the Board of Management, the committee took note of the views of their members on their own remuneration. Further details on the remuneration policy are provided in the Remuneration Report starting on page 94.

Nominating & Corporate Governance Committee

The Nominating & Corporate Governance Committee met seven times in 2020. The committee kept a close eye on the new governance system with a six-person Board of Management that was introduced in late 2019. It also evaluated the performance of the individual members of the Board of Management on key leadership traits as well as operational performance. It concluded that the team, under the new leadership of Mr. Farwerck and with the addition of Mr. Figee on 1 February, functions well.

The committee's main focus was on succession planning in the Supervisory Board, given the upcoming resignation of a number of its members. The committee confirmed its profile and the skills required, and noted that continued attention to diversity, not just in gender but also in terms of nationality, cultural background and age, was beneficial to the company and its stakeholders in both the short and longer term.

Given the upcoming resignations of Mr. Haank (2021), Mr. Sickinghe (2022) and Mr. Hartman (2023), the committee concluded that general business leadership (CEO-profile) would be a key requirement in its selection process for the first appointment(s). In addition, the resignation of Ms. Zuiderwijk (2022) and Ms. Sap (2023) would lead to vacancies subject to the enhanced right of recommendation of the Central Works Council. The committee steered the selection process for the vacancy arising due to the resignation of Mr. Haank, leading to the nomination of Mr. van de Aast for appointment to the Supervisory Board by the 2021 AGM. In considering his nomination, the Supervisory Board took good note of the ongoing bankruptcy proceedings around Imtech, and gained advice from internal and external advisors. Balancing all interests, it concluded that, from a current perspective, Mr. van de Aast's value-add to the Supervisory Board outweighed potential negative effects related to these proceedings (see also – About the Supervisory Board). The Committee furthermore recommended to the full Supervisory Board the re-appointment of Mr. Overbeek, who will reach the end of his first term of appointment at the 2021 AGM.

In summer, the Committee acknowledged the resignation of Mr. García Moreno Elizondo and nominated - at the proposal of América Móvil - Mr. Plater for appointment to the Supervisory Board in line with the agreement with América Móvil. After conducting its own due diligence, the Committee was pleased to accept the nomination, leading to the appointment of Mr. Plater per 10 September 2020.

Financial Statements

The Financial Statements for the year ended 31 December 2020, were prepared by the Board of Management and approved by the Supervisory Board. The Report of the independent auditor, Ernst & Young Accountants LLP, is included in the section 'Other Information' on pages 171 - 179. The Supervisory Board recommends that the AGM adopts these Financial Statements.

Final remarks

The Supervisory Board remains grateful to all stakeholders for their contribution to our company. We thank our customers for trusting us and aim to further improve our service to them every day. We pride ourselves in our employees, who were instrumental in ensuring that our networks could meet all challenges presented last year, and thereby keep the Netherlands connected. Our shareholders and bondholders trust us with their financial means, which in turn enables us to pursue our goals. The Supervisory Board is proud to be part of the network of the Netherlands.

Duco W. Sickinghe, Chairman

Catherine R.A. Guillouard

Derk J. Haank

Peter F. Hartman

Edzard J.C. Overbeek

Alejandro D. Plater

Jolande C.M. Sap

Claudia J.G. Zuiderwijk

Remuneration Board of Management

Remuneration Report

Introduction

The objective of the remuneration policy for the Board of Management is to attract, reward and retain necessary leadership talent, in order to support the execution of the company's strategic objectives. Building on our strategic pillars to (i) offer the best converged smart infrastructure, (ii) focus on profitable growth segments and (iii) accelerate simplification and digitalization, our 'accelerate to growth' strategy as announced on 24 November 2020, continuously supported by the underlying principles of our remuneration policy, focusses on accelerating our fiber roll-out, growing our customer footprint, improving the digital customer experience for families and businesses and renewing our way of working.

We made good progress on the execution of our strategy in 2020 and our financial results were solid and continue to reflect a mix of an ongoing competitive environment and the impact of our strategic actions.

The remuneration policy was last amended by the General Meeting of Shareholders in April 2020 based on a 97.87% voting 'for' and 2.13% 'against' for the remuneration policy of the Board of Management and a 99.27% voting 'for' and 0.73% 'against' for the remuneration policy of the Supervisory Board. Regarding the Board of Management remuneration policy, the AGM approved the proposal to remove the discretionary factor from the Short Term Incentive (STI) plan. Regarding the Supervisory Board remuneration policy, the AGM approved the proposal that the fee for attending meetings outside the member's country of residence would no longer apply for newly appointed or re-appointed members of the Supervisory Board and that eligibility for fees for committee membership would be limited to a maximum of two committees (i.e. the two highest fees will be applicable).

This Remuneration Report was prepared in line with the requirements stemming from the implementation of the Shareholder Rights Directive in Dutch law and will consequently be submitted to the General Meeting of Shareholders for an advisory vote. The 2019 Remuneration Report was submitted to the AGM for an advisory vote in April 2020 and resulted in 97.17% voting "for" and 2.83% "against". Given this outcome, no material changes were considered with regard to the underlying guiding principles of the Remuneration Report.

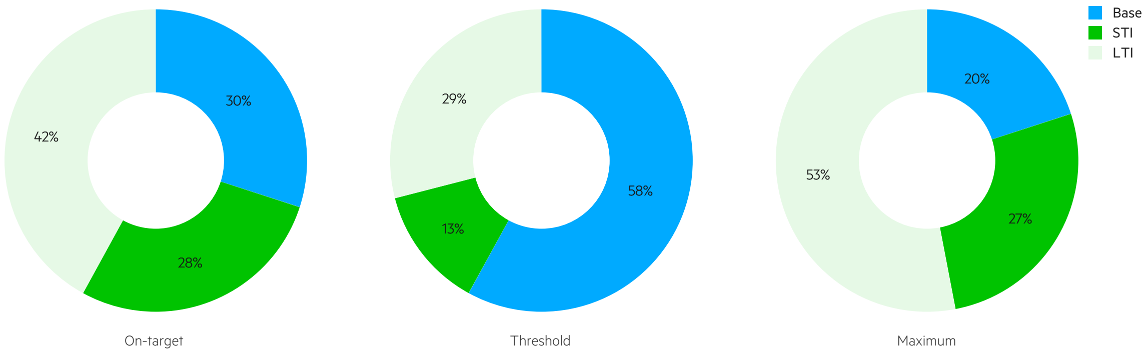
Remuneration policy of the Board of Management

The main principles of KPN's remuneration policy, as described below, are based on a balanced approach between market competitive standards, the ratio between fixed and variable pay and the economic and social contribution of the company linked to the non-financial parameters of the variable pay:

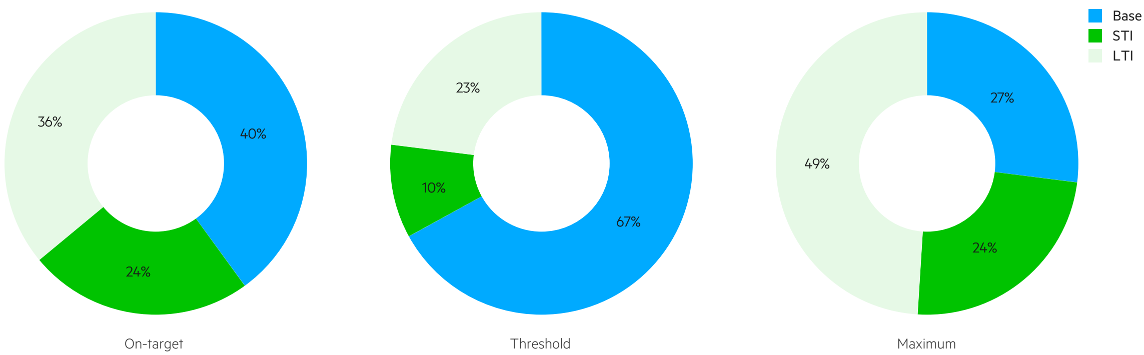
- Paying at market-competitive level (considering all fixed and variable components of the remuneration policy) achieved through benchmarking against an employment market peer group
- Pay-for-performance by driving financial and non-financial performance that generates long-term sustainable and profitable growth. Target remuneration aims at 30-40% of pay in base pay and 60-70% in variable pay in order to maintain a strong alignment with the company's financial performance goals and long-term value creation strategy
- Differentiating by experience and responsibility through alignment of the pay with the responsibilities, relevant experience, required competences and performance of individual jobholders
- Balancing all stakeholder interests, including the views of shareholders and society (including dialogue with the works council) by complying with best practices in corporate governance, defining targets for the variable pay plans based on financial and non-financial targets and a transparent and clear remuneration policy.

The following pie charts represent the fixed/variable pay mix for both the CEO and other board members in the case of an on-target, threshold and maximum composite performance of the assigned financial- and non-financial targets.

CEO



Other Board members



KPN uses this employment market peer group that consists of Dutch-listed and European sector-specific companies:

Akzo Nobel	ASML	Telecom Italia
DSM	Signify	Telenor
Randstad	Telecom Austria	Proximus
Ahold Delhaize	Iliad	Swisscom
Philips	Telia Company	

The employment market peer group is used as a reference to evaluate the overall market-competitive pay-level for the members of the Board of Management.

Remuneration Board of Management

Main features of the short-term and long-term incentive plans:

Short-term incentive (STI) plan

Component	Short-term incentives
Form of compensation	Cash, possible pay-out for maximum 50% in shares, if share ownership guideline levels have not yet been reached
Value determination (on-target level)	CEO: 90% of base salary and other members Board of Management: 60% of base salary
Financial- and non-financial targets	Financial (70% weight) and non-financial targets (30% weight), subject to the financial circuit-breaker; linear vesting
Scenario at or below threshold performance	At threshold: 25% of the on-target incentive paid. Below threshold no pay-out
Scenario on-target performance	100% of the on-target incentive paid
Scenario maximum performance	150% of the on-target incentive paid

Long-term incentive (LTI) plan

Component	Long-term incentives
Form of compensation	Shares
Value determination (on-target level)	CEO: 135% of base salary and other members Board of Management: 90% of base salary
Financial- and non-financial targets	Financial (70% weight) and non-financial targets (30% weight); linear vesting
Scenario at or below threshold performance	At threshold: 25% of granted shares vest (TSR 75%, i.e. 50th percentile peer group). Below threshold: no vesting
Scenario on-target performance	100% of the granted shares vest (for TSR linear between 50th percentile and first position peer group)
Scenario maximum performance	200% of the granted shares vest (for TSR first position in the peer group)
Holding period	3 years after vesting

Remuneration of the Board of Management in 2020

The actual remuneration of the members of the Board of Management was determined by the Supervisory Board according to the remuneration policy as approved by the AGM, also considering scenario analyses related to variable pay.

Remuneration packages of the individual current members of the Board of Management:

Member	Position	Base salary (EUR)	On-target STI (% base salary)	On-target LTI (% base salary)
Joost Farwerck	Chief Executive Officer	875,000	90%	135%
Chris Figee	Chief Financial Officer	675,000	60%	90%
Jean-Pascal Van Overbeke	Chief Consumer Market	650,000	60%	90%
Marieke Snoep	Chief Business Market	650,000	60%	90%
Babak Fouladi	Chief Technology & Digital Officer	650,000	60%	90%
Hilde Garssen	Chief People Officer	500,000	60%	90%

Annual base salary

The annual base salaries of the individual members of the Board of Management were not adjusted in 2020.

Details actual pay-out level STI

Plan	Target	Weight	Bandwidth pay-out level			Outcome	Actual pay-out %	Outcome percentage		
			Minimum	On-target	Maximum			Minimum	On-target	Maximum
STI 2020	**Financials (70% weighting):**									
	– Adjusted EBITDA-AL	20%	25%	100%	150%	108%	22%			
	– Service Revenue	25%	25%	100%	150%	61%	15%			
	– FCF	25%	25%	100%	150%	122%	31%			
	Non-financials (30% weighting):									
	– NPS NL	15%	25%	100%	150%	0%	0%			
	– Employee engagement	15%	25%	100%	150%	123%	18%			
	Total pay-out level	100%					86%			

The STI 2020 outcome reflects the fact that we delivered on our financial guidance aspects for 2020, supported by our continuing solid progress on simplification and digitalization. KPN remains fully on track with the execution of its strategy while maintaining a robust liquidity position. We continued to execute disciplined cost control, resulting in solid growth in adjusted EBITDA after leases and FCF. Engagement scores based on the employees' views about the future of the company and their individual contribution rose considerably in 2020. The engagement score for process improvement fell short of expectations and therefore emphasizes the continuing need to improve our processes as part of a more simplified operating model. The KPN NL NPS fell below the threshold level for pay-out as it was impacted by the migrated Telfort customer base, the pressure on our operations from changing customer behaviour due to COVID-19 and the changed IPTV interface. The lower NPS is an important point of attention for both the Board of Management and the Supervisory Board, and a key area for improvement, also in 2021.

The committee considered whether the COVID-19 pandemic would be a reason to take specific measures related to the remuneration of the members of the Board of Management. It noted that, so far, the impact of the crisis on the company's financial results, although present, had been relatively limited. The company has not made use of government support (NOW-program) and has met its remuneration commitments to employees, as well as its commitments to shareholder remuneration with a growing regular dividend to be paid over 2020. As such, the committee concluded that there were no reasons to deviate from the agreed executive STI remuneration schemes.

It is assumed that members of the Board of Management will obtain 50% of the STI pay-out in shares to further stimulate reaching the anticipated share ownership levels.

Remuneration Board of Management

Details actual pay-out (vesting) level LTI 2018: vesting period 2018-2020

			Bandwidth vesting level					Outcome percentage		
Plan	Target	Weight	Minimum	On-target	Maximum	Outcome	Actual vesting %	Minimum	On-target	Maximum
LTI 2018	**Financials (75% weighting):**									
	– TSR versus peer group	25%	75% 6th position	100% 5th position	200% 1st position	75%	19%			
	– Free cash flow	25%	25%	100%	200%	32%	8%			
	– Earnings per share (EPS)	25%	25%	100%	200%	0%	0%			
	Non-financials (25% weighting):									
	– Reputation target	12.5%	25%	100%	200%	200%	25%			
	– Energy reduction target	12.5%	25%	100%	200%	200%	25%			
	Vesting %	100%					77%			

The LTI plan 2018 vests in April 2021 and final TSR was measured in mid-February 2021. The plan vested based on the TSR performance that put KPN in sixth position in the applicable peer group, supported by KPN's progressive dividend policy. During the vesting period 2018-2020, KPN's results on cumulative free cash flow performed, supported by a strong cost savings discipline, slightly above the ambitious threshold level of the bandwidth which contributed to a robust liquidity position covering debt maturities until 2023. Earnings per share (EPS) was below the ambitious threshold and so did not contribute to the vesting of the LTI plan. EPS performance was, for example, partly impacted by additional finance expenses related to the repurchase of bonds in 2019, a transaction that lowers KPN's interest expense, delivering significant value going forward.

The reputation target is based on external data, which are measured and conducted by the RepTrak Company, the leading international organization devoted to advancing knowledge about corporate reputations. The external data are independently collected by the RepTrak Company through an online survey among a representative sample of the general public. The bandwidth of the reputation target is based on the 12-month moving averages of the data collected by the RepTrak Company prior to the vesting period. The reputation target for the LTI plan 2018 was measured based on three attributes, i.e. 'providing good value for money', 'being a profitable company' and 'being fair in the way it does business', stressing the belief that customer and societal satisfaction, whilst at the same time being financially solid, are vital for the company's 'license to operate'. The composite performance of the three attributes was 73.0 and outperformed the maximum level of the bandwidth set at 70.7, indicating a significant growth as part of the continuous improvement in KPN's reputation during the vesting period 2018-2020.

The energy reduction target was aligned with a reduction of KPN's energy consumption during the vesting period compared to the baseline in 2017. Energy reduction (compared to the baseline in 2017) during the vesting period was equal to -11.5% and resulted in a vesting above the maximum level of the bandwidth, which was set at -5.5%. This was the result of additional energy savings in our networks, data centers and offices, despite an exponential increase in the volume of our IT services. The key savings came from our network rationalization programme to replace our network equipment with more energy efficient settings and reducing our energy footprint via network virtualization (and so reduce the need for additional equipment). The energy figures are based on external sources and validated by both our internal and external auditors. The outcome on energy reduction during the vesting period 2018-2020 was partly influenced by COVID-19 due to limited travel (i.e. less fuel consumption lease cars) and limited use of office buildings in 2020. Corrected for the impact of COVID-19 the outcome on energy reduction would be -5.9% which would also result in a vesting at the maximum level of the bandwidth.

The committee considered whether the COVID-19 pandemic would be a reason to take specific measures related to the remuneration of the members of the Board of Management. It noted that the impact of the crisis on the company's financial results, although present, had been relatively limited. The company has not made use of government support (NOW-program) and has met its remuneration commitments to employees, as well as its commitments to shareholder remuneration with a growing regular dividend to be paid over 2020. For this reason, the committee concluded that there were no reasons to deviate from the agreed executive LTI remuneration schemes.

Targets LTI 2020, vesting period 2020-2022

For the LTI plan issued in 2020, the financial targets are based on relative TSR with a 25% weighting and free cash flow with a 45% weighting. Under the LTI plan, the Supervisory Board selects each year two non-financial targets based on a predetermined set of 5 strategic categories. The non-financial targets for the LTI plan 2020 have been determined based on circularity and reputation, each with a weighting of 15%.

Circularity was selected as a non-financial target to reflect our long-term sustainability ambitions. We have drawn up a roadmap to reach our ambition of having close-to-100% circular operations by 2025. This road-map is governed by the Energy & Environmental Board. The circularity target was aligned to a close to 100% performance on reuse and recycling (i.e. outflow of materials and waste) by 2025. The on-target ambition for 2022 on reuse and recycling was set at 84% versus a baseline of approximately 78% in 2019. As part of our close to 100% circular ambition we collaborate with our partners to optimize our value chain towards our ambition of zero waste by 2025. The measurement and conduct of the sustainability KPIs have been included in Appendix 3.

Reputation was selected as a non-financial target to maintain continued focus on our role in Dutch society during the execution of the new strategy, that is, next to offering the best converged smart infrastructure and focus on profitable growth segments, also based on acceleration of simplification and digitalization. The two attributes “excellent managers” and “well-organized company” were selected as main drivers to measure the successful implementation and execution of the new strategy, while the attribute “positive influence on society” was selected for KPN’s continuous commitment to Dutch society. The on-target ambition for the composite performance of the three new attributes was set at 69.5 by the end of 2022.

Actual received remuneration of the Board of Management (in thousands of EUR)

See Note 5 for full disclosure of remuneration cost under IFRS principles (also including former members).

Name	Position	Year	Base	STI	Actual vested LTI[1]	Pension cost	Social security/ other compensation [2]	Total[3]	% Fixed[4]	% Variable[4]
Joost Farwerck	CEO	2020	875	676	600	185	20	2,356	41%	59%
	COO/CEO[5]	2019	688	497	316	152	16	1,669	46%	54%
Chris Figee	CFO[6]	2020	619	319	-	100	34	1,072	66%	34%
Jean-Pascal Van Overbeke	CCM	2020	650	335	250	124	15	1,374	53%	47%
		2019[7]	54	34	-	9	1	98	61%	39%
Marieke Snoep	CBM	2020	650	335	-	106	30	1,121	66%	34%
		2019[7]	54	34	-	8	3	99	61%	39%
Babak Fouladi	CTDO	2020	650	335	-	124	14	1,123	66%	34%
		2019[7]	54	34	-	9	1	98	61%	39%
Hilde Garssen	CPO	2020	500	257	-	82	15	854	66%	34%
		2019[7]	42	26	-	6	1	75	62%	38%

1 Final measurement of the LTI 2018 was conducted in February 2021, which leads to 77% vesting of the shares in April 2021. The amounts give an indication of the value of the shares that will vest based on the closing share price of KPN at 15 February 2021 (EUR 2.85). The LTI 2017 is paid in April 2020 based on the share price on the actual vesting date.

2 In addition to social security, the stated amounts include allowances that can be considered as indirect remuneration and relates to the value for the private use of the company car.

3 All remuneration was borne by KPN B.V, please see Note 5 to the Consolidated Financial Statements for the individual pension benefits, on cost and social security.

4 Excluding pension cost, social security and other compensation.

5 Actual total remuneration as COO and CEO.

6 Actual remuneration since appointment to the Board of Management with an effective date of 1 February 2020.

7 Actual remuneration since appointment to the Board of Management with an effective date of 1 December 2019.

Remuneration Board of Management

Change in remuneration for members of the Board of Management versus company performance and remuneration of an average employee over five years.

	2016	2017	2018	2019	2020
Remuneration Joost Farwerck (EUR)[1]	1,418,000	1,904,000	1,384,000	1,669,000	2,356,000
Position	COO	COO	COO	COO/CEO	CEO
-Year-on-year difference (EUR)	158,000	486,000	-520,000	285,000	687,000
-Year-on-year difference (%)	+13%	+34%	-27%	+21%	+41%
Remuneration CFO (EUR)[2]	1,490,000	2,022,000	1,419,000	1,555,000	1,169,000
-Year on Year difference (EUR)	220,000	532,000	-603,000	136,000	-386,000
-Year on year difference (%)	+17%	+36%	-30%	+10%	-25%
Remuneration other current members on average (EUR)[3]				92,500	1,118,000
-Year on Year difference (EUR)					1,025,500
-Year on year difference (%)					n/m
TSR position (part of LTI)					
-Position peer group	6th (75% vesting)	3rd (150% vesting)	8th (no vesting)	6th (75% vesting)	6th (75% vesting)
Free cash flow (part of STI/LTI)	Performance:	Performance:	Performance:	Performance:	Performance:
-STI bandwidth pay-out level	Close to target	Maximum	Around maximum	Maximum	Between on- target and maximum
-LTI bandwidth pay-out level	Below threshold	Between on- target and maximum	Below threshold	Slightly above threshold	Slightly above threshold
EBITDA (part of STI)	Performance:	Performance:	Performance:	Performance:	Performance:
-Pay-out level STI bandwidth	Between threshold and on-target	Between threshold and on-target	Around on-target	Between on-target and maximum	Above on-target
Average cost per FTE (IFRS, EUR)[4]	79,924	82,967	85,355	88,445	84,306
Pay ratio CEO (IFRS)[5]	33	36	29	30	30

1 Remuneration as of 1 October 2019 as CEO. Prior to that the remuneration relates to his COO position.

2 The years 2016-2019 refer to the remuneration of Jan Kees de Jager. The 2020 amount is the remuneration of Chris Figee recalculated on a full year basis considering his appointment on 1 February 2020.

3 Since appointment in the Board of Management with an effective date of 1 December 2019

4 Based on KPN CLA agreement, base salaries for the CLA population increased by 2.5% in 2020. Average cost per FTE (IFRS) in 2020 was impacted by the divestment of KPN Consulting and annual differences in incentive plans.

5 The pay ratio for the years 2016-2017 relates to Eelco Blok and for the year 2018 to Maximo Ibarra.

The fluctuation in actual pay levels during the five reference years is predominantly the result of the outcome of the STI and LTI combined with the relative high emphasis on pay for performance reflected in the short-term and long-term incentive plans. The STI pay-out (in terms of performance versus the assigned targets) was aligned with the level of pay-out to senior management and the CLA employees as in general the same financial and non-financial targets were applied in these variable pay plans when compared to the assigned targets of the Board of Management. The average STI pay-out over the five-year period is close to 86% of the on-target level and the LTI plans vested over the five-year period on average close to 85% of the on-target level reflecting the ambitious targets set for variable incentive plans.

Considering the five years results, variable pay on financial and non-financial targets is strongly linked with KPN's performance against peers (TSR) and its outcomes on the key metrics FCF and EBITDA ensuring alignment with the financial performance goals and the long-term value creation strategy. Lower revenues were offset by ongoing savings from the simplification and digitalization of services. KPN generates growth in FCF which supports a progressive regular dividend and a robust liquidity position and the company remains committed to an investment grade credit profile.

KPN's internal pay ratio

To ensure transparency and clarity, KPN applies an IFRS-driven methodology to calculate the internal pay ratio. KPN's internal pay ratio compares the total CEO compensation under IFRS principles with the average compensation of employees with a labour agreement with KPN (total personnel expenses of KPN employees divided by the average number of KPN FTEs).

In the 5-years table the pay ratio for the years 2016-2017 relates to Eelco Blok and for 2018 to Maximo Ibarra. KPN's calculated pay ratio in 2020 is 30 (2019: 30, considering Joost Farwerck was CEO for the full 12 months of 2019). This outcome is in line with KPN's acceptable bandwidths.

For further details, see Note 5 to the Consolidated Financial Statements.

The table below presents the number of shares and current share plans for current board members.

	Grant date	Granted as of 1 January 2020	Vested	Granted or forfeited in 2020[1]	As of 31December 2020	Pre-tax fair value on grant date (EUR)[2]	Pre-tax market value on vesting date or end of lock-up in 2020 (EUR)	End of lock-up period
Joost Farwerck	16 April 2020		-	535,132	535,132	1,091,669	-	16 April 2026
	11 April 2019	302,514	-	-	302,514	874,265	-	11 April 2025
	19 April 2018	227,733	-	-	227,733	498,735	-	19 April 2023
	13 April 2017[3]	202,396	-152,541	-49,855	-	542,421	337,646	13 April 2022
Chris Figee	16 April 2020		-	275,211	275,211	561,430	-	16 April 2026
Jean-Pascal Van Overbeke	16 April 2020		-	265,018	265,018	540,637	-	16 April 2026
	11 April 2019	196,732	-	-	196,732	568,555	-	11 April 2024
	19 April 2018	114,777	-	-	114,777	251,362	-	19 April 2023
Marieke Snoep	16 April 2020		-	265,018	265,018	540,637	-	16 April 2026
	11 April 2019	156,136	-	-	156,136	451,233	-	11 April 2024
Babak Fouladi	16 April 2020		-	265,018	265,018	540,637	-	16 April 2026
	11 April 2019	196,732	-	-	196,732	568,555	-	11 April 2024
Hilde Garssen	16 April 2020		-	203,860	203,860	415,874	-	16 April 2026
	11 April 2019	62,454	-	-	62,454	180,492	-	11 April 2024

1 The shares granted to the Board of Management represent 38% (2019: 34%) of the total number of shares and share-based awards granted in 2020 to all employees. The grant numbers do not include any deferred dividend during the vesting period. The deferred dividend during the vesting period will be additionally granted in shares.

2 Value is calculated by multiplying the number of share awards by the fair value at grant date.

3 Final TSR measurement for the 2017 share grant was conducted in February 2020, which resulted in 63.78% vesting in April 2020.

See the Insider transactions section for stock ownership of the members of the Board of Management and Supervisory Board and see Note 5 to the Consolidated Financial Statements for a further description and valuation of the share plans.

Claw-back clause

The claw-back clause was not applied in 2020.

Developments for 2021

No adjustments to the remuneration policy of the Board of Management are foreseen in 2021, also considering the recent adjustments proposed to and approved by the AGM in April 2020.

Supervisory Board

The objective of the remuneration policy for the Supervisory Board is to reward the members appropriately for their work based on market-competitive fee levels. Members are appointed for a four-year term. To the extent applicable, the same principles of the Board of Management remuneration policy apply to the Supervisory Board remuneration policy.

KPN has a fixed annual fee and annual committee membership fees for the members of the Supervisory Board. The eligibility for committee fees is limited to two committees (i.e. the two highest fees will be applicable).

AEX-listed companies with a two-tier board serve as a reference to determine market-competitive fee levels. Supervisory Board members do not receive any variable compensation and are not granted any shares as a form of pay.

Remuneration Board of Management

The following table shows the annual fixed fee structure for the members of the Supervisory Board and the members of the committees, which have not changed in the last five years.

The following table shows the actual fee each current member of the Supervisory Board received in 2016-2020.

Position	Annual fee in EUR
Chairman Supervisory Board	100,000
Vice-chairman Supervisory Board	70,000
Member Supervisory Board	60,000
Chairman Audit Committee	20,000
Member Audit Committee	10,000
Chairman Strategy & Organization Committee	12,500
Member Strategy & Organization Committee	7,500
Chairman Remuneration Committee	10,000
Member Remuneration Committee	5,000
Chairman Nominating & Corporate Governance Committee	10,000
Member Nominating & Corporate Governance Committee	5,000

Amounts in €		Membership fee 2020	Committee fees 2020	Total 2020	Total 2019	Total 2018	Total 2017	Total 2016
D.W. Sickinghe	Chairman	100,000	16,771	116,771	115,000	116,875	122,500	123,929
D.J. Haank	Vice-chairman	70,000	22,813	92,813	87,500	86,250	82,500	84,643
P.A.M. van Bommel[1]	Member	17,500	5,833	23,333	80,000	80,000	80,000	77,143
C.J. García Moreno Elizondo[2]	Member	41,667	9,966	51,633	73,000	73,000	73,000	73,000
A.D. Plater[3]	Member	18,333	5,347	23,680	-	-	-	-
C.J.G. Zuiderwijk	Member	60,000	10,000	70,000	70,000	71,875	77,500	77,500
P.F. Hartman	Member	60,000	15,000	75,000	75,000	76,875	82,500	80,357
J.C.M. Sap	Member	60,000	15,000	75,000	70,000	70,000	70,000	70,000
E.J.C. Overbeek	Member	60,000	12,500	72,500	72,500	71,250	16,875	-
C.R.A. Guillouard[4]	Member	42,500	12,396	54,896	-	-	-	-
Total		**530,000**	**125,626**	**655,626**	**643,000**	**646,125**	**604,875**	**586,572**

1 up to 15 April 2020

2 up to 10 September 2020

3 Since appointment in the Supervisory Board with an effective date of 10 September 2020.

4 Since appointment in the Supervisory Board with an effective date of 15 April 2020.

Developments for 2021

No adjustments to the remuneration policy of the Supervisory Board are foreseen in 2021, also considering the recent adjustments proposed to and approved by the AGM in April 2020.

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Consolidated Statement of Profit or Loss

For the year ended 31 December

€ million	Notes	2020	2019
Revenues	[4.1]	5,283	5,499
Other income	[4.2]	19	202
Total revenues and other income		**5,303**	**5,702**
Cost of goods & services		1,284	1,301
Personnel expenses	[5]	892	1,027
Information technology/Technical infrastructure		328	353
Other operating expenses	[6]	335	443
Depreciation, amortization and impairments	[10, 11, 19]	1,552	1,537
Total operating expenses		**4,390**	**4,661**
Operating profit		**912**	**1,041**
Finance income		-3	24
Finance costs		-239	-307
Other financial results		-28	-90
Financial income and expenses	[7, 19]	**-269**	**-372**
Share of the profit/loss (-) of associates		6	-6
Profit before income tax from continuing operations		**649**	**663**
Income taxes	[8]	-88	-49
Profit for the year from continuing operations		**561**	**614**
Profit/loss (-) for the year from discontinued operations	[15]	-	12
Profit for the year		**561**	**626**
Profit attributable to non-controlling interests		-	-
Profit attributable to equity holders of the company		560	626
Earnings per ordinary share after taxes attributable to equity holders of the company for the year in EUR	[9]		
Basic (continuing operations)		0.13	0.15
Diluted (continuing operations)		0.13	0.15
Basic (discontinued operations)		-	-
Diluted (discontinued operations)		-	-
Basic (total, including discontinued operations)		0.13	0.15
Diluted (total, including discontinued operations)		0.13	0.15

Consolidated Statement of Other Comprehensive Income

For the year ended 31 December

€ million	Notes	2020	2019
Profit for the year		**561**	**626**
Other comprehensive income, net of tax			
Other comprehensive income to be reclassified subsequently to profit or loss when specific conditions are met:			
Net gain/loss (-) on cash flow hedges	[16]	84	115
Currency translation differences	[15, 16]	3	-21
Net other comprehensive income/loss (-) to be reclassified to profit or loss in subsequent periods		**87**	**94**
Items of other comprehensive income not to be reclassified subsequently to profit or loss:			
Retirement benefits remeasurements		-11	8
Net gain/loss (-) on equity instruments designated at fair value through other comprehensive income	[12.1, 12.2]	6	-84
Net other comprehensive income/loss (-) not to be reclassified to profit or loss in subsequent periods		**-5**	**-76**
Other comprehensive income/loss (-) for the year, net of tax		**82**	**18**
Total comprehensive income for the year, net of tax		**643**	**644**
Total comprehensive income for the year, net of tax, attributable to:			
Equity holders of the company		643	644
Non-controlling interests		-	-
		643	**644**
Total comprehensive income/loss (-) attributable to equity holders of the company arises from:			
Continuing operations		643	644
Discontinued operations	[15]	-	-

Consolidated Financial Statements

Consolidated Statement of Financial Position

Assets

€ million	Notes	31 December 2020	31 December 2019
Non-current assets			
Property, plant and equipment	[10]	5,422	5,432
Intangible assets	[11]	3,238	2,995
Right-of-use assets	[19]	857	847
Equity investments accounted for using the equity method		8	3
Equity investments measured at fair value through other comprehensive income	[12.1]	37	32
Derivative financial instruments	[12.3]	191	236
Deferred income tax assets	[8]	567	662
Trade and other receivables	[13.1]	132	111
Contract assets and contract costs	[13.2]	18	32
		10,469	**10,350**
Current assets			
Inventories		47	54
Trade and other receivables	[13.1]	636	756
Contract assets and contract costs	[13.2]	49	37
Income tax receivables	[8]	1	-
Derivative financial instruments	[12.3]	11	22
Other current financial assets	[12.1]	270	275
Cash and cash equivalents	[14]	597	766
		1,611	**1,909**
Assets and disposal groups classified as held for sale	[15]	**-**	**44**
Total assets		**12,080**	**12,304**

Equity and liabilities

€ million	Notes	31 December 2020	31 December 2019
Equity			
Share capital		168	168
Share premium		8,445	8,445
Other reserves		-199	-300
Retained earnings		-6,289	-6,302
Equity attributable to holders of perpetual capital securities		496	496
Equity attributable to equity holders of the company		**2,621**	**2,507**
Non-controlling interests		1	1
Total equity	[16]	**2,622**	**2,507**
Non-current liabilities			
Borrowings	[12.2]	5,821	5,722
Lease liabilities	[19]	787	785
Derivative financial instruments	[12.3]	192	136
Provisions for retirement benefit obligations	[17]	152	188
Provisions for other liabilities and charges	[18]	151	105
Contract liabilities	[20]	136	184
Other payables	[20]	12	12
		7,250	**7,132**
Current liabilities			
Trade and other payables	[20]	1,128	1,256
Contract liabilities	[20]	209	228
Borrowings	[12.2]	679	937
Lease liabilities	[19]	150	145
Derivative financial instruments	[12.3]	4	4
Provisions for other liabilities and charges	[18]	38	63
		2,209	**2,634**
Liabilities directly associated with the assets and disposal groups classified as held for sale	[15]	**-**	**30**
Total equity and liabilities		**12,080**	**12,304**

Consolidated Financial Statements

Consolidated Statement of Changes in Equity

€ million, except number of shares	Notes	Subscribed ordinary shares	Share capital	Share premium	Other reserves	Retained earnings	Equity attributable to holders of perpetual capital securities	Equity attributable to equity holders of the company	Non-controlling interests	Total equity
Balance at 31 December 2018		**4,202,844,404**	**168**	**8,445**	**-398**	**-6,338**	**-**	**1,877**	**-**	**1,878**
Profit for the year			-	-	-	626	-	626	-	626
Other comprehensive income for the year			-	-	94	-76	-	18	-	18
Total comprehensive income for the year			**-**	**-**	**94**	**550**	**-**	**644**	**-**	**644**
Share-based compensation	[5]		-	-	-	-2	-	-2	-	-2
Sold treasury shares			-	-	4	-	-	4	-	4
Issuance of EUR hybrid bond	[12.2]		-	-	-	-	496	496	-	496
Dividends paid			-	-	-	-512	-	-512	-	-512
Other			-	-	-	-	-	-	1	1
Total transactions with owners, recognized directly in equity			**-**	**-**	**4**	**-514**	**496**	**-14**	**1**	**-14**
Balance at 31 December 2019		**4,202,844,404**	**168**	**8,445**	**-300**	**-6,302**	**496**	**2,507**	**1**	**2,507**
Profit for the year			-	-	-	561	-	560	-	561
Other comprehensive income for the year			-	-	87	-5	-	82	-	82
Total comprehensive income for the year			**-**	**-**	**87**	**556**	**-**	**643**	**-**	**643**
Share-based compensation	[5]		-	-	-	-11	-	-11	-	-11
Sold treasury shares			-	-	14	-	-	14	-	14
Dividends paid			-	-	-	-529	-	-529	-	-529
Paid coupon perpetual hybrid bond			-	-	-	-3	-	-3	-	-3
Total transactions with owners, recognized directly in equity			**-**	**-**	**14**	**-543**	**-**	**-529**	**-**	**-529**
Balance at 31 December 2020		**4,202,844,404**	**168**	**8,445**	**-199**	**-6,289**	**496**	**2,621**	**1**	**2,622**

Consolidated Statement of Cash Flows

For the year ended 31 December

€ million	Notes	2020	2019
Profit before income tax from continuing operations		649	663
Adjustments for:			
– Net financial expense	[7]	269	372
– Share-based compensation	[5]	5	2
– Share of the profit/loss (-) of associates		-6	6
– Depreciation, amortization and impairments	[10, 11, 19]	1,552	1,537
– Other non-cash income and expense		-19	-202
– Changes in provisions (excluding deferred taxes)		-117	-51
Changes in working capital relating to:			
– Current assets		98	61
– Current liabilities		-131	-70
Dividends received	[12.1]	-	24
Income taxes paid/received		-	-7
Interest paid/received		-255	-329
Net cash flow from operating activities from continuing operations		**2,043**	**2,005**
Net cash flow from operating activities from discontinued operations		**-1**	**1**
Net cash flow from operating activities		**2,043**	**2,006**
Disposal of equity investments measured at fair value through other comprehensive income	[12.1]	-	347
Acquisition of subsidiaries and associates (net of acquired cash)	[21]	-14	-3
Disposal of subsidiaries and associates (net of cash)	[21]	28	258
Investments in software		-225	-255
Investments in other intangible assets		-417	-
Investments in property, plant and equipment		-922	-859
Disposals of property, plant and equipment		4	4
Changes in other current financial assets	[12.1]	1	-233
Net cash flow from investing activities from continuing operations		**-1,545**	**-742**
Net cash flow from investing activities from discontinued operations	[15]	**-**	**35**
Net cash flow from investing activities		**-1,545**	**-707**
Dividends paid		-529	-512
Paid coupon perpetual hybrid bond		-3	-
Issuance and repayment of perpetual hybrid bonds		-	495
Proceeds from borrowings	[12.2]	949	-
Repayments of borrowings and settlement of derivatives	[12.1, 12.2]	-951	-982
Repayments of lease liabilities	[19]	-135	-141
Other		-2	-5
Net cash flow from financing activities from continuing operations		**-670**	**-1,145**
Net cash flow from financing activities from discontinued operations		**-**	**-**
Net cash flow from financing activities		**-670**	**-1,145**
Total net cash flow from continuing operations		**-172**	**118**
Total net cash flow from discontinued operations		**-1**	**37**
Changes in cash and cash equivalents		**-173**	**155**
Net cash and cash equivalents at 1 January		767	612
Net cash and cash equivalents at 31 December		**594**	**767**
Bank overdrafts		2	-
Cash classified as held for sale		-	-1
Cash and cash equivalents	[14]	**597**	**766**

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General notes to the Consolidated Financial Statements

[1] General information

Koninklijke KPN N.V. (KPN or the company) was incorporated in 1989 and is domiciled in the Netherlands. KPN is registered at the Chamber of Commerce (file no. 02045200). The address of KPN's registered office is Wilhelminakade 123, 3072 AP, Rotterdam. KPN's shares are listed on Euronext Amsterdam.

KPN is a leading telecommunications and IT provider in the Netherlands, offering fixed and mobile telephony, fixed and mobile broadband internet and TV to retail consumers. KPN is market leader in the Netherlands in infrastructure and network-related IT solutions to business customers. KPN also provides wholesale network services to third parties.

The Financial Statements were authorized for issue by both the Supervisory Board and the Board of Management on 19 February 2021 and are subject to adoption by the Annual General Meeting of Shareholders on 14 April 2021.

[2] Summary of significant accounting policies

Basis of preparation

The Consolidated Financial Statements of KPN have been prepared in accordance with International Financial Reporting Standards as adopted by the European Union (IFRS) and with the statutory provisions of Part 9, Book 2 of the Dutch Civil Code, under the historical cost convention, except for certain equity investments accounted for using the equity method, and certain equity investments and derivative financial instruments measured at fair value, and on a going concern basis.

All amounts are presented in millions unless stated otherwise. Certain figures may not tally exactly due to rounding. In addition, certain percentages may have been calculated using rounded figures.

Summary of significant accounting policies

The general accounting policies as applied are described below. Significant accounting policies are described in the Notes to the Consolidated Financial Statements.

Changes in accounting policies and disclosures

KPN applies new standards and amendments issued by the International Accounting Standards Board (IASB), when effective and endorsed by the European Union. KPN has not early adopted any standards. Only changes with a significant impact are discussed.

KPN has concluded that the amendments to IFRS 9, IAS 39 and IFRS 7 regarding interest rate benchmark reforms and the amendments to IAS 1 and IAS 8 regarding the definition of 'material' did not have a significant impact.

Amendment to IFRS 3: Definition of a 'business'

The amendment to IFRS 3 Business Combinations clarifies the definition of a 'business'. Under the new guidance, to be considered a business, an integrated set of activities and assets must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create an output. Furthermore, the amendment clarifies that a business can exist without including all of the inputs and processes needed to create outputs. The assessment if a 'business' was acquired must be performed based on what was acquired in its current state and condition, whereas previously IFRS 3 took into consideration if the acquired business could be integrated with the acquirers inputs and processes.

The amendment has been endorsed (April 2020) and is effective as of 1 January 2020. The amendment applies prospectively to transactions or events that occur after the date of application (1 January 2020). During 2020, the updated guidance has been applied to two acquisitions in the fiber domain. Refer to Notes 10 and 21.

Amendment to IFRS 16: COVID-19-Related Rent Concessions

In May 2020, an amendment was issued to provide relief to lessees from applying the IFRS 16 guidance on lease modifications to rent concessions arising as a direct consequence of the COVID-19 pandemic. This amendment is effective for annual periods beginning on or after 1 June 2020 and has been endorsed. KPN has not applied this relief as it did not receive any rent concessions related to COVID-19.

Standards issued but not yet effective

The IASB has issued a new standard (IFRS 17 'Insurance Contracts') and several amendments to existing standards with an effective date of 1 January 2021 or later. Only changes with a possible relevant impact are discussed.

Amendment to IAS 37: Onerous contracts

The proposed amendments to IAS 37 Provisions, Contingent Liabilities and Contingent Assets specify which costs must be included when assessing whether a contract is onerous or loss-making using a 'directly related cost approach'.

Costs that relate directly to a contract to provide goods or services include both incremental costs (such as costs of direct labor and materials) and an allocation of costs directly related to contract activities (such as depreciation of equipment used to fulfill the contract as well as costs of contract management). General and administrative costs do not relate directly to a contract and are excluded unless they are explicitly chargeable to the counterparty under the contract. Currently, KPN does not consider costs of own personnel as incremental costs, whereas costs of additional labor capacity are included in the incremental costs.

The amendments are effective as of 1 January 2022 and must be applied prospectively to contracts for which an entity has not yet fulfilled all of its obligations at the beginning of the annual reporting period in which it first applies the amendments. The amendments have not yet been endorsed. KPN currently does not expect a material impact.

Basis of consolidation

KPN's Consolidated Financial Statements include the financial results of its subsidiaries and incorporate KPN's share of the results from associates.

Subsidiaries are all entities directly or indirectly controlled by KPN. 'Control' is defined as the power over an entity, i.e. the ability to govern the financial and operating policies, resulting in obtaining the gains or losses from the entity's activities.

Subsidiaries are fully consolidated from the date on which control is obtained by KPN and are deconsolidated from the date on which KPN's control ceases. All intercompany transactions, balances and unrealized results on transactions with subsidiaries are eliminated.

Changes in ownership interests in subsidiaries without change of control that do not result in loss of control are accounted for as equity transactions. Gains or losses on disposals to non-controlling interests are also recorded in equity.

Foreign currency translation

The Financial Statements are presented in euro (EUR), which is KPN's presentation currency as well as functional currency.

Transactions in foreign currencies are translated into euro using the exchange rates applicable at transaction date. At reporting date, monetary assets and liabilities denominated in foreign currencies are translated to euro using the rates at reporting date. Exchange rate differences are recognized in profit or loss except when these differences are related to qualifying cash flow hedges and qualifying net investment hedges in which case the exchange rate differences are recorded in OCI.

Exchange rate differences on non-monetary assets and liabilities are reported as part of the fair value gain or loss from that asset or liability. Exchange rate differences arising from the translation of the net investment in foreign entities, of borrowings and other currency instruments designated as hedges of such investments are recognized in OCI.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate at the reporting date.

Subsidiaries

For consolidation purposes, the results and financial position of subsidiaries are translated into euro at the closing rate of the date of the financial position (assets and liabilities) or at the average exchange rates applicable for the specific reporting period (income and expenses). All resulting exchange differences are recognized in OCI.

Statement of Cash Flows

The Statement of Cash Flows is prepared using the indirect method. Cash flows denominated in currencies other than euro are translated at average exchange rates. Cash flows relating to interest and taxes on profits and tax deductions relating to interest on perpetual hybrid bonds are included in the cash flow from operating activities. The consideration paid in cash for acquired subsidiaries is included in the cash flow from investing activities, net of cash acquired. Cash flows resulting from the disposal of subsidiaries are disclosed separately, net of cash sold.

Significant accounting estimates, judgments and assumptions made by management

These are evaluated continuously and are based on historic experience and other factors, including expectations of future events thought to be reasonable under the circumstances. Actual results may deviate from the estimates applied. Estimates are revised when material changes to the underlying assumption occur.

The accounting estimates, judgments and assumptions deemed significant to KPN's Financial Statements relate to:

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Subjects	Notes
Determination of deferred tax assets for losses carry forward and provisions for tax contingencies	Note 8 and 20
Determination of value in use of cash-generating units for goodwill impairment testing	Note 11
Assessments of exposure to credit risk and financial markets risk	Note 12.4
The 'more likely than not' assessment required to determine whether or not to recognize a provision for idle cables, which are part of a public electronic communications network	Note 18 and 22
The assessment of the lease terms deemed reasonably certain of KPN's lease contracts and the incremental borrowing rate used to measure the lease liabilities	Note 19
Assessments whether revenue for variable consideration is probable or highly probable. This concerns revenue related to disputes and revenue related to VAT regarding unused multipurpose bundles	Note 4 and 20

In preparing the Financial Statements, KPN has applied the concept of materiality to the presentation and level of disclosures. Only essential and mandatory information is disclosed that is relevant to a reader's understanding of these Financial Statements.

Impact of COVID-19

KPN managed its business through the COVID-19 crisis in 2020 by adjusting its cost base in line with developing economic circumstances and closely monitoring a number of business drivers including payment behavior, net working capital and credit quality. Lower revenues driven by roaming and delayed IT projects were partly offset by higher fixed and national mobile traffic. Indirect operating expenses slightly decreased due to lower cost related to travel, learning & development and facilities. The total estimated net effect on KPN's financial results was limited.

Reassuringly, the Dutch government announced that it would continue most of its support packages for businesses for the first half of 2021 and KPN has seen limited impact from requests for extended payment terms so far. KPN did not use any form of state aid in 2020.

While preparing these Financial Statements, the significant accounting estimates, judgements and assumptions applied were reviewed. Compared to those significant estimates, judgments and assumptions identified in the 2019 Integrated Annual Report, no significant changes were identified. Nonetheless, the following items were reviewed more closely to assess any COVID-19 impact:

- Receivables: the impact of changes in customer payment behavior or even customer bad debts was reviewed. In the Business segment, our SME exposure is relatively limited in sectors such as hospitality, leisure and travel. Also, many of our Large Corporate and Enterprise customers are active in the public sector. In the Consumer segment, KPN Finance B.V. recognized a limited adjustment to the provision for expected credit losses.
- Inventory levels were successfully managed to reflect the changes in demand. Purchase commitments were managed and updated to match the updated demand; no onerous contracts were identified.
- Regarding fixed assets, specifically assets under construction, some projects were temporarily delayed but no COVID-19-related impairments were recognized.
- The COVID-19 situation did not result in an adjustment to the carrying value of the deferred tax assets for operating losses carried forward.

Goodwill impairment review

In accordance with IAS 36, KPN assesses goodwill for impairment at the end of each year and when a triggering event occurs. The COVID-19 pandemic caused a deterioration in general economic conditions but had a modest impact on KPN's financial results in 2020. In addition to the sensitivity analyses, KPN performed a scenario analysis consistent with macro-economic projections of the ECB for the Euro area published in December 2020 and a publication of the ECB in May 2020 about the impact of the COVID-19 pandemic on various sectors of the economy. For the sake of prudence, we used an extreme scenario. The regular impairment tests nor the additional extreme scenario analysis resulted in an impairment of goodwill. The impact of the COVID-19 pandemic on the assumptions applied in the goodwill impairment test are disclosed in Note 11.

Financial position

KPN's balance sheet and liquidity position remain strong. The available liquidity, consisting of cash and available committed credit facilities, is sufficient to cover KPN's current obligations and debt maturities for the next two years. KPN's credit facilities and debt instruments do not contain any financial covenants which could restrict their availability or trigger early redemption as a result of the COVID-19 crisis. During 2020, the COVID-19 crisis led to increased volatility in capital markets and a deterioration in market liquidity. KPN's Treasury department closely monitored these developments to ensure that the impact on KPN's liquidity position, sources of financing and financial counterparies remained within acceptable risk limits.

KPN's leverage ratio remains within the medium-term target of <2.5x net debt to EBITDA and KPN's credit ratings have remained unchanged at BBB / BBB / Baa3 with a stable outlook from Fitch, S&P and Moody's respectively. KPN did not use any form of state aid in 2020 as the impact of the COVID-19 crisis on KPN's financial performance and financial position was limited. Consequently, KPN has not changed its intention regarding dividend payments over 2020.

[3] Segment reporting

Operating segments are reported in a manner consistent with the internal reporting to KPN's CEO, who is the Chief Operating Decision-Maker according to IFRS 8 'Operating Segments'.

Comparative financial information for 2019 has been restated as several smaller units were transferred from the Consumer and Business segments to Network, Operations & IT. The impact on the segment information was not material.

Almost all of KPN's operating activities are in the Netherlands.

Operating segments

KPN's operating segments comprise of Consumer, Business, Wholesale and Network, Operations & IT (NOI). For general information on these segments, read more in sections 'Shareholder value' and 'Flexible, simple and converged products and services'.

Other

'Other' comprises KPN Holding, Corporate Center and eliminations.

Segment performance

As part of the simplification process, KPN has limited the intercompany charges to charges that are considered relevant for tax purposes.

The EBITDA AL of Consumer, Business and Wholesale represents the contribution margin of these segments and the EBITDA AL of NOI mostly consists of operating expenses. Due to the fact that KPN neither allocates interest expenses to segments nor accounts for taxes in the segments, the disclosure is limited to operating profit for the year.

Investments in property, plant and equipment, and intangible assets (capex) are centrally managed and reported to KPN's Chief Operating Decision-Maker at the KPN Group level, not at a segment level.

For an explanation of EBITDA, EBITDA AL and incidental transactions included in Revenues, Other income and EBITDA AL, see Appendix 1.

Segmentation 2020

€ million	Notes	Consumer	Business	Wholesale	NOI	Other[1]	Total KPN Group
Statement of Profit or Loss							
External revenues[2]		2,852	1,832	590	5	4	5,283
Other income		-	12	4	3	-	19
Inter-division revenues		11	9	46	1	-67	-
Total	[4]	**2,863**	**1,853**	**641**	**9**	**-63**	**5,303**
Operating expenses		-987	-974	-126	-605	-146	-2,839
EBITDA		**1,876**	**879**	**514**	**-596**	**-209**	**2,464**
DA&I		-190	-53	-9	-1,236	-63	-1,552
Operating result		**1,686**	**825**	**505**	**-1,832**	**-272**	**912**
EBITDA		1,876	879	514	-596	-209	2,464
DA&I right-of-use assets	[19]	-10	-4	-1	-65	-50	-130
Interest lease liabilities	[19]	-2	-	-	-15	-5	-22
EBITDA after lease		**1,864**	**875**	**513**	**-676**	**-264**	**2,312**
Total assets		4,453	2,779	612	9,390	-5,154	12,080
Total liabilities		4,537	2,759	612	9,421	-7,871	9,458

1 Including eliminations

2 External revenues mainly consist of rendering of services

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Segmentation 2019 (restated)

€ million	Notes	Consumer	Business	Wholesale	NOI	Other[1]	Total KPN Group
Statement of Profit or Loss							
External revenues[2]		2,907	2,021	565	3	3	5,499
Other income		-	30	171	2	-	202
Inter-division revenues		9	17	82	1	-109	-
Total	[4]	**2,916**	**2,068**	**817**	**6**	**-105**	**5,702**
Operating expenses		-1,052	-1,087	-140	-704	-142	-3,124
EBITDA		**1,864**	**981**	**677**	**-698**	**-247**	**2,578**
DA&I		-207	-55	-14	-1,191	-70	-1,537
Operating result		**1,657**	**927**	**663**	**-1,889**	**-317**	**1,041**
EBITDA		1,864	981	677	-698	-247	2,578
DA&I right-of-use assets	[19]	-10	-4	-4	-67	-53	-138
Interest lease liabilities	[19]	-3	-	-3	-16	-6	-28
EBITDA after lease		**1,852**	**977**	**670**	**-781**	**-306**	**2,412**
Total assets		4,531	2,852	811	9,017	-4,908	12,304
Total liabilities		4,592	2,832	811	9,010	-7,449	9,796

1 Including eliminations

2 External revenues mainly consist of rendering of services

Notes to the Consolidated Statement of Profit or Loss

[4] Revenues and Other income

[4.1] Revenues

€ million	2020	2019
Service revenues	4,891	5,110
Non-service revenues	368	378
Revenues from contracts with customers	**5,258**	**5,488**
Rentals and other revenues	25	11
Revenues	**5,283**	**5,499**

Service revenues are all revenues recognized over time and include fees for usage of KPN's network and facilities, e.g. monthly subscription fees and revenues from customer-specific IT solutions.

Non-service revenues are revenues recognized at a point in time and includes for example sale of handsets, peripheral equipment as well as software licenses sold without ongoing support.

The application of KPN's accounting policies on revenue recognition, including relevant judgements, and information about KPN's performance obligations is summarized below:

Contracts for fixed-voice/internet/television

- Installation services offered to consumer customers are generally considered a separate performance obligation, as the customer can choose to use an engineer for installation or to install the equipment themselves. Installation services treated as a separate performance obligation include installing of customer premises equipment (CPE), e.g. set-top boxes, setting up in-home WiFi and installing customers' own devices. Revenue from installation services is allocated to the installation service at the start of the contract and recognized as revenue at a point in time (at completion of the installation).
  The difference between the amount of revenue recognized and the amount charged to the customer is recognized as a contract asset. Most CPE is considered part of KPN's network. These hardware elements are capitalized as part of property, plant and equipment as KPN retains ownership and control over the economic benefits, and are therefore not considered a separate performance obligation.
- Network access is considered a separate performance obligation. Revenue is recognized over time during the subscription period. In general content, e.g. TV content, is considered part of the network access performance obligation and revenue is recognized on a gross basis.
  Revenue for streaming services, which are contracted and billed to customers separately, are recognized on a net basis as KPN acts as an agent.
- One-off connection fees are not separate performance obligations as they are considered to be necessary to get access to the network. The fees charged to the customer are recognized as a contract liability and bundled with the performance obligation for network access.

Postpaid mobile contracts via KPN shops and website

- Handset sales are a separate performance obligation and are recognized as revenue at a point in time (upon delivery of the handset equipment). The amount of revenue allocated to the handset less the amount charged to the customer upfront is recognized as a contract asset if the payment to be received for the handset is conditional on the delivery of telco services and as a financial receivable if the payment to be received is unconditional.
- As of 1 May 2017, KPN is legally required to treat a handset combined with a postpaid subscription as a consumer loan under the Dutch Financial Supervision Act (*Wet op het financieel toezicht, Wft*) if the consumer customer repays the handset in monthly instalments and the credit amount is above EUR 250. The outstanding handset credit is considered a contract asset because the payment is conditional on the delivery of telco services. As of 1 January 2018, the contract with consumer customers for the handset instalment payments changed in both direct and indirect channels and is no longer conditional on the delivery of the telco services.
  Therefore, a financial receivable is recognized for the instalments to be received (see Note 13). Taking into account the low interest rates and contract duration, these receivables do not include a significant financing component.
- Network access is considered a separate performance obligation. Revenue is recognized over time during the subscription period.

Postpaid mobile contracts via third parties

- The handsets sold and delivered by third parties, related to KPN subscription contracts, are not performance obligations for KPN. Handset-related dealer fees result in an unbilled receivable on the Statement of Financial Position, which is decreased when handset instalments are billed to the end-customer.
- Transaction-related dealer fees paid to acquire or retain subscribers are capitalized as contract costs and expensed on a straight-line basis over the contract term of the underlying customer contract.

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Workspace and related services

- Transition projects for corporate customers are considered separate performance obligations, as the customer can benefit from the project deliverables on their own. Revenue is recognized over time (percentage of completion during the project phase). Transition projects sometimes include the delivery of peripheral equipment and software licenses. These are not considered as separate performance obligations if KPN performs the installation and/or must provide ongoing support as part of the transition project. If not part of a transition project, revenue for peripheral equipment is recognized as revenue at a point in time (upon delivery of the equipment), whereas revenue for licenses is recognized over time (on a monthly basis).
- Exploitation services are considered a separate performance obligation. Revenue is recognized over time during the contract period.

Wholesale services

- The Wholesale segment bills customers at (regulated) tariffs that may be disputed by other operators and regulators. A contract liability is recognized in case the invoiced revenue is not considered highly probable.
- Exploitation services are considered a separate performance obligation and revenue is recognized over time.
- One-off connection fees are not separate performance obligations.

In 2019 and 2020, the time value of money was not significant and therefore not recorded.

Generally, the payment term is two weeks in the consumer market and 30 days in the business market.

KPN applies the practical expedients provided in IFRS 15 under which disclosure of amounts of consideration allocated to the remaining performance obligations (unsatisfied or partially satisfied) do not need to be disclosed. This applies to contracts with an original expected duration of less than one year or when KPN bills a fixed amount for network services provided. KPN recognizes revenue from network services in the amount to which KPN has a right to invoice the customer and this amount corresponds directly with the value of KPN's performance completed to date.

The remaining performance obligations expected to be recognized in future periods relating to the transition & transformation projects for workspace services with business customers were nil as at 31 December 2020 and 31 December 2019.

Revenues, disaggregated per segment, including interdivision revenues:

€ million	2020	2019
Not-bundled fixed lines service revenues	246	269
Bundled fixed lines service revenues	1,606	1,605
Other (mainly peripheral equipment)	67	42
Consumer residential communication services	**1,919**	**1,916**
Mobile service revenues	743	779
Other (mainly handsets)	202	221
Consumer mobile communication services	**944**	**999**
Total Consumer revenues	**2,863**	**2,916**
Mobile service revenues	404	457
Internet of Things	59	53
Broadband & network services	339	370
Fixed-voice	221	276
Other (mainly handsets, peripheral equipment and software licenses)	105	112
Business communications services	**1,127**	**1,268**
IT services[1]	265	268
Professional services & consultancy[2]	445	487
Other	3	14
Other Business revenues	**713**	**770**
Total Business revenues	**1,841**	**2,038**
Mobile service revenues	140	139
Fixed revenues	497	509
Total Wholesale revenues	**636**	**648**
NOI and Other (incl. eliminations)	**-57**	**-103**
Total	**5,283**	**5,499**

1 Including security, cloud and workspace service except for large corporate customers

2 Including workspace and related services for large corporate customers

[4.2] Other income

€ million	2020	2019
Other income	19	202

Other income in 2020 relates to the sale of KPN's subsidiary KPN Consulting B.V. (EUR 11m), adjustments to the book result on sale of subsidiaries in 2019 (EUR 2m) and the book gain on the sale of various other fixed assets (EUR 6m).

Other income in 2019 includes the gains on the sale of KPN's subsidiaries NLDC B.V. (EUR 171m), Argeweb B.V. (EUR 4m) and KPN's International Network Services (EUR 25m), as well as the book gain on the sale of various other fixed assets (EUR 2m).

See Note 21 for further information on the sale of subsidiaries.

Accounting policy: Revenues

The core principle is that revenue is recognized to depict the transfer of promised goods or services to the customer in an amount that reflects the consideration to which KPN expects to be entitled in exchange for those goods or services. Revenue is recognized when it is probable that the economic benefits associated with a transaction will flow to KPN and the amount of revenue and associated costs can be measured reliably.

KPN follows the five-step process of IFRS 15 to recognize revenue. After a contract with a customer has been entered into, the separate performance obligations are identified which are the distinct goods and services promised to the customer (the customer can benefit from the goods or services either on their own or together with other resources that are readily available to the customer, and the transfer of goods or services to the customer are separately identifiable from other promises in the contract). The next steps are the determination of the transaction price and the allocation to the performance obligations. Allocation of the transaction price to performance obligations is based on standalone selling prices, which are based on our price lists and therefore readily available. The final step is to recognize revenue when a performance obligation is satisfied. Revenue is recognized either at a point in time or over time. In general, telco and IT services are delivered over time, whereas handsets and peripheral and network equipment, in case they are treated as separate performance obligations, are delivered at a point in time.

Revenue for variable considerations, including revenue under dispute, is recognized only when it is highly probable which, in some cases, requires significant judgement.

An adjustment for the time value of money is made to a transaction price for the effects of financing if time between recognition of revenue and cash receipt is expected to exceed 12 months and if it provides the customer with a significant benefit.

If KPN transfers goods or services to a customer before the customer pays consideration or before payment is due, a contract asset is recognized in case the earned consideration is conditional. A financial receivable is recognized if KPN's right to an amount of consideration is unconditional (only the passage of time is required before payment of the consideration is due).

KPN recognizes contract liabilities in the Statement of Financial Position for considerations received in respect of unsatisfied performance obligations. Contract liabilities are recognized as revenue when KPN performs under the contract. At the start of a contract with a customer, in case services or goods are delivered by sub-contractors, KPN determines whether its performance obligation is to provide the specified goods or services itself (acting as a principal) or to arrange for another party to provide those goods or services (acting as an agent) based on the agreed terms and conditions with the customer and the sub-contractor, as well as the nature of the goods and services promised to the customer.

Accounting policy: Costs to obtain and/or fulfill a contract

The incremental costs of obtaining a contract with a customer are recognized as an asset if KPN expects to recover those costs. Costs to obtain a contract that would have been incurred regardless of whether the contract was obtained are recognized as an expense when incurred, unless those costs are explicitly chargeable to the customer regardless of whether the contract is obtained or not. Costs to fulfill a contract are recognized as an asset if:

- The costs relate directly to a contract; and
- The costs generate or enhance resources that will be used in satisfying performance obligations in the future; and
- The costs are expected to be recovered.

Capitalized contract costs are amortized on a linear basis over the period in which KPN transfers the related goods or services to the customer. KPN applies the practical expedient to immediately expense contract costs when the asset that would have resulted from capitalizing such costs would have been amortized within one year or less.

Assets recognized for costs to obtain a contract and costs to fulfill a contract are subject to impairment testing.

Accounting policy: Other income

Other income includes gains on the sale of property, plant and equipment, as well as other gains not related to KPN's operating activities.

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[5] Personnel expenses

€ million	2020	2019
Salaries and wages	739	822
Retirement benefits	79	87
Social security contributions	90	111
Additional labor capacity	105	99
Own work capitalized	-120	-119
other	-1	29
Total personnel expenses	**892**	**1,027**

Employee redundancy costs are not included in personnel expenses but in other operating expenses. See Note 18 for information on employee redundancy costs.

Number of own personnel (FTE) per segment	31 December 2020	31 December 2019 Restated
Consumer	2,538	2,591
Business	2,877[1]	3,804
Wholesale	202	194
NOI	3,478	3,612
Other	1,007	1,048
Total FTE	**10,102**	**11,248**

1 The sale of Consulting and Call2 resulted in a decrease of 718 FTE.

Share plans

KPN has granted shares (equity-settled) and share-based awards (cash-settled) on its shares to members of the Board of Management and senior management. The conditionally granted awards (granted until 2018) will vest after three years if the employee is still employed by KPN. Vesting is based on individual vesting of 25% relative total shareholder return (TSR) versus peer group, 25% free cash flow, 25% earnings per share, 12.5% on sustainability/ environmental targets and 12.5% on stakeholder/ customer targets. Vesting of non-financial targets is subject to achieving a cumulative net profit during the vesting period of three years (i.e. a qualifier for vesting). The peer group and the vesting schedule can be found under 'Long-term incentives' in the Remuneration Report.

As of 2019, the targets for the LTI plan are set as follows: 70% financial targets, of which 45% on cumulative free cash flow over the plan period and 25% on relative TSR measured against the STOXX Europe 600 Telecommunications index and 30% non-financial targets, determined at the start of a new plan by the Supervisory Board from the following categories: (i) Sustainability; (ii) Reputation; (iii) Social; (iv) Key business projects; and (v) Market share.

The main features of the awards granted to KPN management are summarized below.

	Board of Management	Senior management	Maximum term	Settlement type[1]	Vesting period	Holding period after vesting of/until
2016	X		5 years	Equity[2]	3 years	2 years
		X	3 years	Cash	3 years	–
2017	X	X	5 years	Equity[2]	3 years	2 years
		X	3 years	Cash	3 years	–
2018	X	X	5 years	Equity[2]	3 years	2 years
		X	3 years	Cash	3 years	–
2019	X	X	5 years	Equity[2]	3 years	3 years
		X	3 years	Cash	3 years	–
2020	X		5 years	Equity[2]	3 years	3 years
		X	3 years	Cash	3 years	–

1 The cash-settled share awards will be settled in cash and no holding restrictions apply. An exception to the holding period for equity-settled plans is made with respect to shares that were sold upon vesting to cover the tax obligation on the vested shares. After vesting, the holder is able to sell a number of unconditional granted shares only up to the amount necessary to settle the wage taxes liability relating to the profit made on the stock compensation plan. Wage tax in the Netherlands is generally around 50% of the total vested amount.

2 Including deferred dividend.

The total compensation expense associated with the share plans was EUR 6m in 2020 (2019: EUR 4m). The related liability (for cash-settled shares) on 31 December 2020 was EUR 6m (31 December 2019: EUR 4m). This liability is included under Other payables. For the 2017 Share Plan and share-based awards, the service conditions were met in the year 2020. The intrinsic value at vesting was EUR 5m (2019: EUR 3m).

The following table presents the number of shares and share-based awards in thousands under the share plans.

	Total 31 Dec 2018	Granted/ additional vesting[1]	Exercised/ Vested	Forfeited	Total 31 Dec 2019	Granted/ additional vesting[2]	Exercised/ Vested	Forfeited[3]	Total 31 Dec 2020[4]	-of which: Non-vested
2016 Share-based awards Sr. man.	2,208	-	-938	-1,270	-	-				-
2016 Shares BoM	768	-	-327	-442	-	-				-
2017 Share-based awards Sr. man.	1,141	-	-	-80	1,061	-	-677	-384	-	-
2017 Shares BoM/Sr. man.	1,970	-	-	-98	1,872	-	-1,194	-678	-	-
2018 Share-based awards Sr. man.	1,332	51	-	-174	1,209		-	-126	1,083	1,083
2018 Shares CEO	80	-	-	-80	-	-	-	-	-	-
2018 Shares BoM/Sr. man.	2,985	-	-	-800	2,184	-	-	-271	1,913	1,913
2019 Share-based awards Sr. man.	-	2,059	-	-	2,059	13	-	-50	2,022	2,022
2019 Shares BoM/Sr. man.	-	1,614	-	-438	1,176	-	-	-39	1,137	1,137
2020 Share-based awards Sr. man.						2,942	-	-17	2,925	2,925
2020 Shares BoM						1,809	-	-	1,809	1,809

1 On the basis of a 100% grant. The equity-settled share numbers do not include any deferred dividend during the vesting period. The deferred dividend during the vesting period will be granted in additional shares.

2 At grant date, the fair value is calculated using a Monte Carlo Simulation model. In April 2020, the fair value was EUR 1.77 (2019 grant: EUR 2.64) for the 2020 share-based award (cash-settled) and EUR 2.04 (2019 grant: EUR 2.89) for the 2020 equity-settled share grant for the Board of Management (excluding deferred dividend).

3 At the end of 2020, KPN held the 6th position with respect to the 2018 share grant and at the end of 2019, KPN held the 6th position with respect to the 2017 share grant. This position and the outcomes of the other targets will lead to a 77% vesting in April 2021 of the 2018 share grant. Final TSR measurement for the 2018 share grant was conducted in February 2021. Final TSR measurement for the 2017 share grant was conducted in February 2020 which resulted in 64% vesting in April 2020.

4 The fair value of each cash-settled share-based award was measured on 31 December 2020 using recent strategic plans, forecasts and a Monte Carlo Simulation model, based on the most recent available share price of KPN and its performance compared with peer companies at the moment of valuation (i.e. closing share prices as at 31 December 2020). The fair value on 31 December 2020 was EUR 1.69 (2019: EUR 2.12) for the 2018 share-based award, EUR 2.15 (2019: EUR 2.62) for the 2019 share-based award and EUR 2.06 for the 2020 share-based award.

The fair value of each award at the grant date is determined using the following assumptions:

€ million	2020 LTI	2019 LTI
Risk-free interest rate based on euro government bonds for remaining time to maturity of 2.7 years	-0.3%	-0.2%
Expected dividend for KPN (based on one year's historical daily data preceding the date of award)	5.4%	4.5%
Expected volatility (PSP grant based on 2.7 years' historical daily data) used for TSR	24.1%	20.4%
Share price at date of award (closing at grant date)	€ 2.20	€ 2.88

The following paragraphs detail the actual remuneration of the Board of Management and the Supervisory Board. Please refer to the Remuneration Report for the executive pay policy.

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Details of actual remuneration

The remuneration of the Board of Management, representing the costs incurred by the company measured under IFRS principles, is as follows:

Name current member	Year	Salary	STI[1]	LTI[2]	Pension Cost[3]	Social security and other compensation[4]	Total
J.F.E. Farwerck	2020	875,000	675,833	767,501	185,345	19,793	2,523,472
	2019	687,500	497,250	602,478	152,497	15,641	1,955,366
H.C. Figee	2020[5]	618,750	318,594	132,674	99,675	34,386	1,204,079
J.P.E.D. van Overbeke	2020	650,000	334,698	401,564	123,973	15,019	1,525,254
	2019[6]	54,167	33,800	23,088	8,847	1,261	121,163
M. Snoep	2020	650,000	334,698	278,445	106,089	30,275	1,399,507
	2019[6]	54,167	33,800	12,787	8,178	2,532	111,464
B. Fouladi	2020	650,000	334,698	317,624	123,979	14,031	1,440,332
	2019[6]	54,167	33,800	16,112	8,534	1,192	113,805
H. Garssen	2020	500,000	257,460	158,551	81,544	15,033	1,012,588
	2019[6]	41,667	26,000	5,115	6,183	1,262	80,227
Total current members	2020	**3,943,750**	**2,255,981**	**2,056,359**	**720,605**	**128,537**	**9,105,232**
	2019	**891,668**	**624,650**	**659,580**	**184,239**	**21,888**	**2,382,025**

1 Actual STI relates to performance in the current year but paid out in the following financial year. Please see the 'Short-term incentives' section in the Remuneration Report for the actual pay-out levels per target.

2 The amounts in the table represent the cost recognized for shares in 2020 and 2019 based on their fair values at grant date. The fair value of the share-based award is recorded as cost over the vesting period. Please see the 'Long-term incentives' section in the Remuneration Report for a further explanation.

3 The pension costs include the costs for survivor's pension, disability coverage, administration as well as the gross allowances. The fixed gross allowance (for the base pay part above EUR 110,111) in 2020 was, EUR 127,940 for Mr. Farwerck (2019: EUR 92,553), EUR 67,990 for Mr. Figee, EUR 83,533 for Mr. Van Overbeke (2019: EUR 4,972), EUR 72,270 for Ms. Snoep (2019: EUR 4,972), EUR 86,753 for Mr. Fouladi (2019: EUR 4,972) and EUR 52,984 for Ms. Garssen (2019: EUR 3,597).

4 In addition to social security, the stated amounts include allowances that can be considered as indirect remuneration and relates to the value for the private use of the company car.

5 Remuneration since 1 February 2020.

6 Remuneration since 1 December 2019.

Name former member	Year	Salary	Severance	STI[1]	LTI[2]	Pension Cost[3]	Social security and other compensation[4]	Total
J.C. de Jager (until February 2020)	2020	112,500	-	57,929	84,114	22,097	5,813	282,453
	2019	675,000	675,000	421,200	563,054	124,155	15,882	2,474,291
M. Ibarra (until September 2019)	2019	701,244	-	-	-328,275	129,834	11,203	514,006
Total former members	**2020**	**112,500**	**-**	**57,929**	**84,114**	**22,097**	**5,813**	**282,453**
	2019	**1,376,244**	**675,000**	**421,200**	**234,779**	**253,989**	**27,085**	**2,988,297**

1 Actual STI relates to performance in the current year but paid out in the following financial year. Please see the 'Short-term incentives' section in the Remuneration Report for the actual pay-out levels per target.

2 The amounts in the table represent the cost recognized for shares in 2020 and 2019 based on their fair values at grant date. The fair value of the share-based award is recorded as cost over the vesting period. Please see the 'Long-term incentives' section in the Remuneration Report for a further explanation.

3 The pension costs include the costs for survivor's pension, disability coverage, administration as well as the gross allowances. For the former members the fixed gross allowance in 2020 was EUR 15,885 for Mr. De Jager (2019: EUR 79,777) and EUR 0 for Mr. Ibarra (2019: EUR 86,927).

4 In addition to social security, the stated amounts include allowances that can be considered as indirect remuneration and relates to the value for the private use of the company car.

See the Remuneration Report for the number of shares under the share plans per individual board member.

See the Insider Transactions section (p. 87) for stock ownership of members of the Board of Management and Supervisory Board.

Supervisory Board

Please see the Remuneration Report for the actual fee received by each member of the Supervisory Board. The total fee for 2020 is EUR 655,626 (2019: EUR 643,000).

Accounting policy: Share-based compensation

For equity-settled plans, the fair value of shares granted to employees is measured at grant date. For cash-settled plans, the fair value of the liability for the awards granted is remeasured at each reporting date and at settlement date.

The costs of share-based compensation plans are determined based on the fair value of the shares and the number of shares expected to vest. On each balance date, KPN determines whether it is necessary to revise the expectation of the number of shares that will vest. The fair value is recognized as personnel expense in profit or loss over the vesting period of the shares against an increase in equity in the case of equity-settled share-based compensation plans and against the recognition of a liability in the case of cash-settled share-based compensation plans.

[6] Other operating expenses

Other operating expenses comprise, among others, a net addition to the restructuring provision (see Note 18).

Auditor's fees

The fees listed below relate to the services provided to KPN and its consolidated group entities by Ernst & Young Accountants LLP, as well as by other Dutch and foreign-based EY individual partnerships and legal entities, including their tax services and advisory groups:

€ million	2020	2019
Financial statements audit fees	3.6	3.6
Other assurance fees	0.9	1.0
Total audit fees	4.5	4.6
Tax fees	0.1	0.2
Total	**4.6**	**4.8**

The total fees of Ernst & Young Accountants LLP charged to KPN and its consolidated group entities amounted to EUR 4.5m in 2020 (2019: EUR 4.6m). The financial statements audit fees include the fees for professional services rendered for the audit of KPN's annual financial statements and the annual statutory financial statements of subsidiaries or services that are normally provided by the auditor in connection with the audits.

The other assurance fees include the fees incurred for assurance and related services that are reasonably related to the performance of the audit or review of KPN's Financial Statements, such as revenue and IT-related assurance services and regulatory-related assurance services.

Accounting policy: Operating expenses

Operating expenses are divided into direct cost (cost of goods and services) and indirect cost (IT/TI, personnel expenses and other operating expenses).

Cost of goods and services are costs incurred in the context of a sales transaction and include subscriber acquisition and retention costs and traffic expenses. These costs are expensed as incurred, except handset fees paid to dealers and transaction related dealer commissions that are capitalized and amortized over the contract term. The cost of a handset is expensed when the handset is sold (as incurred), both as an individual sale or as a component of a transaction in combination with a subscription.

Information technology (IT) expenses relate to KPN's IT environment and include licenses and maintenance expenses for software and/or IT hardware when not directly related to a sales transaction. Technical infrastructure (TI) expenses are expenses related to KPN's fixed and mobile networks.

Personnel expenses are all expenses related to KPN's workforce, both related to own employees and external personnel.

Other operating expenses include expenses related to marketing and communication, billing and collection, housing and facilities.

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[7] Financial income and expenses

€ million	Notes	2020	2019
Finance income		**-3**	**24**
Interest on borrowings		-207	-268
Interest expense lease liability	[19]	-22	-28
Interest on other provisions		-3	-6
Other interest expenses		-7	-5
Finance costs		**-239**	**-307**
Amortizable part of hedge reserve	[12.1]	-15	-17
Amortization discontinued fair value hedges	[15]	29	38
Derivative financial instruments not qualified for hedge accounting	[12]	-27	-29
Exchange rate differences		-4	1
Bond tender premiums and hedge unwinds	[12.2]	-	-95
Other		-11	13
Other financial results		**-28**	**-90**
Total		**-269**	**-372**

Finance income of EUR -3m consisted mainly of negative interest on cash balances; figures for 2019 included EUR 24m dividend received from Telefónica Deutschland.

Finance costs decreased by EUR 67m, which was driven by bond redemptions and refinancing transactions. Interest on borrowings included a non-cash amount of EUR 4m (2019: EUR 9m) relating to debt issuance and similar costs, which are amortized over the remaining life of the respective bonds using the effective interest rate method.

Other financial results decreased by EUR 62m (lower net cost), mainly due to the bond tender and unwind of associated hedges that KPN executed in November 2019, which resulted in a net charge of EUR 95m in 2019. The ineffectiveness of hedge relationships resulted in a EUR 11m net loss (2019: EUR 9m gain), which includes a loss of EUR 10m related to a refinement of the hedge accounting calculations partially reversing gains in previous years.

[8] Taxation

The Netherlands

The book loss, which is recognized as a result of the sale of E-Plus in 2014 (see schedule net DTA book loss sale of E-Plus), was used to offset KPN's taxable income in the Netherlands in 2014 up to and including 2020, and will be used to offset a significant part of KPN's taxable income in the Netherlands in the coming years.

KPN has an agreement with the Dutch tax authorities with respect to the application of the Dutch innovation box tax regime. This is a facility under Dutch corporate income tax law where profits attributable to innovation are taxed at an effective rate of 7.0% (2019: 7.0%). The application of the innovation box resulted in a benefit of EUR 16m over 2020 (2019: EUR 16m). During 2020, KPN and the Dutch tax authorities started discussions on how the innovation box was applied in 2018-2020. The resulting tax uncertainty for 2018 and 2019 is recognized as an expense of EUR 8m on innovation tax facilities prior years. KPN expects to settle these discussions in 2021.

See Note 21 Business combinations and disposals for the impact of the acquisitions, which are separately liable for income taxes, and disposals of subsidiaries and business units.

Income tax expense

€ million	2020	2019
Current tax	1	-8
Deferred taxes	-89	-41
Income tax (charge)/benefit from continuing operations	**-88**	**-49**

The reconciliation from the Dutch statutory tax of 25% (2019: 25%) to the effective tax rate (ETR) of 13.7% (2019: 7.3%) is explained in the following table. Book tax expenses increased by EUR 39m from EUR 49m in 2019 to EUR 88m in 2020.

Changes in Dutch tax rates resulted in a benefit of EUR 67m in 2020 (2019: EUR 48m) on the valuation of our net deferred tax assets, while the tax exemption of the result on disposal of subsidiaries and business units resulted in a tax benefit of EUR 3m (2019: EUR 50m).

	2020		2019	
	€ million	ETR	€ million	ETR
Profit before income tax from continuing operations excluding associates and joint ventures	**643**		**669**	
Taxes at Dutch statutory tax rates	-161	25.0%	-167	25.0%
Dutch tax rate adjustment	67	-10.4%	48	-7.1%
Not taxable income, non deductible expenses and liquidation losses	3	-0.5%	50	-7.5%
Innovation tax facilities current year	16	-2.5%	16	-2.5%
Innovation tax facilities prior year	-8	1.2%	-	0.0%
Deferred tax related to current year	-3	0.5%	8	-1.3%
Other	-2	0.4%	-4	0.6%
Income tax benefit/(charge) from continuing operations	**-88**	**13.7%**	**-49**	**7.3%**

Net DTA book loss on the sale of E-Plus

€ million	Net DTA	Realized	Unrealized	Offset by DTL	Net Loss
Balance at 31 December 2018	**533**	**134**	**411**	**-12**	**2,506**
Movement 2019	55	19	24	12	132
Balance at 31 December 2019	**588**	**153**	**435**	**-**	**2,638**
Movement 2020	-41	-107	66	-	-450
Balance at 31 December 2020	**547**	**46**	**501**	**-**	**2,188**

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Deferred tax positions

Deferred tax assets

€ million	Tax loss & other carry forwards[1]	Unrealized liquidation losses[2]	Bonds & hedges[3]	Restriction on depreciation[4]	Fiscal goodwill[5]	Lease Liabilities[6]	Other	Offset by DTL	Total[7]
Balance at 31 December 2018	**183**	**411**	**120**	**104**	**75**	**194**	**74**	**-440**	**720**
Income statement benefit/(charge)	-10	-	-17	-15	-75	4	1	-13	-124
Transfer to current tax	21	-	-	-	7	-	-	-	28
Tax charged to OCI	-3	-	-33	-	-	-	-	-	-37
Tax rate changes[8]	5	24	16	16	15	9	-1	-	85
Other (exchange, reclassification, change in consolidation)	-	-	-	-	-	-4	2	-	-3
Transfer to held for sale	-	-	-	-	-5	-2	-	-	-8
Balance at 31 December 2019	**195**	**435**	**85**	**105**	**16**	**201**	**76**	**-452**	**662**
Income statement benefit/(charge)	-29	-	-7	-19	-14	2	-14	16	-65
Transfer to current tax	-102	-	-	12	-	-	-	-	-90
Tax charged to OCI	6	-	-25	-	-	-	-	-	-19
Tax rate changes[8]	11	66	11	-4	1	3	-1	-10	77
Transfer to held for sale	-	-	-	-	1	-	-	-	1
Balance at 31 December 2020	**81**	**501**	**64**	**94**	**4**	**206**	**61**	**-446**	**567**

1 Net offsettable losses expected to be recovered within the expiration limits of applicable tax law. KPN has a history of recent profits.

2 Unrealized losses expected to be realized upon liquidation of the former E-Plus entities. Consequently, expiration limits are not yet applicable.

3 Amounts relate to capitalized costs for tax purposes, derivative positions adjusted for tax purposes and unrealized FX results included in the hedge reserve.

4 Amounts relate to assets depreciated in 5 years for tax purposes and less than 5 years for book purposes.

5 Amounts relate to goodwill depreciated for tax purposes (originated from internal transfers).

6 For leases, KPN separately recognizes both deferred tax assets and deferred tax liabilities, based on the underlying temporary difference.

7 Of which EUR 100m to be recovered within 12 months (2019: EUR 140m). Recoverability depending on future taxable results. Based on current projections, KPN expects to fully utilize its realized and unrealized losses well within the expiration limits of applicable tax law.

8 Representing the impact of the Dutch corporate tax rate change of which a net benefit of EUR 10m has been added to OCI in 2020 (2019: net benefit of EUR 12m).

Deferred tax positions

Deferred tax liabilities

€ million	Software development[1]	Goodwill depreciation[2]	PPA[3]	Right of use assets[4]	Other	Offset against tax assets	Total
Balance at 31 December 2018	**110**	**68**	**50**	**174**	**37**	**-440**	**-**
Income statement benefit/(charge)	2	16	-8	2	-11	-13	-12
Transfer to current tax	-	-	-	-	-	-	-
Tax charged to OCI	-	-	-	-	-14	-	-14
Tax rate changes[5]	14	3	4	8	1	-	29
Other (exchange, reclassification, change in consolidation)	-	-1	-1	1	-	-	-1
Transfer to held for sale	-	-	-	-2	-	-	-2
Balance at 31 December 2019	**126**	**86**	**45**	**183**	**12**	**-452**	**-**
Income statement benefit/(charge)	-25	16	-8	3	-2	16	-
Transfer to current tax	-	-	-	-	-	-	-
Tax charged to OCI	-	-	-	-	-	-	-
Tax rate changes[5]	-1	-	7	3	1	-10	-
Transfer to held for sale	-	-	-	-	-	-	-
Balance at 31 December 2020	**100**	**102**	**44**	**189**	**11**	**-446**	**-**

1 Amounts relate to a capitalized software costs which is taken as an expense for tax books.

2 Amounts relate to acquired goodwill depreciated for tax purposes (not for book purposes).

3 See Note 21 for the impact of the acquisitions.

4 For leases, KPN separately recognizes both deferred tax assets and deferred tax liabilities, based on the underlying temporary difference.

5 Representing the impact of the Dutch corporate tax rate change of which a net benefit of EUR 10m has been added to OCI in 2020 (2019: net benefit of EUR 12m).

Tax loss carry forward

	31 December 2020			31 December 2019		
€ million	Tax loss carry forward	Maximum deferred tax asset	Recognized deferred tax asset	Tax loss carry forward	Maximum deferred tax asset	Recognized deferred tax asset
Koninklijke KPN – corporate tax[1]	328	82	81	823	195	195
Other	71	15	-	65	14	-
Total KPN Group	**400**	**97**	**81**	**888**	**209**	**195**

1 The offset of realized losses with future profits is limited to 9 years for losses incurred in years ending 2018 and is limited to 6 years for losses incurred in 2019 and onwards. Furthermore, we refer to "Tax and regulations - forward looking" in this integrated report on future changes regarding the use and limitation of losses.

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Expiration of the available tax loss carry forward and recognized tax assets

	31 December 2020			31 December 2019		
€ million	Tax loss carry forward	Maximum deferred tax asset	Recognized deferred tax asset	Tax loss carry forward	Maximum deferred tax asset	Recognized deferred tax asset
2020	-	-	-	-	-	-
2021	-	-	-	-	-	-
2022	-	-	-	46	11	11
2023	186	47	46	635	153	153
2024	1	-	-	1	-	-
2025	141	35	35	-	-	-
Later	53	11	-	199	43	31
Unlimited	18	4	-	7	2	-
Total	**400**	**97**	**81**	**888**	**209**	**195**

Accounting policy: Taxation

Current income tax

The current income tax charge is calculated in accordance with the prevailing tax regulations and rates, taking into account non-taxable income and non-deductible expenses.

The current income tax expense reflects the amount for the current reporting period that KPN expects to recover from or pay to the tax authorities. Current income tax related to items recognized directly in equity/OCI is recorded in equity/ OCI and not in profit or loss, with an exception for (hybrid) financial instruments classified as equity. KPN's management periodically evaluates positions taken in the tax returns regarding situations in which applicable tax regulations are subject to interpretation and establishes provisions when deemed appropriate.

Deferred income taxes

Deferred income tax positions are recognized for temporary differences between the tax basis of assets and liabilities and their carrying values. DTAs are recognized for deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. DTAs are recognized only to the extent that it is probable that future taxable profits will be available against which the temporary differences can be utilized. Both the recognized and unrecognized DTAs are reassessed on each reporting date based on available projections. If future taxable profits are insufficiently available, derecognition may become inevitable unless certain exceptions can be applied. DTAs are recorded for deductible temporary differences associated with investments in subsidiaries and associates and are recorded only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized.

DTLs are recognized for all taxable temporary differences except when they arise from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the profit or loss reported in the Statement of Profit or Loss nor the taxable profit or loss. Also, no DTLs are recorded for taxable temporary differences associated with investments in subsidiaries and associates when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future. Deferred tax positions are stated at nominal value and are measured at the corporate income tax rates KPN expects to be applicable in the year when the asset is realized or liability is settled based on enacted or substantially enacted tax laws.

DTAs and DTLs are netted if there is a legally enforceable right to offset current tax assets against current tax liabilities and the DTAs/DTLs relate to income taxes levied by the same taxation authority on the same taxable entity or if, in the case of different taxable entities, there is an intention either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

[9] Earnings per share

The following table shows the income and share data used in the calculations of the basic and diluted EPS.

€ million	2020	2019
Profit for the year from continuing operations	561	614
Profit for the year from discontinued operations	-	12
Profit for the year	**561**	**626**
Profit attributable to non-controlling interests	-	-
Deduction for perpetual capital securities	-10	-1
Adjusted profit (loss) attributable to ordinary shareholders of the company	**551**	**624**
Weighted average number of subscribed ordinary shares	**4,196,846,423**	**4,195,770,386**
Dilution effects: options and non-vested shares	5,079,463	5,554,828
Weighted average number of subscribed ordinary shares including dilution effects	**4,201,925,886**	**4,201,325,214**

Earnings per ordinary share after taxes attributable to equity holders of the company for the year:

€	2020	2019
Basic (continuing operations)	0.13	0.15
Diluted (continuing operations)	0.13	0.15
Basic (discontinued operations)	-	-
Diluted (discontinued operations)	-	-
Basic (total, including discontinued operations)	0.13	0.15
Diluted (total, including discontinued operations)	0.13	0.15

Diluted earnings per share are calculated by adjusting the weighted average number of ordinary shares outstanding to assume conversion of all dilutive potential ordinary shares.

Share options and non-vested shares are regarded to have potential dilutive effects on the ordinary shares.

Coupons and carrying amount adjustments on the perpetual capital securities were deducted from the profit attributable to equity holders, since the perpetual hybrid bonds represent equity but do not constitute profit attributable to ordinary holders.

The total basic earnings per share include EUR 0.02 (2019: EUR 0.01) tax expenses.

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Notes to the Consolidated Statement of Financial Position

[10] Property, plant and equipment

Statement of changes in property, plant and equipment

€ million	Land and buildings	Plant and equipment	Other tangible non-current assets	Assets under construction	Total
Balance at 1 January 2019	**391**	**4,921**	**37**	**246**	**5,595**
Investments	39	852	20	-29	883
Depreciation	-49	-909	-15	-	-973
Impairments and retirements	-	-2	-	-15	-17
Changes in consolidation	-29	-23	-2	-	-54
Other	-1	-1	-	-	-2
Closing net book value	**351**	**4,839**	**40**	**203**	**5,432**
Cost	1,454	9,392	96	203	11,145
Accumulated depreciation/impairments	-1,103	-4,553	-56	-	-5,713
Balance at 31 December 2019	**351**	**4,839**	**40**	**203**	**5,432**
Investments[1]	101	952	14	-79	987
Depreciation	-44	-925	-15	-	-984
Impairments and retirements	-2	-15	-	-7	-25
Changes in consolidation[2]	-	11	-	-	11
Other	-	1	-1	-	-
Closing net book value	**405**	**4,863**	**38**	**116**	**5,422**
Cost	1,536	9,570	87	116	11,310
Accumulated depreciation/impairments	-1,131	-4,707	-50	-	-5,888
Balance at 31 December 2020	**405**	**4,863**	**38**	**116**	**5,422**

1 Investments in plant and equipment include the acquisition of a fiber network not qualifying as a business under IFRS 3 of EUR 9m.

2 Changes in consolidation include the acquisition of the cooperative Sterk Midden-Drenthe.

Estimated useful lives of the principal PPE categories

PPE category	Depreciation period
Land	No depreciation
Buildings	14-33 years
Network equipment	3-7 years
Fiber network infrastructure	30 years
Copper network infrastructure	5-10 years
Office equipment	4-10 years

The assets' residual values and useful lives are reviewed at least annually and adjusted if appropriate.

KPN's strategy includes, amongst others, accelerating the roll-out of fiber which affects the depreciation period of all new investments in copper infrastructure. As of 1 January 2019, depreciations of these investments were capped at 10 years.

Begin 2020, KPN announced to phase out its copper network starting begin 2023 for existing addresses where fiber service delivery is currently available, and for the addresses in every already announced fiber roll-out project under construction. The depreciation of this part of the copper network is accelerated for an additional amount of EUR 13m in 2020.

Interest is capitalized as an increase in PPE if the construction of assets takes a substantial period of time and the amount is material.

Accounting policy: PPE

PPE are valued at cost less depreciation and impairment. The cost include direct costs (materials, direct labor and work contracted out) and directly attributable overhead costs.

Asset retirement obligations are capitalized as part of the cost of tangible fixed assets and expensed as either depreciation over the assets' estimated useful life or as impairment charges.

PPE are depreciated using the straight-line method, based on estimated useful life, taking into account residual value. Land is not depreciated. PPE are reviewed for impairment whenever events or changes in circumstances indicate that the book value of the assets concerned may not be recoverable. An impairment loss is recognized for the amount by which the assets' book value exceeds its recoverable amount.

Impairments are reversed if and to the extent that the impairment no longer exists. The recoverable amount is defined as the higher of an assets' fair value less costs of disposal and its value in use.

[11] Intangible assets

Statement of changes in intangible assets with finite lives and goodwill

€ million	Goodwill	Customer relationships	Software acquired from third parties	Software internally generated	Software in development	Licenses	Other	Total
Balance at 1 January 2019	**1,510**	**236**	**130**	**304**	**89**	**890**	**9**	**3,169**
Investments	-	-	72	240	-57	-	-	255
Changes in consolidation	-15	-4	-1	-	-	-	-	-20
Amortization	-	-30	-85	-201	-	-85	-5	-405
Impairments	-	-	-	-1	-3	-	-	-4
Closing net book value	**1,495**	**202**	**117**	**341**	**30**	**805**	**4**	**2,995**
Cost	2,152	362	261	715	30	1,385	18	4,922
Accumulated amortization/impairments	-657	-159	-144	-374	-	-580	-13	-1,927
Balance at 31 December 2019	**1,495**	**202**	**117**	**341**	**30**	**805**	**4**	**2,995**
Investments	1	-	60	178	-3	417	-	653
Changes in consolidation	-	2	-	-	-	-	-	2
Amortization	-	-29	-74	-214	-	-91	-2	-409
Impairments	-	-	-	-3	-	-	-	-3
Reclassifications	-	-	-2	3	-	-	-	-
Closing net book value	**1,496**	**175**	**100**	**305**	**27**	**1,132**	**3**	**3,238**
Cost	2,153	334	249	678	27	1,803	13	5,256
Accumulated amortization/impairments	-657	-159	-149	-373	-	-671	-10	-2,018
Balance at 31 December 2020	**1,496**	**175**	**100**	**305**	**27**	**1,132**	**3**	**3,238**

Licenses

KPN acquired a combination of frequency licenses in the Dutch 5G auction for EUR 417m, including additional expenses. These licenses, with in total 75MHz of the spectrum, will be amortized over a period of 20 years. The investment in the 700MHz and 1400MHz band (EUR 253m) was used as of July 2020. The investment in the 2100 MHz band for an amount of EUR 164m will be used and amortized as of January 2021.

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Goodwill per CGU

€ million	31 December 2020	31 December 2019
Consumer	770	770
Business	689	689
Wholesale	36	36
Total	**1,496**	**1,495**

Goodwill impairment tests

In accordance with IAS 36, KPN assesses goodwill for impairment at the end of each year and when a triggering event occurs. The annual impairment tests as at 31 December 2020 did not indicate that the book value of KPN's goodwill is not recoverable. KPN's market capitalization on 31 December 2020 was higher than the book value of its equity. A test was performed of the recoverable amount of the book value of each cash-generating unit (CGU), based on their value-in-use, which was determined by using the discounted cash flow method.

Key assumptions used in the cash flow projections are estimated EBITDA, capex, change in working capital and pre-tax weighted average cost of capital (WACC). The cash flow projections are management's best estimate based on the updated strategic plan and extrapolation to terminal values. The WACC is calculated using a capital asset pricing model. The WACC used for 2020 reflects the impact of the lease liabilities recognized in accordance with IFRS 16. The terminal growth rate for the period after 10 years is updated consistently in line with the changes in the post-tax WACC. In 2020, the post-tax WACC and the terminal growth rate were unchanged compared to 2019.

For all three CGUs, the annual impairment tests in 2020 and 2019 resulted in significant positive headroom as at 31 December 2020 and 31 December 2019.

Key assumptions in goodwill impairment tests

CGU	EBITDA margin	Capex intensity	Discount rate	Terminal sales growth[1]
Consumer 2020	52% – 57%	27% – 29%	6% – 7%	-0.5%
Consumer 2019	51% – 53%	25% – 26%	6% – 7%	-0.5%
Business 2020	28% – 35%	16% – 17%	6% – 7%	-0.5%
Business 2019	29% – 33%	14% – 16%	6% – 7%	-0.5%
Wholesale 2020	67% – 70%	36% – 40%	6% – 7%	-0.5%
Wholesale 2019	65% – 68%	29% – 32%	6% – 7%	-0.5%

1 Estimates after 10 years.

The sensitivity analyses on the impairment test, resulting from a change in the key assumptions, showed that the headroom of the CGUs is more than sufficient. The analyses were performed for each key assumption separately. For example, a 1% higher discount rate, a 20% higher capex, a 1% lower terminal growth rate or a 15% lower EBITDA in each of the CGUs would not lead to a goodwill impairment.

In addition to the sensitivity analyses, KPN performed a scenario analysis consistent with macroeconomic projections of the ECB for the Euro area published in December 2020 and a publication of the ECB in May 2020 about the impact of the COVID-19 pandemic on various sectors of the economy. For the sake of prudence, we used an extreme scenario in which, due to lockdown measures, the contribution margin of the whole KPN Group would decline by around 5% in 2021 compared to our strategic plan, followed by a 4% decline in 2022, 3% in 2023 and 2% in the following years, including the terminal value after 10 years. This scenario, with indirect expenses, capex and other assumptions basically unchanged, would still not lead to a goodwill impairment.

Accounting policy: Goodwill and intangibles with finite lives

The excess of the consideration transferred over the fair value of the identifiable net assets acquired in a business combination is recorded as goodwill. Goodwill on acquisitions of subsidiaries is included in intangible assets. Goodwill on acquisition of associates is included in investments in associates. Goodwill is allocated to CGUs for the purpose of impairment testing. The allocation is made to those CGUs or groups of CGUs that are expected to benefit from the synergies of the business combination. Goodwill is carried at cost less accumulated impairment losses and tested for impairment annually or whenever there is an indication that goodwill may be impaired. Goodwill is impaired if the recoverable amount is lower than the book value. The recoverable amount is defined as the higher of the fair value less costs of disposal and the value in use of the CGU concerned. Impairment losses on goodwill are not reversed in the event that circumstances that triggered the impairment have changed.

Licenses and software are valued at cost less amortization and impairment. Amortization is calculated using the straight-line method over the economic useful life and commences at the date that services can be offered (available for use). Internally developed and acquired software which is not an integral part of PPE, is capitalized on the basis of the costs incurred, which includes direct costs and directly attributable overhead costs incurred.

Other intangible assets such as customer relationships and trade names acquired in business combinations are capitalized at their fair values at acquisition date and are amortized using the straight-line method over the economic useful life.

Intangible assets are reviewed for impairment whenever events or changes in circumstances indicate that the book value of the asset may not be recoverable. An impairment loss is recognized for the amount by which the book value of the licenses exceeds its recoverable amount. Impairments are reversed if and to the extent that the impairment no longer exists. Intangible assets not yet available for use are tested annually for impairment or whenever KPN has an indication that the intangible fixed assets may be impaired. For example, licenses are tested as part of a CGU as licenses do not generate independent cash flows.

The amortization periods of the intangible assets with finite lives are 5-20 years for licenses, 3-5 years for software and 4-20 years for other intangible assets.

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[12] Financial assets and financial liabilities

Summary of the financial assets and liabilities at carrying amount and fair value, classified per category

€ million	Notes	31 December 2020 Carrying amount	31 December 2020 Fair value	31 December 2019 Carrying amount	31 December 2019 Fair value
Financial assets at FVPL					
Other current financial assets	[12.1]	270	270	275	275
Derivatives	[12.3]	202	202	258	258
Cash and cash equivalents, including classified as held for sale	[14]	597	597	767	767
Financial assets at amortized cost					
Trade and other receivables	[13]	641	641	717	717
Financial assets at FVOCI					
Equity investments	[12.1]	37	37	32	32
Total financial assets		**1,746**	**1,746**	**2,049**	**2,049**
Financial liabilities FVPL					
Derivatives	[12.3]	196	196	140	140
Financial liabilities at amortized cost					
Borrowings	[12.2]	6,500	6,997	6,659	7,261
Lease liabilities	[19]	937	937	930	930
Trade and other payables	[20]	953	953	1,074	1,074
Total financial liabilities		**8,587**	**9,083**	**8,803**	**9,405**

Fair value measurement hierarchy at 31 December 2020

€ million	Level 1	Level 2	Level 3	Total
Financial assets at FVPL				
Derivatives (cross-currency interest rate swap)	-	26	-	26
Derivatives (interest rate swap) and other	-	176	-	176
Financial assets at FVOCI				
Equity investments:				
Unlisted securities	-	-	37	37
Total assets	**-**	**202**	**37**	**239**
Financial liabilities at FVPL				
Derivatives (cross-currency interest rate swap)	-	161	-	161
Derivatives (interest rate swap)	-	34	-	34
Total liabilities	**-**	**196**	**-**	**196**

Fair value measurement hierarchy at 31 December 2019

€ million	Level 1	Level 2	Level 3	Total
Financial assets at FVPL				
Derivatives (cross-currency interest rate swap)	-	70	-	70
Derivatives (interest rate swap) and other	-	188	-	188
Financial assets at FVOCI				
Equity investments:				
Unlisted securities	-	-	32	32
Total assets	**-**	**258**	**32**	**290**
Financial liabilities at FVPL				
Derivatives (cross-currency interest rate swap)	-	98	-	98
Derivatives (interest rate swap)	-	42	-	42
Total liabilities	**-**	**140**	**-**	**140**

Fair value estimation

Level 1: Fair value of instruments traded in active markets and based on quoted market prices.
Level 2: Instrument is not traded in an active market and fair value is determined by using valuation techniques based on maximum use of observable market data for all significant inputs.
Level 3: One or more of the significant inputs is not based on observable market data, the fair value is estimated using models and other valuation methods. The valuation of available-for-sale unlisted securities is based on a discounted cash flow model.

Accounting policy: Financial assets

Financial assets are classified at initial recognition.

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and KPN's business model for managing them.

KPN initially measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs.

For the purposes of subsequent measurement, financial assets are classified into four categories:
- Financial assets at amortized cost (debt instruments).
- Financial assets at fair value through other comprehensive income (OCI) with recycling of cumulative gains and losses (debt instruments).
- Financial assets designated at fair value through OCI with no recycling of cumulative gains and losses upon derecognition (equity instruments).
- Financial assets at fair value through profit or loss.

[12.1] Financial assets

Equity investments measured at fair value through OCI

This includes several minority stakes of which the largest is Actility SA, a provider of network solutions and managed information systems for the Internet of Things market with a carrying value of EUR 7m (2019: EUR 7m).

During 2019, KPN disposed of its remaining stake in Telefónica Deutschland (TEFD) through various transactions and a final sale on 13 June 2019. In total 131.2m shares were sold at an average price of EUR 2.65 per share. During 2019, a net loss of EUR 101m on the fair value of the stake in TEFD was recorded through OCI. Cumulative losses on the sold shares in 2019 were EUR 197m.

In 2019, KPN received a dividend from TEFD of EUR 24m which was recorded as finance income. No dividends were received from other investments in 2020 or 2019.

These investments were irrevocably designated at fair value through OCI because KPN believes that the fluctuations in the fair value of these investments do not give a fair view of KPN's performance.

Other current financial assets

Other current financial assets include investments in short-term money market funds of EUR 270m (2019: EUR 275m), which are held at fair value through profit or loss (FVPL). These funds have low volatility, with an investment objective of preservation of principal.

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[12.2] Financial liabilities

	31 December 2020		31 December 2019	
€ million	Carrying amount	Fair value	Carrying amount	Fair value
Senior eurobonds EUR	3,616	3,681	3,480	3,610
Senior eurobonds GBP	1,380	1,678	1,457	1,766
Senior global bonds USD	591	687	647	735
Subordinated hybrid bonds classified as liability	487	516	1,002	1,063
Other borrowings	427	434	74	88
Total borrowings	**6,500**	**6,997**	**6,659**	**7,261**
> of which: current	**679**	**685**	**937**	**951**
> of which: non-current	**5,821**	**6,311**	**5,722**	**6,310**

The fair value for eurobonds, global bonds and hybrid bonds is based on the listed price of the bonds. Other borrowings include commercial paper, cash collateral received on derivatives, bank overdraft and other loans.

KPN's weighted average interest rate on total outstanding borrowings on 31 December 2020 was 3.0% after swaps (2019: 3.6%). KPN's weighted average interest rate on senior borrowings on 31 December 2020 was 2.9% after swaps (2019: 3.2%).

Senior bonds

On 21 September 2020, KPN redeemed the 3.75% coupon eurobond 2010-2020 with a remaining outstanding principal amount of EUR 461m, in line with its scheduled maturity. This bond's coupon was swapped to a fixed interest of 1.04%.

On 14 September 2020, KPN issued a EUR 600 million eurobond with a coupon of 0.875% and maturity date of 14 December 2032.

Hybrid bonds

million	Nominal	Nominal €	Coupon	Classification	Redemption	First call date	Swapped	Credit rating
USD hybrid bond	600	465	7.000%	Liability	28 Mar 2073	28 Mar 2023	Fixed 6.34%	BB/Ba2
EUR perpetual hybrid bond	500	500	2.000%	Equity	Perpetual	8 Feb 2025	N/a	BB+/Ba2

On 14 March 2020, KPN redeemed the 6.875% GBP 400m hybrid bond on its first call date. The bond had been swapped to a principal amount of EUR 460m and a 6.777% coupon.

As at 31 December 2020, two hybrid bonds are outstanding with an aggregate nominal amount of EUR 965m after swaps. The USD 600m hybrid bond (swapped to EUR 465m) is included in borrowings while the EUR 500m perpetual hybrid bond is classified as equity. Both hybrid bonds are subordinated debt instruments and are treated for 50% as equity and 50% as debt in KPN's gross and net debt definitions.

KPN may, at its discretion and subject to certain conditions, elect to defer payments of interest on the hybrid bonds. Arrears of interest must be paid if dividends are paid on ordinary shares, if payments are made on other hybrid bonds, in the event of early redemption, and for the USD hybrid bonds at final maturity. KPN does not recognize accruals for coupon payments on the EUR perpetual hybrid bond of EUR 10m per annum. If an accrual had been recognized, the amount would have been EUR 9m on 31 December 2020.

Other borrowings

On 2 April 2020, KPN had fully drawn its EUR 300m credit facility from the European Investment Bank. The loan has a floating interest rate referenced to 3-month Euribor and a single repayment on 2 August 2027. The interest for the current interest period was floored at 0%.

During the year, KPN set up a Euro Commercial Paper Program under which KPN can issue short-term debt instruments for up to EUR 1 billion. As at 31 December 2020, the outstanding balance of commercial paper amounted to EUR 60m (2019: nil) issued at an average interest rate of -0.37%.

Accounting policy: Borrowings

After initial recognition, loans and borrowings are subsequently carried at amortized cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognized in the P&L over the period of the borrowings using the effective interest method. The amortized cost is calculated by taking into account any discounts or premiums on acquisition or issuance and transaction costs. The effective interest rate amortization is recognized in the P&L as finance costs.

Changes in liabilities arising from financing activities

€ million	Borrowings	Derivative financial instruments	Net liability	Lease liabilities	Net liability, including lease liabilities
Balance at 1 January 2019	**7,519**	**133**	**7,652**	**976**	**8,628**
Exchange differences	128	-126	2	-	2
Movements recorded as net cash flows arising from/used in financing activities:					
Repayments of borrowings and settlement of derivatives and repayments of lease liabilities[1]	-922	-	-922	-141	-1,063
Fair value adjustments	-60	-149	-209	-	-209
Other movements[2]	-6	24	18	95	113
Balance at 31 December 2019	**6,659**	**-118**	**6,541**	**930**	**7,472**
Exchange differences	-197	199	1	-	1
Movements recorded as net cash flows arising from/used in financing activities:					
Repayments of borrowings and settlement of derivatives and repayments of lease liabilities[1]	-901	-21	-922	-135	-1,057
Issued bonds & loans[3]	950	-	950	-	950
Fair value adjustments	-8	-68	-76	-	-76
Other movements[2]	-3	3	-	142	142
Balance at 31 December 2020	**6,500**	**-6**	**6,494**	**937**	**7,432**

1 In the Consolidated Statement of Cash Flows, this line item includes a payment of EUR 29m in 2020 and EUR 83m in 2019 regarding cash collateral on derivatives (presented as non-current other receivables) and in 2019 a premium of EUR 136m relating to the bond tender. The interest component of the lease payments is presented within cash flow from operating activities.

2 Other movements of the derivative financial instruments are predominantly movements in the interest part of cash flow hedges. Other movements of the lease liabilities include interest, additions of new contracts, remeasurements and modifications (see Note 19).

3 Includes net proceeds from commercial paper of EUR 60m in 2020 (2019: nil).

[12.3] Hedging activities and derivatives

KPN uses derivatives solely for the purpose of hedging underlying exposures. The primary risks managed using derivative instruments are foreign currency risk and interest rate risk.

€ million	31 December 2020	31 December 2019
Assets (current and non-current)	202	258
Liabilities (current and non-current)	-196	-140
Total derivatives	**6**	**118**
of which: designated in a hedge relationship	**-37**	**48**
of which: other derivatives not designated in a hedge relationship	**43**	**70**

A total loss of EUR 11m due to hedge ineffectiveness was recognized in the P&L in 2020 (2019: EUR 9m gain). This was mainly due to the reversal of gains in previous years after refinement of the hedge accounting calculations (EUR 10m loss),

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the remaining is caused by small differences in the valuation of hedging instruments and hedged items due to credit risk and valuation curves in combination with the cumulative change of the fair value of the hedging instrument becoming greater than the change in the fair value of the hedged item. Note that all hedges continue to be highly effective prospectively.

Derivatives positions are reported on a gross basis and include a credit value adjustment attributable to derivative counterparty default risk. As at 31 December 2020, this was a net asset of EUR 92k (2019: net liability of EUR 61k). Part of the derivatives portfolio is subject to master netting agreements that allow netting under certain circumstances.

If netting had been applied, the total derivatives asset position would be EUR 70m and the total derivatives liability position would be EUR 64m as at 31 December 2020 (2019: EUR 123m and EUR 5m respectively).

Derivatives designated in a hedge relationship

Cash flow hedges

Bonds denominated in foreign currencies are hedged with cross-currency swaps. The currency exposure is hedged by effectively fixing the countervalue in the foreign currency to EUR and by hedging the interest rate exposure by swapping the fixed interest rates in foreign currency to fixed interest rates in EUR. There is an economic relationship between the hedged items and hedging instruments as the terms of the cross-currency swaps match the terms of the bonds. KPN has established a hedge ratio of 1:1 for the hedging relationships as the quantity of hedged items equals the notional amount of the cross-currency swaps. The hedges are until maturity of the underlying senior bonds or until the first call date in the case of the USD hybrid bond. For these hedges, KPN meets the criteria of, and also applies, cash flow hedge accounting. The effectiveness of the hedges is determined at inception and on a quarterly basis. To test the hedge effectiveness, KPN uses the hypothetical derivative method and compares the changes in the fair value of the hedging instruments against the changes in the fair value of the hedged items attributable to the hedged risks. If the cumulative change in fair value of the hedging instrument and hedged item are not equal in absolute terms, the difference will be reported in the P&L to the extent that, in absolute terms, the fair value change of the hedging instrument is greater than the fair value change of the hedged item. Hedge ineffectiveness can arise from:

- Different curves linked to hedged items and hedging instruments
- The counterparties' credit risk differently impacting the fair value movement of the hedging instruments and hedged items
- Changes in the terms of the hedged item or hedge instrument

Overview of the cross-currency swaps at 31 December 2020 and 31 December 2019

Nominal (receive)	Coupon (receive)	Nominal (pay)	Coupon (pay)	Maturity date	Fair value 2020 (EUR m)	Fair value 2019 (EUR m)
GBP -[1]	6.875% annual	460	6.777% annual	14-3-2020	-	9
USD 600	7.000% semi-annual	465	6.344% semi-annual	28-3-2023	25	55
GBP 400	5.000% annual	474	4.424% annual	18-11-2026	-43	-30
GBP 850	5.750% annual	971	5.432% annual	17-9-2029	-88	-59
USD 595	8.375% semi-annual	450	8.517% semi-annual	1-10-2030	-28	-3
Total					**-135**	**-28**

1 On 31 December 2019, the GBP cross-currency swaps with a maturity date 14 March 2020 had a nominal outstanding value of GBP 400m.

Impact of the cash flow hedges on the Statement of Financial Position

€ million	Notional amount	Carrying amount	Line item in Statement of Financial Position	Change in fair value used for measuring ineffectiveness for the period
As at 31 December 2020				
Cross-currency swaps GBP	1,445	-131	Derivatives	-51
Cross-currency swaps USD	915	-4	Derivatives	-56
Total	**2,361**	**-135**		**-107**
As at 31 December 2019				
Cross-currency swaps GBP	1,905	-80	Derivatives	137
Cross-currency swaps USD	915	52	Derivatives	92
Total	**2,820**	**-28**		**229**

The change in fair value of the associated hedged items attributable to the hedged risks resulted in an ineffectiveness loss in 2020 of EUR 12m (2019: EUR 7m gain). This included a EUR 10m loss caused by an adjustment of the hedge accounting procedure, mainly reversing gains in previous years.

Effect of the cash flow hedge in the P&L and OCI

€ million	Total hedging gain/(loss) recognized in OCI	Ineffectiveness recognized as a gain/(loss) in P&L	Line item in P&L	Amount reclassified from OCI as a gain/ (loss) in P&L	Line item in P&L
Year ended 31 December 2020					
Cross-currency swaps GBP	51	-11	Other financial results	-109	Other financial results
Cross-currency swaps USD	56	-1	Other financial results	-90	Other financial results
Total	**107**	**-12**		**-199**	
Year ended 31 December 2019					
Cross-currency swaps GBP	137	5	Other financial results	96	Other financial results
Cross-currency swaps USD	92	2	Other financial results	35	Other financial results
Total	**229**	**7**		**131**	

Fair value hedges
In 2017, the 1.125% fixed-rate eurobond maturing on 11 September 2028 was swapped to a floating rate using fixed-to-floating interest rate swaps, where KPN receives a fixed rate of 0.907% and pays interest at a variable rate equal to the six-month Euribor.

In 2018, the 0.625% fixed-rate eurobond maturing on 9 April 2025 was also swapped to a floating rate using fixed-to-floating interest rate swaps, where KPN receives a fixed rate of 0.920% and pays interest at a variable rate equal to the six-month Euribor (in arrears). The swaps are used to hedge the exposure to changes in the fair value of these fixed rate eurobonds against changes in the EUR interest curve.

There is an economic relationship between the hedged item and the hedging instrument, as the terms of the interest rate swaps match the terms of the fixed-rate bonds (i.e. notional amount, maturity and payment dates). KPN has established a hedge ratio of 1:1 for the hedging relationships as the quantity of hedged item equals the notional amount of the hedging instrument. For these hedges, KPN meets the criteria of, and also applies, hedge accounting. If the cumulative change in the fair value of the hedging instrument and hedged item are not equal in absolute terms, the difference will be recorded in the P&L. The hedge ineffectiveness can arise from:

- Different curves linked to the hedged items and hedging instruments
- The counterparties' credit risk differently impacting the fair value movement of the hedging instruments and hedged items
- Changes in the terms of the hedge item or hedge instrument

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Impact of the fair value hedges on the Statement of Financial Position

€ million	Notional amount	Carrying amount	Line item in Statement of Financial Position	Change in fair value used for measuring ineffectiveness for the period
As at 31 December 2020				
Interest rate swaps	1,250	98	Derivatives	23
As at 31 December 2019				
Interest rate swaps	1,250	75	Derivatives	51

Impact of the hedged items on the Statement of Financial Position

€ million	Carrying amount	Change in fair value adjustments	Line item in Statement of Financial Position	Change in fair value used for measuring ineffectiveness for the period
As at 31 December 2020				
Fixed-rate eurobonds 2025 & 2028	-1,337	-23	Borrowings	-22
As at 31 December 2019				
Fixed-rate eurobonds 2025 & 2028	-1,314	-51	Borrowings	-49

The ineffectiveness recognized in the P&L for the year ended 31 December 2020 was a gain of EUR 1m (2019: EUR 2m gain).

Derivatives not designated in a hedge relationship

In 2011, fixed-rate eurobonds with maturities on 21 September 2020, 4 October 2021 and 30 September 2024 were swapped to a floating interest rate using fixed-to-floating interest rate swaps. Subsequently, in May 2015, KPN entered into offsetting floating-to-fixed interest rate swaps whereby the effective interest rate was re-fixed for the remaining maturity of these bonds. At that time fair value hedge accounting for fixed-to-floating interest rate swaps was discontinued. The cumulative gain at de-designation was EUR 224m and will be amortized to earnings until maturity of the bonds. The gain realized in the P&L in 2020 was EUR 18m (2019: EUR 20m) and the remaining balance of unamortized gains was EUR 30m as at 31 December 2020 (2019: EUR 48m). As at 31 December 2020, KPN holds the offsetting interest rate swaps at FVPL for an amount of EUR 43m net asset (2019: EUR 70m). In the P&L, the change in fair value of these swaps resulted in a loss, recognized in other financial results, of EUR 27m in 2020 (2019: EUR 30m loss), which was offset by EUR 28m net interest received (2019: EUR 31m) that is included in interest on borrowings.

Accounting policy: Derivatives and hedging activities

Derivatives are recognized at fair value. Gains and losses arising from changes in fair value are recognized as finance cost/income during the period in which they arise to the extent that the derivatives have no hedging designation or they are ineffective.

KPN applies IFRS 9 hedge accounting. Derivatives related to loans are designated as either cash flow or fair value hedges.

Offsetting effects are recognized in the P&L.

The hedge documentation includes identification of the hedging instrument, the hedged item, the nature of the risk being hedged and how KPN will assess whether the hedging relationship meets the hedge effectiveness requirements (including the analysis of sources of hedge ineffectiveness and how the hedge ratio is determined).

A hedging relationship qualifies for hedge accounting if it meets all of the following effectiveness requirements:
- There is 'an economic relationship' between the hedged item and the hedging instrument

- The effect of credit risk does not 'dominate the value changes' that result from that economic relationship
- The hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that KPN actually hedges and the quantity of the hedging instrument that KPN actually uses to hedge that quantity of hedged item

Changes in the fair value of an effective derivative, which is designated as a fair value hedge, along with the gain or loss on the hedged item that is attributable to the hedged risk, are recorded in the P&L as finance cost/ income. Changes in the fair value of an effective derivative, which is designated as a cash flow hedge, are recorded in OCI for the effective part, until the P&L is affected by the variability in cash flows of the designated hedged item. The ineffective part of the cash flow hedge is recognized as finance cost/income. If an underlying transaction has ceased to be an effective hedge or in case of early redemption of the hedged item, hedge accounting is discontinued prospectively which means that subsequent changes in fair value are recognized in the P&L as finance cost/income and the cumulative amount recorded in OCI is released in the P&L.

[12.4] Financial risk management and policies

Financing policy

KPN strives for the right balance between investments in the business, shareholder remuneration and a prudent financing policy. It is KPN policy to utilize excess cash for operational and financial flexibility and/or shareholder remuneration.

The net debt/EBITDA AL ratio is one of the drivers for KPN's credit rating and is based on the nominal value of borrowings borrowings and takes 50% equity credit on hybrid bonds into account. KPN remains committed to an investment grade credit profile and aims for a net debt/EBITDA AL ratio of below 2.5x in the medium term.

The difference between the carrying value and nominal value of borrowings includes: (1) carrying value adjustments resulting from fair value hedges; (2) in case of foreign currency bonds, the difference between the nominal amount at the prevailing spot rate and the swapped nominal amount in EUR; and (3) amortized debt issuance costs.

€ million	31 December 2020	31 December 2019
Borrowings	6,500	6,659
Perpetual hybrid	500	500
Bank overdraft	-2	-
50% equity credit for hybrid bonds	-483	-483
Cash collateral paid on derivatives	-117	-97
Difference between carrying value and nominal value	-202	-392
Adjusted gross debt	**6,197**	**6,188**
Net cash and cash equivalents	594	766
Short-term investments	270	275
Net debt[1]	5,332	5,148
Adjusted EBITDA AL	2,320	2,317
Net debt/EBITDA AL	**2.3x**	**2.2x**

1 Excluding lease liabilities.

Financial risk management

KPN is exposed to a variety of financial risks. The overall risk management program focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on KPN's financial position and performance.

Derivatives are used to hedge certain risk exposures (see Note 12.3).

KPN's key financial risks are:
- Credit and counterparty risk
- Liquidity risk
- Market risk

KPN's Treasury department manages the financial risks according to policies approved by the Board of Management and Supervisory Board. These policies are established to identify and analyze financial risks, set appropriate risk limits and controls, and monitor adherence to those limits.

The COVID-19 crisis in 2020 led to increased volatility in capital markets and a deterioration in market liquidity. KPN's Treasury department monitored the situation closely and the impact on KPN's liquidity position, sources of financing and financial counterparties remained within acceptable risk limits. KPN did not suffer any material impact on its liquidity reserves and its ability to raise financing at attractive rates remained very strong.

Credit and counterparty risk

Credit risk arises from the possibility of asset impairment occurring when counterparties are unable to meet their obligations in transactions involving financial instruments. KPN's counterparty policy sets limits for the maximum exposure per counterparty, which are primarily based on credit ratings,

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investment periods and collateral. The minimum counterparty credit rating (Moody's equivalent) is Baa2 for cash balances and Baa1 for entering into new derivative transactions. Cash balances used for working capital purposes can also reside at banks with lower credit ratings. Capital preservation is KPN's main priority when investing excess cash.

As at 31 December 2020, KPN's cash balances and short-term investments were held in bank accounts, bank deposits and money market funds with maturities of up to three months. The majority of cash balances were invested with counterparties with a credit rating equivalent to A3 at Moody's or higher and the counterparties of outstanding derivatives have a credit rating equivalent to Baa1 or higher with Moody's.

Credit risk on trade receivables is controlled using restrictive policies for customer acceptance. Credit management is focused on mobile services. Before accepting certain new customers in this segment, the creditworthiness of prospective clients is checked. In addition, KPN keeps track of the payment performance of customers. If customers fail to meet set criteria, payment issues must be resolved before a new transaction will be entered into.

KPN's policy is to provide financial guarantees only to wholly-owned subsidiaries. As at 31 December 2020, KPN had parent guarantees and bank guarantees outstanding to third parties for various Dutch wholly-owned subsidiaries. The carrying amount of financial assets, including cash, and contract assets represents the maximum credit exposure, which amounts to EUR 1,784m as at 31 December 2020 (2019: EUR 2,082m). On 31 December 2020, the total outstanding bank guarantees amounted to EUR 7m (2019: EUR 7m), which were issued in the ordinary course of business.

See schedule of the allowances for expected losses in Note 13 for information about credit losses on trade and other receivables. There were no other credit losses.

Maturity analysis of the financial liabilities based on the remaining contractual maturities on 31 December 2020

	Borrowings				Derivatives			
€ million	Bonds and loans[1]	Interest on bonds and loans[2]	Lease liabilities	Other debt and cash collateral	Derivatives inflow (including interest)	Derivatives outflow (including interest)	Trade and other payables and accrued expenses	Total
2021	673	209	165	74	-197	151	865	1,940
2022	616	186	134	5	-183	147	-	904
2023	-	160	122	3	-655	597	-	227
2024	431	160	110	23	-149	117	-	692
2025	625	135	102	-	-133	112	-	841
2026 and further	3,939	514	404	-	-2,344	2,319	-	4,833
Contractual cash flows	**6,285**	**1,363**	**1,037**	**105**	**-3,662**	**3,443**	**865**	**9,437**

1 Includes the USD hybrid bonds with final maturity in 2073 (redemption value of EUR 465m).

2 Interest payments on the USD hybrid bonds (EUR 34m per year until the first call date in 2023) are not included. KPN may, at its discretion and subject to certain conditions, elect to defer payments of interest on these hybrid bonds. Any arrears of interest must be paid at the latest at redemption in 2073, the amount of which cannot be reliably measured because of the duration of the hybrid bonds.

Liquidity risk

Liquidity risk is the risk that KPN will not be able to meet its financial obligations associated with financial instruments as they become due. KPN's approach to managing liquidity is to ensure sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage. Some of the derivatives contain reset clauses or collateral postings at pre-agreed dates, in order to mitigate counterparty exposure during the life of the swap. These reset clauses will result in early euro settlement obligations in cash with the swap counterparty, which could lead to additional cash inflows or outflows before maturity. In order to reduce liquidity risks, the reset clauses or collateral postings are spread over different points in time.

During 2020, KPN paid net collateral of EUR 29m (2019: received EUR 107m) according to pre-agreed settlement schedules.

Available financing resources

In addition to the available cash and cash equivalents and short-term investments and cash flows from operations, KPN has committed financing resources available through its EUR 1.25bn revolving credit facility. The facility is used for general corporate purposes and does not contain any financial covenants. The facility was undrawn as of 31 December 2020 and is committed until its final maturity date of 1 July 2023.

Capital resources covenants

KPN's existing capital resources contain the following covenants as at 31 December 2020, which could trigger additional financial obligations or early redemption of the outstanding indebtedness. All senior bonds issued after 1 January 2006 (EUR 5.0bn outstanding as at 31 December 2020) contain a change of control clause. KPN may be required to early redeem if certain changes of control occur and within this change of control period (maximum of 90 days) a rating downgrade to sub-investment grade occurs. The hybrid bonds also contain a change of control clause by means of which KPN has the possibility to repurchase the hybrid bonds at par. A 5% interest step-up applies if a rating downgrade occurs during the change of control period in respect of that change of control. In addition, many of KPN's capital resources contain a covenant prohibiting KPN from entering into any amalgamation, demerger, merger, corporate restructuring or reorganization, unless prior written consent has been given by a majority of the lenders or bondholders or the resulting company assumes all of the rights and obligations with respect to the loans or bonds.

Market risk

KPN is exposed to various kinds of market risks in the ordinary course of business. These risks include foreign currency exchange rate risk and interest rate risk.

Foreign currency exchange rate risk

Foreign currency risks mainly result from settlement of international telecommunications traffic and purchase of assets and primarily consist of GBP and USD exposure. Foreign currency exchange rate risks related to bonds that are not denominated in EUR are hedged into EUR in line with KPN's hedging policies. Group companies and business operations are obliged to hedge their firm commitments and highly predictable anticipated transactions in non-functional currencies by forward exchange contracts.

Accordingly, KPN's Treasury department matches and manages the intercompany and external exposures using forward exchange contracts. No hedge accounting is applied for these hedge instruments.

As at 31 December 2020, more than 97% (2019: 98%) of cash and cash equivalents was denominated in the functional currency of the related entities. More than 99% of the net amount of trade receivables and more than 95% of the amount of trade payables was outstanding in the functional currency of the related entities as at 31 December 2020 and 2019.

Interest rate risk and interest rate profile

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate as a result of changes in market interest rates. Borrowings, derivatives, cash and cash equivalents are subject to interest rate risk. With regard to interest rate risk exposure, KPN periodically evaluates the desired mix of fixed and floating interest rate liabilities, balancing the benefit of lower interest costs vs. the variability of cash flows. Any interest rate risk exposure longer than one year is considered to be fixed. KPN may use derivative financial instruments to adjust the desired interest rate risk exposure.

As at 31 December 2020, 76% of KPN's interest-bearing gross debt (after swaps, excluding bank overdrafts) was at fixed interest rates (2019: 81%).

With a view to the existing and forecasted debt structure, KPN could enter into additional future derivatives to further adjust the mix of fixed and floating interest rate liabilities.

A sensitivity analysis as at 31 December 2020 with regard to interest rate risk on interest-bearing liabilities showed that, ceteris paribus, each adverse change in floating interest rates of 100 bps would hypothetically result in EUR 16m higher interest costs per annum (2019: EUR 13m).

Cash flow hedges

KPN carried out a sensitivity analysis as at 31 December 2020 with regard to interest rate and currency risk on the cash flow hedges. KPN applies cash flow hedge accounting on all bonds not denominated in EUR. With all other variables held constant, KPN calculated the hypothetical impact of changes in interest rates based on various scenarios. This would hypothetically result in a higher or lower value of the hedge reserve, which is included in equity attributable to equity holders. In a similar way, KPN calculated the hypothetical impact of changes in the EUR/USD rate and the EUR/GBP rate, holding all other variables constant. The results of the analysis are shown in the table below, indicating the hypothetical impact on the fair value of the cross-currency swaps (excluding the partially offsetting impact on the hedged items).

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€ million (before tax)	Change	GBP 2020	GBP 2019	USD 2020	USD 2019	Total 2020	Total 2019
Change in interest rate	+1%-point	-5	-3	1	3	-4	-
	-1%-point	5	3	-2	-4	3	-1
Change in FX rate	+10%-point	41	30	36	36	77	66
	-10%-point	-52	-38	-45	-45	-96	-84

Prospective effectiveness testing indicates that all cash flow hedges are expected to be highly effective. Consequently, the expected impact on the P&L is immaterial.

Fair value hedges

KPN carried out a sensitivity analysis on 31 December 2020 with regard to the fair value of interest rate swaps (excluding the partially offsetting impact on the hedged items):

€ million	Change	2020	2019
Change in EUR interest rates	+1%-point	-77	-88
	-1%-point	82	94

For a sensitivity analysis on interest rate risk regarding pensions, see Note 17.

Offsetting financial assets and financial liabilities

Financial assets

Financial assets subject to offsetting, enforceable master netting arrangements and similar agreements

€ million	Gross amount	Financial liabilities offset	Net amount in balance sheet	Not offset: Financial instruments/ Cash collateral	Net amount
31 December 2020					
Cash and cash equivalents	597	-	597	-	597
Derivatives	202	-	202	-15	187
Total	**799**	**-**	**799**	**-15**	**783**
31 December 2019					
Cash and cash equivalents	766	-	766	-	766
Derivatives	258	-	258	-24	234
Total	**1,024**	**-**	**1,024**	**-24**	**999**

Financial liabilities

Financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements

€ million	Gross amount	Financial assets offset	Net amount in balance sheet	Not offset: Financial instruments/ Cash collateral	Net amount
31 December 2020					
Derivatives	196	-	196	-117	79
Total	**196**	**-**	**196**	**-117**	**79**
31 December 2019					
Derivatives	140	-	140	-97	44
Total	**140**	**-**	**140**	**-97**	**44**

For the financial assets and liabilities summarized above, each agreement between KPN and the counterparty allows for net settlement of the relevant financial assets and liabilities when both parties elect to settle on a net basis.

Accounting policy: Offsetting financial assets and liabilities

Financial assets and liabilities are offset and reported on a net basis on the balance sheet only when there is a legally enforceable right to offset the recognized amounts and there is an intention either to settle on a net basis or to realize the asset and settle the liability simultaneously.

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[13] Trade and other receivables, contract assets and contract costs

[13.1] Trade and other receivables

€ million	31 December 2020 Current	31 December 2020 Non-current	31 December 2019 Current	31 December 2019 Non-current
Trade receivables	219	-	264	-
Financial receivables handsets	216	-	240	-
Sales to be invoiced	82	-	110	-
Interest to be received	18	-	24	-
Prepayments, accruals and other receivables	102	132	118	111
Total	**636**	**132**	**756**	**111**

The decrease in 2020 of trade receivables of EUR 45m mainly relates to different timing of payments from business customers, compared to 2019.

The financial receivables handsets consist of instalment payments on the handset loans, mainly issued by KPN Finance B.V.

The non-current other receivables relate for EUR 117m to cash collateral received on derivatives (2019: EUR 97m).

Sales to be invoiced include accrued income related to usage of KPN's network, which is invoiced monthly in arrears.

The carrying amounts of trade and other receivables approximate their fair value. Trade and other receivables are non-interest bearing. Trade receivables are generally on payment terms of 14-30 days. The aging of the gross trade receivables is as follows:

€ million	31 December 2020	31 December 2019
Trade receivables gross		
Amounts undue	151	169
Past due 0–90 days	55	64
Past due 91–360 days	16	19
More than one year	18	33
Total trade receivables gross	**240**	**284**
Provision for credit risk exposure	20	20
Total trade receivables net	**219**	**264**

[13.2] Contract assets and contract costs

€ million	31 December 2020 Current	31 December 2020 Non-current	31 December 2019 Current	31 December 2019 Non-current
Contract assets	35	2	32	1
Costs to obtain a contract	-	16	-	31
Costs to fulfill a contract	13	-	5	-
Total	**49**	**18**	**37**	**32**

Contract assets

A contract asset is recognized if the earned consideration is conditional. This includes:

- Deferred discounts invoiced to customers if the discount is only granted in the first period of the service contract and the discount is recognized on a straight-line basis over the contract term
- Installation services and hardware delivered at the start of the contract if the amount of revenue recognized is higher than the amounts charged upfront
- Transition projects for business customers when the revenue recognized is higher than the amounts invoiced for the transition phase

Upon invoicing, the amounts recognized as contract assets are reclassified to trade receivables.

Contract costs

Contract costs include:

- Transaction-related dealer fees paid to acquire or retain mobile subscribers
- Costs incurred during the transition phase of projects for business customers to be able to deliver exploitation services that are not treated as a separate performance obligation. The costs are capitalized as costs to fulfill a contract and expensed

in principle on a straight-line basis over the remaining contract term in which the exploitation services are delivered.

[13.3] Allowances for expected credit losses

Movement schedule of the allowances for expected credit losses:

€ million	Trade receivables	Financial receivables handsets	Contract assets	Total
Balance at 1 January 2019	**30**	**5**	**1**	**36**
Additions/releases P&L	16	-2	-	14
Usage	-25	-	-	-25
Balance at 31 December 2019	**20**	**4**	**-**	**24**
Additions/releases P&L	14	-1	-	13
Usage	-14	-	-	-13
Balance at 31 December 2020	**20**	**3**	**1**	**24**

Accounting policy: Trade and other receivables, contract assets and contract costs

Trade and other receivables and contract assets classify as financial assets and are measured at amortized cost if both of the following conditions are met:

- The financial asset is held within a business model with the objective to hold financial assets in order to collect contractual cash flows
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding

Financial assets at amortized cost are subsequently measured using the effective interest method less provisions for impairment. An allowance for expected credit losses is recorded for all financial assets and contract assets at initial recognition. This allowance is regularly updated.

The amortized cost is calculated by taking into account any discounts or premiums on acquisition and transactions costs.

The effective interest rate amortization is recognized under finance income or finance costs.

See Note 4 for the accounting policy regarding contract costs.

[14] Cash and cash equivalents

Cash and cash equivalents consist of highly liquid instruments with initial maturities of three months or less, including balances on bank accounts, bank deposits and money market funds.

€ million	31 December 2020	31 December 2019
Cash	253	292
Short-term bank deposits and money market funds	344	475
Classified as held for sale	-	-1
Total cash and cash equivalents	**597**	**766**

The decrease in cash and cash equivalents was mainly the result of EUR 765m free cash flow and EUR 39m of net funding proceeds, offset by EUR 529m of dividends paid, a EUR 416m spectrum payment and a EUR 29m of net outflow of cash collateral on derivatives.

Accounting policy: Cash and cash equivalents

Cash and cash equivalents comprise cash in hand, deposits held at call with banks, AAA-rated prime money market funds and other short-term highly liquid investments with original maturities of three months or less. Bank overdrafts are included in borrowings in current liabilities.

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[15] Non-current assets, liabilities and disposal groups held for sale

€ million	31 December 2020	31 December 2019
Intangible assets	-	15
Property, plant and equipment	-	-
Other non-current assets	-	16
Current assets	-	13
Fair value adjustment of disposal group	-	-
Total assets of disposal groups held for sale	**-**	**44**
Non-current liabilities	-	-7
Current liabilities	-	-22
Total liabilities directly associated with the non-current assets and disposal groups classified as held for sale	**-**	**-30**

As at 31 December 2019, KPN Consulting B.V. and an equity investment accounted for using the equity method were classified as held for sale.

On 1 April 2020, KPN completed the sale of KPN Consulting B.V. to Cegeka N.V.. KPN Consulting B.V. had been classified as held for sale since 31 December 2019. KPN Consulting B.V. was part of KPN's Business segment and did not qualify as a discontinued operation, therefore the financial results of KPN Consulting continued to be included in KPN consolidation until completion of the sale.

During 2019, KPN announced and completed the sale of NLDC B.V., Argeweb B.V. and its international network. See Note 21 for information on these transactions.

Discontinued operations

iBasis Inc. had been classified as disposal group held for sale since 7 March 2018. The sale was completed on 8 February 2019. Although iBasis has been eliminated from the segment disclosures, the profit/loss (-) for the period from discontinued operations in the Consolidated Statement of Profit or Loss and cash flows from discontinued operations include results related to iBasis until 8 February 2019.

The following table summarizes the results of iBasis included in the Consolidated Statement of Profit or Loss as 'profit/loss for the period from discontinued operations':

€ million	2020	2019
Revenues and other income	-	36
Operating expenses	-	-35
Finance income and expenses	-	-
Share of the loss of associated and joint ventures	-	-
Income taxes	-	-
Result for the period from discontinued operations before impairment and tax effects resulting from the transaction	**-**	1
Impairment disposal group	-	-
Realized cumulative currency translation adjustment	-	12
Profit/loss (-) for the period from discontinued operations related to iBasis	**-**	**13**

Some results (and cash flows) from discontinued operations may continue to arise following the unwinding of the remaining positions of iBasis (sold in 2019), BASE Company (sold in 2016) and E-Plus (sold in 2014). The result from discontinued operations of EUR nil (2019: EUR 12m) includes a positive result of EUR 1m related to BASE Company (2019: EUR -1m), a negative result of EUR -1m related to E-Plus (2019: EUR nil) and EUR nil related to iBasis (2019: EUR 13m).

The profit from discontinued operations in 2019 (EUR 12m) includes recycled currency translation gains of EUR 12m (fully related to iBasis), with an offsetting gain in other comprehensive income, resulting in a total comprehensive income from discontinued operations of nil.

Cash flow from discontinued operations

€ million	2020	2019
Cash flow from operating activities	-1	1
Cash flow from investing activities	-	35
Cash flow from financing activities	-	-
Total net cash (outflow)/inflow from discontinued operations	**-1**	**37**

Upon completion of the sale of iBasis on 8 February 2019, KPN received a net cash consideration of EUR 36m, included in the cash flow from investing activities from discontinued operations. Transaction costs amount to EUR 5m and are included in the cash flow from operating activities from discontinued operations.

Accounting policy: Non-current assets and disposal groups held for sale

Non-current assets and disposal groups classified as held for sale as well as liabilities directly associated with them are stated at the lower of carrying amount (book value) and fair value less costs of disposal if their carrying amount is recovered principally through a sale transaction rather than through continuing use. If fixed assets are transferred to held for sale, depreciation and amortization ceases. A disposal group classifies as a 'discontinued operation' based on its significance to the KPN Group.

[16] Equity

Limitations in distribution of shareholders' equity

Total distributable reserves as at 31 December 2020 amounted to EUR 2,304m which includes the perpetual capital securities (2019: EUR 2,173m). For further details on non-distributable reserves, see Note C to the Corporate Financial Statements.

Share capital

Authorized capital stock totals EUR 720m divided into nine billion ordinary shares of EUR 4ct each and nine billion preference shares B of EUR 4ct each. At 31 December 2020, a total of 4,202,844,404 ordinary shares were outstanding and fully paid-in. Dutch law prohibits KPN from casting a vote on shares KPN holds (treasury shares). The ordinary shares and preference shares B carry the right to cast one vote each. The ordinary shares are registered or payable to the bearer.

Shareholders may request the company to convert their registered shares to bearer shares, but not vice versa.

€ million, unless indicated otherwise	Number of treasury shares	Treasury shares reserve	Hedge reserve	Currency translation reserve[1]	Total Other reserves
Balance at 1 January 2019	**7,300,454**	**-83**	**-355**	**40**	**-398**
Movements recorded in OCI (net)	-	-	115	-21	94
Sold treasury shares	-370,531	4	-	-	4
Balance at 31 December 2019	**6,929,923**	**-79**	**-240**	**19**	**-300**
Movements recorded in OCI (net)	-	-	84	3	87
Sold treasury shares	-1,320,491	14	-	-	14
Balance at 31 December 2020	**5,609,432**	**-65**	**-156**	**22**	**-199**

1 In 2019, EUR 12m of cumulative currency translation gains were recycled to the profit or loss and included in the book result on the sale of iBasis (see Note 15).

The additional paid-in capital is exempt from Dutch tax up to an amount of EUR 9,282m at 31 December 2020 (2019: EUR 9,282m).

Hedge reserve

€ million	31 December 2020	31 December 2019
Effective portion cash flow hedges[1]	-87	-170
Amortizable part[2]	-122	-137
Hedge reserve	**-209**	**-307**
Tax effect	53	67
Hedge reserve, net of tax	**-156**	**-240**

1 The effective portion of cash flow hedges will be recognized in the P&L in line with the maturities of the related derivatives (see Note 12.3).

2 The amortizable part of the hedge reserve is amortized over the remaining life of the related bonds (between 2016 and 2030). The impact on the P&L will be EUR 15m in 2021.

Treasury shares reserve

KPN purchased shares in its own capital for delivery upon exercise of share options by management and personnel under the share option and performance share plans (Note 5). Votes on purchased shares may not be cast and do not count determining the number of votes required at a General Meeting of Shareholders. In 2020 and 2019, no shares were purchased for the share option and performance share plans. In 2020 and 2019, shares were sold in connection with vesting grants of the KPN Restricted Share Plan (see Note 5).

Treasury shares are accounted for at cost, representing the market price on the acquisition date. The proceeds at delivery of the treasury shares are recognized directly in the other reserves.

Equity attributable to holders of perpetual capital securities

On 8 November 2019, KPN issued a EUR 500m hybrid bond with a 2.00% coupon and a perpetual maturity. This bond is classified as equity in the Consolidated Statement of Financial Position and valued at net proceeds (see Note 12.2).

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Foundation Preference Shares B KPN

KPN has granted a call option, which is not limited in time, to the Foundation Preference Shares B KPN (the Foundation) to acquire preference shares B. For further information about the Foundation, see chapter 'Corporate governance'.

In KPN's opinion, the call option does not represent a significant fair value due to the fact that the preference shares B, issued after exercise of the call option, bear interest linked to Euribor.

Dividend per share

At the AGM of Shareholders on 14 April 2021, a final dividend of EUR 8.7ct per share will be proposed in respect of 2020. In August 2020, KPN paid an interim dividend in respect of 2020 of EUR 4.3ct per share, in total EUR 180m, bringing the total regular dividend in respect of 2020 to EUR 13.0ct per share (in total EUR 365m).

These Financial Statements do not reflect the proposal for the remaining dividend payable. In April 2020, KPN paid a final dividend of EUR 8.3ct per share in respect of 2019, in total EUR 348m. The total dividend in respect of 2019 was EUR 12.5ct per ordinary share.

[17] Retirement benefits

Retirement benefits are provided through a number of defined contribution plans and funded and unfunded defined benefit plans. The most significant plans are described below.

KPN main pension plan

KPN's main pension plan covers employees in the Netherlands who are subject to KPN's collective labor agreement and employees with an individual labor agreement, and is externally funded through Stichting Pensioenfonds KPN. This plan is a collective defined contribution pension plan and is accounted for as a defined contribution plan because KPN has no other obligation than to pay the annual contribution which is a fixed percentage of the pensionable base for a period of three years as of 1 January 2020. After this three-year period, the annual contribution will be reassessed based on a fixed and agreed method in which no reflection to past service or the funded status of the fund is included.

Getronics UK and US

The Getronics US and UK operations were divested in 2008 and 2012, respectively. The closed and frozen pension plans of the former US and UK operations remained with KPN and are accounted for as a defined benefit plan. The assets of the plans are held separately from KPN in independently administered funds except for two supplemental executive retirement plans in the US. The UK plan operates under the regulations of the UK Pensions Regulator and the main US plan under the provisions of the Employee Retirement Income Security Act (ERISA). The deficit in the plans' funding must be recovered by the investment returns in the plans' assets and contributions by KPN. The pension plans in the UK and US expose KPN to a number of risks which can have an impact on the future contributions by KPN and the liability recorded in its balance sheet. The most significant risks are summarized below:

- Asset volatility risk: the pension plans' assets are predominantly invested in equity securities and other return seeking assets, so the plans' funding levels are exposed to equity market risks. The spread of COVID-19 in 2020 for example caused great volatility.
- Interest rate risk: a decrease in interest rates will increase the plans' liabilities, although this will be partially offset by an increase in the value of the plans' bond holdings.
- Inflation risk: the indexation of the accrued benefits in the UK is unconditional and is based on a combination of consumer and retail price indices, so the UK plan is exposed to inflation risk.
- Life expectancy risk: the plans provide benefits for the life of the members, so increases in life expectancy will result in an increase in the plans' liabilities.

In the UK, guaranteed minimum pension (GMP) is a portion of pension that was accrued by individuals who were contracted out of the state second pension prior to 6 April 1997. At present there is an inequality of benefits between male and female members who have GMP. The High Court in the UK ruled in 2018 that equalization will be required for affected defined benefit pension schemes. A number of options can be used to equalize. The estimated cost of equalization as at 31 December 2020 and 2019 for the UK plan is EUR 6m, which has been recognized as a past service cost in 2018. However, the cost to the UK plan for equalizing heavily depends on a complex interaction between the benefit design and membership profile as well as the method used to equalize, which must be determined by the trustees.

Other

KPN has a number of other funded (insured) plans in the Netherlands and an unfunded transitional early retirement plan (provision of EUR 7m as at 31 December 2020, last payment expected in 2021), which are all closed to new entrants.

Furthermore, with regard to the insured plans, based on Dutch law, KPN could be required to make contributions if participants of these plans require a value transfer to another pension fund or insurer. However, the risk related to these value transfers is limited and therefore no provision has been recognized for these plans.

Provisions for retirement benefit obligations

The provisions for retirement benefit obligations consist of the net defined benefit liability regarding pension plans and early retirement plans, which are accounted for as defined benefit plans as described above. See the table on the next page for a specification of the balance sheet position.

€ million	Defined benefit obligation[1] 2020	2019	Fair value of assets 2020	2019	Net defined benefit liability (asset) 2020	2019
Balance at 1 January	**670**	**636**	**-482**	**-430**	**188**	**206**
Included in profit or loss						
Operating expense[2]	1	-5	3	9	4	4
Interest expense (income)	14	19	-10	-13	4	6
Included in OCI						
Remeasurements loss (gain):						
Actuarial loss (gain)[3]	53	40	-	-	53	40
Return on plan assets excluding interest income	-	-	-42	-48	-42	-48
Effect of movements in exchange rates	-38	21	27	-14	-11	7
Total	**15**	**61**	**-15**	**-62**	**-**	**-1**
Other						
Employer's contribution	-	-	-45	-28	-45	-28
Benefits paid	-49	-42	49	42	-	-
Balance at 31 December	**651**	**670**	**-499**	**-482**	**152**	**188**

1 The measurement date for all defined benefit plans is 31 December.

2 Service costs were EUR 1m and administrative costs EUR 3m in both 2020 and 2019.

3 The actuarial loss (gain) in 2020 and 2019 consists of demographic assumptions (EUR -2m and EUR -14m), financial assumptions (EUR +56m and EUR +59m) and experience adjustments (EUR -1m and EUR -5m).

Defined benefit obligations

Actuarial assumptions

The key actuarial assumptions used in the calculation of the defined benefit obligations are as follows:

	31 December 2020			31 December 2019		
	Getronics UK	Getronics US	Other	Getronics UK	Getronics US	Other
Discount rate (%)	1.4	2.3	0.6	2.0	3.1	1.1
Expected salary increases (%)	N/a	N/a	2.0	N/a	N/a	2.0
Expected benefit increases/indexation (%)	2.1-2.8	N/a	0.0	2.1-2.7	N/a	0.3
Life expectancy for pensioners at retirement age:						
Male	22.2	20.5	21.4	24.2	20.6	21.8
Female	24.2	22.4	23.4	26.2	22.6	23.7

The discount rate is based on yield curves of AA corporate bonds with maturities equal to the duration of the benefit obligations and in the applicable currency. As at 31 December 2020, the (weighted) average duration of the defined benefit obligation was 14 years.

Assumptions regarding life expectancy are based on published statistics and mortality tables that include allowances for future improvement in mortality. The mortality table used in the Netherlands is the projected table AG 2020 which includes projected improvement rates varying by year of birth, corrected for fund specific circumstances. The mortality table used in the UK is the 92% of SAPS S2PXA tables CMI 2019 projection with a 1.25% long-term improvement, and in the US the Pri-2012 Total Dataset with Scale MP-2020. The life expectancy at the age of 65 is expected to increase in the next 20 years by between one and two years in the UK and the US.

Sensitivity analysis

The following table shows the approximate impact on the defined benefit obligation of a change in the key actuarial assumptions of 0.5% and in the case of life expectancy of a change of one year.

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€ million	31 December 2020 Increase	31 December 2020 Decrease	31 December 2019 Increase	31 December 2019 Decrease
Discount rate	-42	46	-43	47
Expected salary increases	-	-	-	-
Expected benefit increases	18	-21	23	-21
Life expectancy	30	-30	29	-29

Plan assets

The assets of all defined benefit pension plans as at 31 December 2020 and 2019 comprise of:

	31 December 2020	31 December 2019
Quoted in active markets:		
Equity securities	19%	22%
Fixed-income securities[1]	35%	35%
Real estate[2]	0%	0%
Commodities[3]	1%	1%
Other	3%	3%
Other:		
Equity securities	8%	6%
Fixed-income securities[1]	11%	11%
Real estate[2]	2%	3%
Other[4]	20%	19%

1 Including inflation-linked bonds (per Standard & Poor's rating).

2 As at 31 December 2020, none of the investments in real estate were located in Europe.

3 Includes investment funds which invest in financial instruments related to commodities such as energy, agricultural products and precious metals.

4 Mainly insurance contracts.

Strategic investment policies

The strategic investment portfolios of the defined benefit plans (before hedging) at year-end 2020 were as follows:

€ million	Getronics UK	Getronics US	Other plans
Equity securities	35%	45%	0%
Fixed-income securities (including inflation-linked bonds)	35%	25%	0%
Other	30%	30%	100%
Total	**100%**	**100%**	**100%**

In both the UK and the US, a roadmap is in place to move to more fixed-income exposure as the funded status improves. The Getronics UK pension fund does not hedge interest rate risks, currency risks and equity risks. The Getronics US pension fund does not hedge currency and equity risks, but partially hedges interest rate risk. As the pension funds mainly invest in the global investment funds, a minor part of these investments could be related to KPN equities. The pension funds do not have direct investments in KPN equities.

Expected contributions and benefits

In 2020, the total employer's contributions and benefit payments for all defined benefit and defined contribution plans amounted to EUR 124m, consisting of EUR 80m employer's premiums for defined contribution plans, EUR 23m contributions for funded defined benefit plans and EUR 21m payments for unfunded plans.

The amount of employer's contributions in 2021 for the remaining defined benefit pension plans is estimated to be EUR 13m for the funded plans and EUR 7m for the unfunded plans. The total amount of employer's premiums to be paid in 2021 for the defined contribution plans is estimated to be EUR 79m.

Accounting policy: Provisions for retirement benefit obligations (pension obligations)

The liability recognized in respect of all pension and early retirement plans that qualify as a defined benefit obligation is the present value of the defined benefit obligation less the fair value of plan assets. KPN uses actuarial calculations (projected unit credit method) to measure the obligations and the costs. For the calculation, actuarial assumptions are made about demographic variables (such as employee turnover and mortality) and financial variables (such as future indexation and the discount rate). The discount rate is determined by reference to market rates. These are interest rates of high-quality corporate bonds that are denominated in the currency in which the benefit will be paid and that have terms to maturity approximating the terms of the related liability. A net defined benefit asset may arise where a defined benefit plan has been overfunded. KPN recognizes a net defined benefit asset in such a case only when future economic benefits are available to KPN in the form of a reduction in future contributions or a cash refund. Actuarial gains and losses are recognized immediately in OCI.

Past service costs, curtailments and settlements are recognized immediately in the P&L.

The amount of pension costs included in operating expenses with respect to defined benefit plans consists of service cost, past service costs, curtailments and settlements and administration costs. Net interest on the net defined benefit liability is presented as part of finance costs.

For pension plans that qualify as a defined contribution plan, KPN recognizes contributions as an expense when an employee has rendered service in exchange for those contributions.

[18] Provisions for other liabilities and charges

€ million	31 December 2020	31 December 2019
Restructuring provision	19	42
Asset retirement obligations	94	44
Other provisions	76	82
Total provisions for other liabilities and charges	**189**	**168**
of which: non-current	151	105
of which: current	**38**	**63**

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Statement of changes in provisions

€ million	Personnel	Contractual	Total restructuring	Asset retirement obligation	Other provisions[1]	Total provisions
Balance at 1 January 2019	**58**	**2**	**61**	**51**	**77**	**188**
of which: current portion restated	**58**	**2**	**60**	**4**	**13**	**78**
Additions	111	4	115	-	13	128
Releases	-	-	-	-1	-3	-4
Usage	-129	-4	-133	-4	-5	-142
Other movements, incl. discontinued operations	-	-	-	-2	-	-2
Balance at 31 December 2019	**40**	**2**	**42**	**44**	**82**	**168**
of which: current portion restated	**40**	**1**	**40**	**3**	**20**	**63**
Additions	36	-	36	52	4	92
Releases	-	-	-	-1	-	-1
Usage	-58	-	-58	-2	-11	-71
Other movements, incl. change in consolidation	-	-	-	-	1	1
Balance at 31 December 2020	**18**	**2**	**19**	**94**	**76**	**189**
< 1 year	**18**	**-**	**18**	**4**	**17**	**38**
1-5 years	**-**	**1**	**1**	**15**	**4**	**20**
> 5 years	**-**	**-**	**-**	**75**	**55**	**131**

1 Includes provisions for claims and litigations, onerous contracts, warranties and employee benefits.

Restructuring provisions

Termination benefits are payable when employment is terminated before the normal retirement date, or whenever an employee accepts redundancy in exchange for these benefits.

Termination benefits are recognized when KPN is demonstrably committed either to terminating the employment according to a detailed formal plan without the possibility of withdrawal or to providing termination benefits as a result of an individual and accepted offer made to encourage redundancy. Benefits falling due more than 12 months after 31 December are discounted to present value.

Other long-term employee obligations include jubilee or other long-service employee benefits, long-term disability benefits and, if they are not fully payable within 12 months after the end of the period, bonuses and deferred compensation. The expected costs of these benefits are accrued over the period of employment using an accounting method similar to that for defined benefit pension plans, except that actuarial gains and losses and past-service costs are recognized immediately in the P&L.

Asset retirement obligations

The provision for asset retirement obligations (ARO) is based on assumptions of the estimated costs of removal, discount rate and estimated period of removal, which vary per type of asset. In 2020, EUR 47m was added to ARO provision for the decommissioning costs of the radio sites because the actual costs are considerably higher, partly due to the fact that the new radio site equipment is heavier and bigger. The increase in the ARO provision is recognized fully in the balance sheet as activated asset retirement costs, which is included in plant and equipment.

As defined in the Telecommunications Act, the obligation for landlords to tolerate cables terminates as soon as those cables have been idle for a continuous period of 10 years. Because the date when the cables will become idle is uncertain and KPN is not able to predict whether and when a landlord will place a request for removal, KPN is not able to make a reliable estimate of the impact and therefore no provision was recognized at 31 December 2020 nor at 31 December 2019.

Accounting policy: Provisions for other liabilities and charges

Provisions for asset retirement obligations, restructuring costs and legal claims are recognized when KPN has a present legal or constructive obligation as a result of past events and it is more likely than not that an outflow of resources will be required to settle the obligation and the amount can be reliably estimated.

Provisions are measured at the present value of management's best estimate of the expenditure required to settle the present obligation at balance sheet date. The discount rate used to determine the present value reflects current market assessments of the time value of money and the risks specific to the liability.

[19] Leasing

Right-of-use assets

€ million	Mobile network	Fixed network & data centers	Real estate	Vehicles	Other	Total
Accumulated cost	757	304	544	156	4	1,766
Accumulated depreciation & impairment	-355	-186	-267	-77	-3	-888
Balance as at 1 January 2019	**402**	**119**	**278**	**79**	**1**	**878**
Additions	36	-	2	34	-	73
Remeasurement & lease modifications	121	4	-1	-3	-	121
Depreciation	-53	-15	-36	-37	-1	-142
Impairments	-	-	2	-	-	2
Change in consolidation[1]	-	-77	-	-8	-	-85
Closing net book value	**506**	**30**	**245**	**64**	**1**	**847**
Accumulated cost	906	138	510	137	4	1,695
Accumulated depreciation & impairment	-400	-108	-265	-72	-3	-848
Balance as at 31 December 2019	**506**	**30**	**245**	**64**	**1**	**847**
Additions	39	2	1	31	-	74
Remeasurement & lease modifications	76	2	-6	-4	-	70
Depreciation	-55	-11	-35	-31	-1	-132
Impairments	-	-	-	-	-	-
Closing net book value	**566**	**23**	**205**	**61**	**1**	**857**
Accumulated cost	995	119	493	137	4	1,749
Accumulated depreciation & impairment	-429	-96	-288	-76	-3	-892
Balance as at 31 December 2020	**566**	**23**	**205**	**61**	**1**	**857**
Total estimated lease term at commencement of a lease (in years)	5-15	5-20	5-20	5-7	<5	

1 The change in consolidation in 2019 relates to the sale of NLDC B.V. (data centers) and the classification as held for sale of KPN Consulting B.V. (vehicles).

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Lease liabilities

€ million	Mobile network	Fixed network & data centers	Real estate	Vehicles	Other	Total
Non-current lease liability	377	121	282	47	-	827
Current lease liability	66	21	33	28	-	149
Balance as at 1 January 2019	**443**	**143**	**315**	**75**	**1**	**976**
Additions	36	-	2	34	-	73
Remeasurement & lease modifications	120	4	-3	-3	-	119
Interest	15	5	8	1	-	28
Redemptions	-60	-24	-46	-37	-1	-168
Change in consolidation[1]	-	-89	-	-8	-	-97
Closing net book value	**554**	**38**	**276**	**61**	**1**	**930**
Non-current lease liability	477	26	244	37	-	785
Current lease liability	77	12	32	24	-	145
Balance as at 31 December 2019	**554**	**38**	**276**	**61**	**1**	**930**
Additions	37	3	1	31	-	73
Remeasurement & lease modifications	75	2	-7	-2	-	68
Interest	13	1	7	1	-	22
Redemptions	-61	-17	-45	-32	-1	-156
Closing net book value	**618**	**27**	**232**	**58**	**1**	**937**
Non-current lease liability	531	19	202	35	-	787
Current lease liability	88	9	30	23	-	150
Balance as at 31 December 2020	**618**	**27**	**232**	**58**	**1**	**937**

1 The change in consolidation in 2019 relates to the sale of NLDC B.V. (data centers) and the classification as held for sale of KPN Consulting B.V. (vehicles).

The redemptions reflect the total payments made during the year for the lease fees included in the lease liability. The redemption consists of the repayments of the lease liabilities which are presented in the cash flow from financing activities (2020: EUR 135m, 2019: EUR 141m) and the interest paid during the year (2020: EUR 22m, 2019: EUR 28m) which is part of the cash flow from operating activities.

The maturity analysis of the lease liabilities can be found in Note 12.4.

KPN's lease portfolio consists of mobile network (mostly site rentals and mobile towers), fixed network & data centers (technical buildings), real estate (offices and shops), vehicles and some other leased assets.

The following amounts are recognized in the profit or loss:

€ million	2020	2019
Depreciation right-of-use assets	-132	-142
Impairment (-) or impairment reversal right-of-use assets	-	1
Gain or loss (-) on early terminations	3	3
Total depreciation & impairments presented in the P&L	**-130**	**-138**
Interest on lease liabilities	-22	-28
Total amount recognized in profit or loss	**-152**	**-165**

In 2020, KPN entered into a sale and leaseback transaction for one of its technical buildings. This transaction resulted in a gain of EUR 3m, recognized in other income. The leaseback is limited to a period of five years. The impact on the lease liability and right-of-use asset (fixed network) was limited.

The expenses related to short-term vehicle leases (included in employee expenses) are not material. KPN does not apply the low-value exemption and does not have contracts with variable lease payments other than variable lease payments dependent on an index or a rate.

Most of KPN's lease contracts include extension (renewal) or termination options. KPN exercises significant judgement in determining whether these options are reasonably certain to be exercised (see Note 2). The assessments are updated annually or when a significant change in the economic circumstances occurs. Periods covered by renewal options deemed reasonably certain or early termination options that are reasonably certain not to be exercised are included in the total lease liability.

A significant number of KPN's contracts have an unlimited number of extension options. Only those deemed reasonably certain are included in the lease term and therefore the lease liability. A reliable estimate of the potential future lease payments related to periods beyond the lease terms reflected on the balance sheet cannot be provided. This affects mostly the mobile and fixed network, as well as real estate. Vehicles are generally returned by the end of their term.

KPN as a lessor

KPN acts as a lessor in a limited number of real estate, mobile site contracts and some specific types of customer premises equipment, all classified as operating leases. These lessor contracts are not material to KPN Group, individually nor in aggregate. The terms are 1-10 years. All leases include a clause to enable upward revision of the lease fees (annual indexation). Rental income recognized in 2020 amounted to EUR 3m (2019: EUR 3m). The future minimum lease receivable under the non-cancellable operating leases as at 31 December 2020 is EUR 9m (31 December 2019: EUR 5m).

Accounting policy: Leases

KPN as lessee

Lease liabilities

At the commencement date of a lease (i.e. the date on which the underlying asset of the lease is available for use by KPN), KPN recognizes a lease liability measured at the present value of future lease payments to be made over the term of the lease, This includes fixed fees (including in-substance fixed payments), any lease incentives (such as rent-free periods or fee discounts), variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. KPN does not have purchase options to be taken into account. Penalties for early termination of a lease are not included when KPN is reasonably certain that the related early termination will not take place.

All contracts of KPN that contain variable lease payments depend on a consumer price index or a rate. However, should other types of fees occur, these variable fees will be accounted for in the operating expenses.

After the commencement date, the lease liabilities increase due to the accrual of interest and decrease due to the payments of the fees due. The lease liabilities are remeasured when a change occurs in the fees due, the lease term deemed reasonably certain and/or changes to the scope of a lease. Upon remeasurement of the lease liability of a contract, the applied discount rate (incremental borrowing rate) is revised unless the remeasurement relates to a fee change following a change in consumer price index or rate.

The total lease liability recognized is split into a non-current and a current portion. The current lease liabilities reflect only the part of the payments due within one year related to the repayment of the total lease liabilities.

Lease term

KPN determined the lease term as the non-cancellable term of a contract together with any periods covered by an option to extend the lease if it is reasonably certain to be exercised, or any periods covered by an option to terminate the lease if it is reasonably certain not to be exercised.

KPN applies judgement when assessing if the use of an option is reasonably certain. Factors included are KPN's asset and network strategy, technological developments and other circumstances that may impose an economic incentive affecting the expected use of an underlying asset. For vehicles, renewal options are not included in the initial assessment of the lease term as KPN's policy prescribes the return of vehicles to the lessor at the end of the lease term.

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After the commencement of a lease, KPN reassesses the lease term if there is a significant event or change in circumstances that is within KPN's control and effects KPN's ability to exercise or not to exercise the option to renew or to terminate a lease.

Incremental borrowing rate

The implicit discount rates of KPN's leases are not readily available, with the exception for vehicles, KPN applies its applicable incremental borrowing rate to determine the discounted value of the lease liabilities. Upon modification of a lease, the lease liability is remeasured using the applicable discount rate at the date of the remeasurement. KPN's incremental borrowing rates are mainly determined using a risk-free rate combined with a spread reflecting KPN's credit risk. The applicable rate per contract is primarily dependent on the total expected term of a lease at its commencement date (new leases) or the total expected remaining lease term in case of a remeasurement of a lease.

Right-of-use assets

Right-of-use assets are recognized at commencement date of a lease as counterpart to the lease liabilities. The right-of-use assets are measured at cost, less accumulated depreciation and impairment losses and adjusted for any remeasurement in the corresponding lease liabilities. The cost of the right-of-use assets includes the initially recognized amount of the corresponding lease liabilities, initial direct costs incurred in obtaining the lease (if any) and lease payments made at or before commencement of the lease. Lease incentives received are deducted from the carrying value of the right-of-use assets.

The right-of-use assets are depreciated on a straight-line basis over the shorter of the estimated useful life of the underlying asset and the lease term. Right-of-use assets are subject to impairment.

Short-term leases and leases of low-value assets

KPN does not apply the practical expedients for low-value leases (leases of an underlying asset with a value of less than EUR 5,000) and short-term leases (leases with a total expected term of less than 12 months) except for short-term rental vehicles.

Regarding vehicle leases, KPN applies the practical expedient not to separate non-lease components from lease components. Therefore, the full monthly lease fees are reflected in KPN's Statement of Financial Position. For all types of leased assets, electricity and fuel-related expenses remain part of operating expenses.

KPN as lessor

Leases where KPN as lessor retains a significant portion of the risk and rewards of ownership of the lease asset are classified as operating leases. The assets remain on the balance sheet and are depreciated over the assets' useful life.

Lease payments received from lessees are recognized as revenue on a straight-line basis over the lease period.

If KPN acts as a lessor in a finance lease, the transaction is accounted for as a normal sale and the present value of the lease payments is recognized as a receivable. The difference between the gross receivable and the present value of the receivable is deferred and recognized as interest over the lease term.

[20] Contract liabilities, trade and other payables

Trade and other payables

	31 December 2020		31 December 2019	
€ million	Current	Non-current	Current	Non-current
Trade payables	531	-	550	-
Accrued interest	88	-	121	-
Accrued expenses	283	-	380	-
Social security and other taxes payable	187	-	192	-
Other payables	39	12	13	12
Total	**1,128**	**12**	**1,256**	**12**

Some of KPN's suppliers participate in KPN's Supplier Finance Programs, giving them the opportunity to receive earlier payment (from a financial institution) without modifying KPN's payment terms. The payment terms do not deviate from the terms agreed with suppliers who do not participate in these programs. KPN in 2020 also agreed a new Supplier Finance Program that provides KPN with an extended payment period. As the revised payment terms for this supplier do not materially deviate from customary payment terms in the industry, the relating liabilities are classified as trade and other payables, and payments are classified as operating cash flow. The Supplier Finance Programs do not impact covenants or KPN's access to (future) borrowings from financial institutions. As at 31 December 2020, the total amount of payables under the Supplier Finance Programs amounted to EUR 162m (2019: EUR 126m).

Contract liabilities

	31 December 2020		31 December 2019	
€ million	Current	Non-current	Current	Non-current
Contract liabilities	209	136	228	184
Of which variable considerations	-	102	-	147

The contract liabilities primarily relate to the consideration received from customers before satisfying performance obligations, such as advances for subscriptions and airtime. KPN recognizes a contract liability for postpaid and prepaid bundled minutes based on the actual usage of these bundles per proposition. The utilization percentage, which is the number of credits used as a percentage of total credits granted for that period, is monitored periodically and is based on the historical data.

For the transition phase of projects for business customers which are treated as a separate performance obligation a contract liability is recognized if the amount invoiced is higher than the amount of revenue allocated to these projects. For the mobile connection fees charged to the customer a contract liability is recognized if the connection is not treated as a separate performance obligation.

Contract liabilities are also recognized for variable considerations which are not deemed highly probable. This applies to the billed roaming and MTA tariffs that are regulated and imposed retrospectively and to VAT related to certain mobile consumer propositions.

The introduction of new mobile consumer propositions in August 2016 caused a change in the VAT calculation methodology, resulting in a lower remittance of VAT from August 2016 until December 2018. KPN's view is not shared by the Dutch tax authorities. KPN concluded, based on the applicable regulations, that a positive outcome of this dispute is not highly probable and therefore recorded a contract liability for the VAT amount. A potentially negative outcome of a forthcoming court procedure will lead to a negative cash flow in future years.

In 2020, EUR 17m revenue was recognized from variable considerations related to performance obligations satisfied (or partially satisfied) in previous years (in 2019: EUR 20m).

The year's revenues include the current portion of the contract liability balance at the beginning of the year.

Accounting policy: Contract liabilities, trade and other payables

Trade and other payables classify as 'borrowings' within KPN's financial liabilities. For the accounting policy, see Note 12

For the accounting policy regarding contract liabilities, see Note 4.

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[21] Business combinations and disposals

Disposals

€ million	2020	2019
Amount of assets and liabilities in the subsidiaries or businesses over which control is lost:		
Property, plant and equipment	-	54
Intangible assets	5	15
Right-of-use assets	9	78
Other non-current assets	4	6
Trade and other receivables, prepayments and accrued income	12	14
Net cash and cash equivalents	2	3
Non-current liabilities	-5	-89
Trade and other payables and accrued expenses	-17	-31
Total net assets	**11**	**49**
Transaction and migration costs	**2**	**10**
Cash consideration[1]	25	260
Total consideration	**25**	**260**
Book gain	**13**	**200**

1 The cash consideration in 2020 includes EUR 2m final settlement of sold subsidiaries in 2019.

Changes in consolidation in 2020

On 1 April 2020, KPN completed the sale of KPN Consulting B.V. to Cegeka N.V. KPN Consulting was part of KPN's Business segment and was classified as held for sale as of 31 December 2019. The transaction resulted in a book gain of EUR 11m, recognized as other income (see Note 4.2). The gain is income tax exempt (see Note 8).

On 2 November 2020, KPN acquired a fiber network with 5,900 addresses in a rural area from the cooperative Sterk Midden-Drenthe, together with the contracts with internet service providers, the business activities and the employees. The transaction is accounted for as a business combination because the assets acquired and liabilities assumed are considered to constitute a business, as KPN acquired business activities of a network operator including inputs and substantive processes applied to those inputs that provide network services to customers.

Purchase price allocation of the acquisition

€ million	2020
Recognized amounts of identifiable assets acquired and liabilities assumed:	
Property, plant and equipment	11
Intangible assets	2
Total identifiable net assets	**13**
Cash consideration	14
Total consideration	**14**
Goodwill	**1**

The impact of the acquisition on KPN Group's revenues, EBITDA and net profit in 2020 is negligible, also if the acquisition had taken place at the beginning of the year.

Changes in consolidation in 2019

On 8 February 2019, KPN completed the sale of iBasis, Inc. KPN classified iBasis as a disposal group held for sale as of 7 March 2018. Given its significance to the KPN Group, iBasis qualified as a discontinued operation. See Note 15 for further information on this transaction.

On 30 September 2019, KPN completed the sale of its subsidiary NLDC B.V. to DWS. NLDC was part of KPN's Wholesale segment and was classified as held for sale as of 8 May 2019.

On 29 November 2019, KPN announced and completed the sale of web-hosting subsidiary Argeweb B.V. to TWS Holding B.V.

On 2 December 2019, KPN completed the sale of its International Network Services to GTT Communications, Inc., a global cloud networking provider to multinational clients and operator of a Tier 1 IP network. KPN's international network had been classified as held for sale as of 25 June 2019.

The aggregated book gain of the three transactions amounts to EUR 200m and is included in other income (see Note 4.2). The gain is income tax exempt (see Note 8).

Cash received from the disposal of subsidiaries (net of cash) amounts to EUR 23m (2019: EUR 258m) and is classified as cash flow from investing activities in the Consolidated Statement of Cash Flows.

Accounting policy: Business combinations

KPN uses the acquisition method to account for business combinations. The consideration paid is measured at the fair value of the assets transferred, equity instruments issued and liabilities incurred or assumed at the date of exchange.

Identifiable assets acquired and liabilities and contingent liabilities assumed are measured at their fair values at the acquisition date. When a business combination is achieved in stages, any previously held equity interest is remeasured at its acquisition date fair value and any resulting gain or loss is recognized in the P&L.

Contingent considerations are recognized at fair value at acquisition date and subsequent changes to the fair value are recognized in the P&L. Contingent considerations classified as equity are not remeasured and subsequent settlement is counted for within equity.

For each business combination, KPN elects to recognize any non-controlling interest in the acquiree either at fair value or at the proportionate share in the acquiree's net assets.

Acquisition-related costs are expensed as incurred.

The excess of the consideration paid, non-controlling interests recognized and the acquisition date fair value of any previous equity interests in the acquiree over the fair value of KPN's share of the net assets acquired is recorded as goodwill. If negative goodwill occurs (bargain purchase), the difference is recognized directly in the P&L.

[22] Commitments, contingencies and legal proceedings

Commitments

€ million	Less than 1 year	1-5 years	More than 5 years	Total 31 December 2020	Total 31 December 2019
Capital and purchase commitments	739	411	34	1,183	1,029
Guarantees and other	-	7	124	131	140
Total commitments	**739**	**418**	**157**	**1,314**	**1,170**

The capital and purchase commitments mainly relate to minimum contractual obligations with regard to network operations, mobile handsets and telco services, and lease contracts that have not yet commenced.

Guarantees consist of financial obligations of group companies under certain contracts guaranteed by KPN. A total amount of EUR 131m relates to parent guarantees (2019: EUR 140m).

Contingent liabilities

Legal and tax proceedings

KPN is involved in a number of legal and tax proceedings that have arisen in the ordinary course of its business, including commercial, regulatory or other proceedings. KPN periodically carefully assesses the likelihood that legal and tax proceedings may lead to a cash outflow and recognizes provisions in such cases/matters if and when required.

However, the outcome of legal proceedings can be difficult to predict with certainty and KPN can offer no assurances in this regard.

In some cases, the impact of a legal proceeding may be more strategic than financial and such impact cannot properly be quantified. Below is a description of legal proceedings or contingent liabilities that could have a material impact for KPN.

Idle cables

See Note 18 for a contingent liability related to idle cables and the accounting policy of provisions.

VAT calculation methodology

See note 20 Contract liabilities, trade and other payables for further details.

Indemnification

In KPN's Articles of Association and in a further decision by the Board of Management, which was approved by the Supervisory Board, KPN has indemnified the members and former members of KPN's Board of Management and Supervisory Board, as well as a number of KPN's officers and directors and former officers and directors, against liabilities, claims, judgments, fines and penalties incurred by such officer or director as a result of

Consolidated Financial Statements

any threatened, pending or completed action, investigation or proceeding (whether civil, criminal or administrative) brought by a third party in relation to acts or omissions in or related to their capacity as officer or director.

The indemnification does not apply to claims and expenses reimbursed by insurers nor to an officer or a director adjudged to be liable for willful misconduct ('opzet') or intentional recklessness ('bewuste roekeloosheid').

[23] Related-party transactions

KPN considers none of the related-party transactions to be material on an individual basis. Transactions between group companies are not included in the description as these are eliminated in the Consolidated Financial Statements.

Transactions with shareholders

On 9 February 2021, América Móvil, S.A.B. de C.V. (AMX) published in its fourth quarter 2020 report that it owned 19.7% of KPN's ordinary share capital as at 31 December 2020. The total value of sales transactions by the continuing operations of KPN in 2020 with AMX, its subsidiaries and associated companies amounted to less than EUR 1m (2019: less than EUR 1m) and the total value of purchase transactions amounted to less than EUR 1m (2019: EUR 1m). The total trade receivables and payables as at 31 December 2020 amounted to nil (2019: less than EUR 1m).

Other shareholdings equaling or exceeding 3% of the issued capital:

- On 4 December 2020, Capital Research and Management Company notified the AFM that it held 15.05% of the voting rights related to KPN's ordinary share capital.
- On 11 September 2020, BlackRock, Inc. notified the AFM that it held 4.07% of the shares and 4.97% of the voting rights related to KPN's ordinary share capital.
- On 29 June 2020, Capital Income Builder notified the AFM that it held 3.08% of the shares related to KPN's ordinary share capital.
- On 28 April 2020, The Income Fund of America notified the AFM that it held 5.02% of the shares related to KPN's ordinary share capital.
- On 26 February 2020, Amundi Asset Management notified the AFM that it held 3.00% of the shares and voting rights related to KPN's ordinary share capital.

To KPN's knowledge, no other shareholder owned 3% or more of KPN's issued share capital as at 31 December 2020. KPN did not enter into agreements with AMX or other shareholders that could have a material impact on KPN's Financial Statements.

Transactions with associated companies

The total value of sales transactions and purchase transactions by the continuing operations of consolidated KPN companies with associated companies and other non-consolidated companies in 2020 amounted to approximately EUR 20m and EUR 1m respectively (2019: EUR 31m and EUR 1m respectively). The total trade receivables and payables as at 31 December 2020 amounted to less than EUR 1m (31 December 2019: EUR 10m and less than EUR 1m respectively).

Transactions with directors and related parties

For details of the relationship between directors and the company, see the Remuneration Report on pages 94 to 102 of this Integrated Annual Report. Directors in this respect are defined as key management and relate to those having authority and responsibility for planning, directing, and controlling the activities of an entity, either directly or indirectly. At KPN, key management consists of the members of the Board of Management and the Supervisory Board.

The company was not a party to any material transactions, or proposed transactions, in which members of the Supervisory Board or Board of Management or close members of their families had a direct or indirect material interest.

The total value of sales transactions by KPN's continuing operations in 2020 with parties in which members of the Supervisory Board or Board of Management or close members of their families had a direct or indirect material interest amounted to EUR 4m (2019: EUR 7m) and the total value of purchase transactions amounted to EUR 7m (2019: EUR 3m), all in the ordinary course of business. The total trade receivables and payables as at 31 December 2020 amounted to less than EUR 1m and EUR 2m respectively (31 December 2019: EUR 1m and EUR 2m respectively).

[24] Legal structure

Name of significant subsidiaries and other principal interests
KPN B.V.
• CAM IT Solutions B.V.
• GroupIT B.V.
• InSpark Holding B.V.
• KPN Finance B.V.
• KPN Security B.V.
• Reggefiber Group B.V.
• Solcon Internetdiensten B.V.
• Telfort Zakelijk B.V.
• XS4ALL Internet B.V.
• Yes Telecom Netherlands B.V.
KPN Mobile N.V.
• KPN Mobile International B.V.
KPN Ventures B.V.
Getronics B.V.
• Getronics Finance Holdings B.V.
• Getronics Pensions UK Ltd.
• Getronics US Operations, Inc.

The percentage ownership/voting interest of these entities is 100%.

The country of incorporation of all entities is the Netherlands, except Getronics Pensions UK Ltd. which is incorporated in the United Kingdom and Getronics US Operations, Inc. which is incorporated in the United States of America.

[25] Proposed appropriation of result

On outstanding Class B preferred shares, a dividend is paid out equal to the average of the 12-month Euribor increased by 1%. If the 12-month Euribor is no longer determined, the dividend on preference shares will be calculated based on the yield on state loans. Subsequently, subject to the approval of the Supervisory Board, the Board of Management will determine what proportion of net income remaining after payment of the dividend on any Class B preferred shares will be appropriated to the reserves. The part of the profit remaining after the appropriation to the reserves shall be at the disposal of the AGM. No Class B preferred shares were outstanding on 31 December 2020.

The profit of the financial year 2020 that is attributable to equity holders of the company amounts to EUR 560m. In August 2020, a regular interim dividend of EUR 4.3ct per ordinary share was paid (total amount of EUR 180m). On 19 February 2021, the Board of Management, with the approval of the Supervisory Board, appropriated EUR 15m of the profit 2020 to the other reserves.

Taking into account the interim dividend that was paid in August 2020, the remaining part of the profit is available for payment of a final dividend in respect of 2020. The Board of Management, with the approval of the Supervisory Board, will propose to the AGM to pay a final regular dividend of EUR 8.7ct per ordinary share in respect of 2020 (total amount of EUR 365m).

[26] Subsequent event

KPN has evaluated events up to publication date of these Financial Statements of this Integrated Annual Report and determined that no subsequent event activity required disclosure.

Corporate Financial Statements

Corporate Statement of Profit or Loss

For the ended 31 December

€ million	Notes	2020	2019
Total revenues and other income		**-**	**-**
Other operating expenses		1	-16
Total operating expenses		**1**	**-16**
Operating profit		**1**	**-16**
Finance income		-3	24
Finance costs		-211	-273
Other financial results		-24	-99
Intercompany interest (net)		-639	-583
Financial income and expenses	[A]	**-878**	**-930**
Income from subsidiaries		1,152	1,308
Profit before income tax		**276**	**361**
Income taxes	[B]	285	265
Profit for the year		**560**	**626**

Corporate Statement of Financial Position

Before appropriation of current year result

Assets

€ million	Notes	31 December 2020	31 December 2019
Non-current assets			
Financial fixed assets			
Investments in subsidiaries		16,721	15,571
Loan to subsidiary		60	80
Derivatives		191	236
Deferred taxes		640	698
Other fixed financial assets		117	97
Total non-current assets	[B]	**17,729**	**16,682**
Current assets			
Accounts receivable from subsidiaries	[F]	1,601	1,406
Other receivables and accrued income		19	26
Derivatives		11	22
Other current financial assets		270	276
Cash and cash equivalents		472	637
Total current assets		**2,373**	**2,366**
Total assets		**20,102**	**19,048**

Corporate Financial Statements

Equity and liabilities

€ million	Notes	31 December 2020	31 December 2019
Equity			
Subscribed capital stock		168	168
Additional paid-in capital		8,445	8,445
Treasury shares reserve		-65	-79
Hedge reserve		-156	-240
Legal reserves	[C]	149	166
Retained earnings	[C]	-6,977	-7,076
Equity attributable to holders of perpetual capital securities		496	496
Profit (loss) current year		560	626
Total equity attributable to equity holders		**2,621**	**2,507**
Provisions			
Provisions for retirement benefit obligations		7	24
Other provisions		24	24
Total provisions	[D]	**31**	**48**
Non-current liabilities			
Loans from subsidiaries	[E]	8,135	7,499
Borrowings	[E]	5,457	5,649
Derivative financial instruments		192	136
Other long-term liabilities		368	76
Total non-current liabilities		**14,152**	**13,359**
Current liabilities			
Accounts payable to subsidiaries	[F]	2,424	1,962
Borrowings	[E]	679	937
Derivative financial instruments		4	4
Other current liabilities	[G]	101	108
Accruals and deferred income		91	124
Total current liabilities		**3,299**	**3,135**
Total equity and liabilities		**20,102**	**19,048**

Notes to the Corporate Financial Statements

The principles for the recognition and measurement of assets and liabilities and determination of the result (hereafter referred to as 'accounting policies') of the Corporate Financial Statements of Koninklijke KPN N.V. are the same as those applied to the Consolidated Financial Statements under IFRS (applying the option provided in Article 362 sub 8, Part 9, Book 2 of the Dutch Civil Code). The Consolidated Financial Statements have been prepared in accordance with the IFRS (see Notes to the Consolidated Financial Statements).

Investments in consolidated subsidiaries are measured at net asset value. Net asset value is based on the measurement of assets (including goodwill), provisions and liabilities and the determination of profit based on the principles applied in the Consolidated Financial Statements.

Expected credit losses, if any, with respect to loans granted to and receivables from consolidated subsidiaries are not recognized in these Corporate Financial Statements, which is in line with RJ 100.107a.

[A] Financial income and expenses

€ million	2020	2019
Finance income	**-3**	**24**
Interest on borrowings	-208	-269
Other	-3	-4
Finance costs	**-211**	**-273**
Amortizable part of hedge reserve	-15	-17
Amortization discontinued fair value hedges	29	38
Derivative financial instruments not qualified for hedge accounting	-27	-29
Bond tender premiums and hedge unwinds	-	-95
Other	-12	4
Other financial results	**-25**	**-99**
Intercompany interest (net)	**-639**	**-583**
Total	**-878**	**-930**

Finance income included negative interest on cash balances EUR -3m (2019: EUR 24m income mainly related to dividend received on Telefónica Deutschland shares).

In 2020, interest on borrowings decreased by EUR 61m, which was mainly related to bond redemptions and the bond tender executed in 2019.

Other financial results increased by EUR 75m (lower net cost), mainly due to the bond tender that KPN executed in November 2019. The tender and unwind of associated hedges resulted in a net charge of EUR 95m in 2019.

Intercompany interest (net) mainly includes interest of 8.5% on an intercompany loan provided by KPN Mobile N.V., part of loans payable to subsidiaries (see Note F).

Corporate Financial Statements

[B] Non-current assets

€ million	Investments in subsidiaries companies	Loan to subsidiary[1]	Derivatives	Deferred taxes	Other financial fixed assets	Total
Balance at 31 December 2019	**14,279**	**80**	**185**	**671**	**181**	**15,396**
Exchange rate differences	-20	-	-	-	-	-20
Income from group companies after taxes	1,308	-	-	-	-	1,308
Capital contributions	1	-	-	-	-	1
Received dividend	-2	-	-	-	-	-2
Fair value adjustments	-	-	51	-	-	51
Other	5	-	-	27	-84	-52
Total changes	**1,292**	**-**	**51**	**27**	**-84**	**1,286**
Balance at 31 December 2019	**15,571**	**80**	**236**	**698**	**97**	**16,682**
Exchange rate differences	4	-	-	-	-	4
Income from group companies after taxes	1,152	-	-	-	-	1,152
Capital contributions	1	-	-	-	-	1
Repayments	-	-20	-	-	-	-20
Fair value adjustments	-	-	-45	-	-	-45
Other	-7	-	-	-58	20	-45
Total changes	**1,150**	**-20**	**-45**	**-58**	**20**	**1,047**
Balance at 31 December 2020	**16,721**	**60**	**191**	**640**	**117**	**17,729**

1 Loan to KPN Finance B.V., which is repayable on 28 September 2023 at the latest and is subordinated to all other loans, obligations and creditors. Annual interest is 4.6%.

Taxation

The Corporate Financial Statements on behalf of Koninklijke KPN N.V. are prepared as if the company is independently subject to corporate income tax, so excluding the offset of profits within the tax group of which the entity is the parent.

As a result, the company reports a tax benefit for the tax-deductible interest and no tax on the result of consolidated entities as the tax of these entities is booked at the level of the entity itself.

The company's deferred tax asset represents the future tax relief on taxable profits (within the tax group) due to available losses and is higher than reported on consolidated level, since the asset can be offset against deferred tax liabilities reported in other entities that are part of the same tax group.

[C] Equity attributable to equity holders

For a breakdown of equity attributable to equity holders, see the Consolidated Statement of Changes in Equity and related notes. On 8 November 2019, KPN issued a EUR 500m hybrid bond with a 2.00% coupon and a perpetual maturity. This bond is classified as equity and valued at net proceeds (see Note 12.2).

Legal reserves (net of tax)

€ million	Revaluation reserve property, plant and equipment	Cumulative translation adjustments	Capitalized software development costs	Fair value reserve equity investments	Other	Total
Balance at 1 January 2019	**18**	**40**	**82**	**10**	**18**	**168**
Addition/release (-) retained earnings	-2	-	25	-1	-3	19
Exchange rate differences	-	-21	-	-	-	-21
Balance at 31 December 2019	**16**	**19**	**107**	**9**	**15**	**166**
Addition/release (-) retained earnings	-2	-	-17	-1	-	-20
Exchange rate differences	-	3	-	-	-	3
Balance at 31 December 2020	**14**	**22**	**90**	**8**	**15**	**149**

Pursuant to Dutch law, there are limitations on the distribution of equity attributable to equity holders. Such limitations relate to the subscribed capital stock as well as to legal reserves required by Dutch law as presented above. Dutch law also requires that in determining the amount for distribution, the company's ability to continue to pay its debt must be taken into account. The total distributable reserves, which include the perpetual capital securities, amounted to EUR 2,304m as at 31 December 2020 (2019: EUR 2,173m).

Retained earnings

Movements in retained earnings

€ million	2020	2019
Balance at 1 January	**-7,076**	**-6,747**
Profit of previous year	626	281
Coupon perpetual hybrid bond	-3	-
Dividend ordinary shares	-529	-512
Actuarial gain/loss pensions and other post-employment plans (net of tax)	-11	8
Fair value adjustment equity investments[1]	6	-84
Release/addition legal reserves (except cumulative translation adjustments)	20	-19
Share-based compensation	-11	-2
Balance at 31 December	**-6,977**	**-7,076**

1 The amount in 2019 is mainly the change in the fair value of KPN's stake in Telefónica Deutschland, which was sold in 2019.

Retained earnings reconciled with the Consolidated Statement of Financial Position

€ million	2020	2019
Retained earnings as per Consolidated Statement of Financial Position	**-6,289**	**-6,302**
Revaluation reserve	-14	-16
Capitalized software development costs	-90	-107
Fair value reserve equity investments	-8	-9
Other non-distributable reserves	-15	-15
Profit for the year	-560	-626
Retained earnings as per Corporate Statement of Financial Position	**-6,977**	**-7,076**

[D] Provisions

Movements in provisions

€ million	Retirement benefit obligations	Other provisions	Total
Balance at 1 January 2019	**33**	**22**	**55**
Additions/releases to income	1	5	6
Additions/releases in OCI	2	-	2
Usage	-12	-3	-15
Balance at 31 December 2019	**24**	**24**	**48**
Additions/releases to income	1	2	3
Additions/releases in OCI	4	-	4
Usage	-21	-3	-24
Balance at 31 December 2020	**7**	**24**	**31**

The provisions for retirement benefit obligations relate to early retirement plans (see Note 17 to the Consolidated Financial Statements).

Corporate Financial Statements

[E] Loans from subsidiaries and borrowings

Loans from subsidiaries (non-current) mainly relates to a loan payable to KPN Mobile N.V., which bears interest of 8.5% and must be repaid in full, including accrued interest, in 2034. The loan is subordinated to the unsecured and unsubordinated creditors of Koninklijke KPN N.V. (KPN), but ranks ahead of the hybrid capital securities issued by KPN as long as by their terms these hybrid capital securities are expressed to rank pari passu with the preference share of KPN and the preference shares issued by KPN (if any). There are no loans from subsidiaries with maturity dates in 2021.

Non-current borrowings include bonds outstanding for EUR 4,970m (2019: EUR 5,117m) and hybrid bonds outstanding for EUR 487m (2019: EUR 532m), see also Note 12.2 to the Consolidated Financial Statements. Current loans include bonds outstanding for EUR 617m.

During the year, KPN set up a Euro Commercial Paper Program under which KPN can issue short-term debt instruments for up to EUR 1 billion. As at 31 December 2020, current borrowings include the outstanding balance of commercial paper of EUR 60m (2019: nil).

[F] Accounts receivable from and accounts payable to subsidiaries

Koninklijke KPN N.V. operates a cash pool for the KPN Group, which leads to accounts receivable from and accounts payable to subsidiaries. In 2020, accounts receivable from subsidiaries increased, mainly due to capex and other investments made by subsidiaries. Accounts payable to subsidiaries also increased, mainly due to cash flows from operating activities generated by subsidiaries. Accounts payable to subsidiaries (net) at 31 December 2020 consist of interest to be paid to KPN Mobile N.V. (EUR 172m) and is offset by an intercompany current income tax position of EUR 319m.

Most of these current accounts have an indefinite duration. The interest is determined annually and based on the 12-month Euribor increased by 0.15% and a risk premium attached by the market to the specific KPN credit risk.

[G] Other current liabilities

This balance sheet item consists of VAT payable of the KPN fiscal unity.

[H] Commitments and contingencies

Commitments by virtue of guarantees amounted to EUR 131m (2019: EUR 140m).

KPN has issued several declarations of joint and several liabilities for various group companies in compliance with Article 403, Book 2 of the Dutch Civil Code. These declarations of joint and several liabilities for group companies are included in a complete list of subsidiaries and participating interests, which is available at the offices of the Chamber of Commerce in Rotterdam.

Directors' remuneration

See Note 5 to the Consolidated Financial Statements on employee benefits.

Rotterdam, 19 February 2021

Board of Management	Supervisory Board
Joost Farwerck	Duco Sickinghe
Chris Figee	Catherine Guillouard
Jean-Pascal Van Overbeke	Derk Haank
Marieke Snoep	Peter Hartman
Babak Fouladi	Edzard Overbeek
Hilde Garssen	Alejandro Plater
	Jolande Sap
	Claudia Zuiderwijk

Other information

Combined Independent Auditor's Report

Dear Shareholders and members of the Supervisory Board of Koninklijke KPN N.V. (KPN),

Please find below the main conclusions and main features of our audit and review. For the full text of the independent auditor's report, which includes the assurance report on sustainability, please refer to the next pages.

Summary

Conclusions

Object of audit or review	Outcome of our work performed	Level of assurance
Financial statements 2020 (consolidated and corporate)	Unqualified conclusion	Reasonable (audit)
Sustainability information 2020: **CO_2e emission data 2020 (Scope 1 and 2) of own operations in the Netherlands and the underlying energy data**	Unqualified conclusion	Reasonable (audit)
Sustainability information 2020 in selected chapters and appendices	Unqualified conclusion	Limited (review)
Other information, including the Reports by the Board of Management and the Supervisory Board	No material misstatements to report	

Main features of our audit & review

What we have done	Scope of our work	Materiality	Key audit & assurance matters
Audit of financial statements 2020	Significant segments, including 'Consumer', 'Business', 'Wholesale' and 'Network, Operations and IT'	EUR 45 million, which represents 2.0% of EBITDA AL	• Valuation (in)tangible assets, incl. goodwill • Valuation deferred tax assets • Reliability of IT systems, including security and cybercrime
Audit of CO_2e emission data 2020 (Scope 1 and 2) own NL operations and the underlying energy data	Netherlands	5% deviation per item	• No areas of specific focus
Review of sustainability information for 2020	Selected chapters and appendices	Specific materiality levels for each relevant part of the sustainability information in scope	• CO_2e Scope 3 estimates, energy savings by customers • RepTrak pulse score, Net Promoter Score
Procedures for Other information, including Reports by the Board of Management and Supervisory Board	Full reports	Similar materiality as our audit or review scopes.	• No areas of specific focus

Other information

Combined independent auditor's report on the 2020 financial statements and sustainability information

Our conclusions
We have audited the financial statements 2020 of KPN based in Rotterdam. The financial statements include the consolidated financial statements and the corporate financial statements.

In our opinion:
- the accompanying consolidated financial statements give a true and fair view of the financial position of KPN as at 31 December 2020 and of its result and its cash flows for 2020 in accordance with International Financial Reporting Standards as adopted by the European Union (EU-IFRS) and with Part 9 of Book 2 of the Dutch Civil Code;
- the accompanying corporate financial statements give a true and fair view of the financial position of KPN as at 31 December 2020 and of its result for 2020 in accordance with Part 9 of Book 2 of the Dutch Civil Code.

We have reviewed the sustainability information for the year 2020 of KPN. A review is aimed at obtaining a limited level of assurance. Furthermore, we have audited the CO_2e emission data 2020 (Scope 1 and 2) of own operations in the Netherlands and the underlying energy data. The scope of our engagements is described in the section The scope of our engagements.

Based on our review procedures performed, nothing has come to our attention that causes us to believe that the sustainability information in scope does not present, in all material respects, a reliable and adequate view of KPN's policy and business operations with regard to sustainability and the thereto related events and achievements for 2020, in accordance with the GRI Standards (comprehensive option) and the supplemental KPN reporting criteria as disclosed in Appendix 3: Transparency, materiality and stakeholder engagement (hereinafter: Transparency) of the Integrated Annual Report.

In our opinion, the CO_2e emission data 2020 (Scope 1 and 2) of own operations in the Netherlands and the underlying energy data as presented on page 57 of the Integrated Annual Report are prepared, in all material respects, in accordance with the Sustainability Reporting Standards of the Global Reporting Initiative (GRI Standards) (comprehensive option) and the applied supplemental KPN reporting criteria as disclosed in Appendix 3: Transparency, of the Integrated Annual Report.

Based on the procedures performed required by Part 9 of Book 2, section 2:135b sub-section 7 of the Dutch Civil Code and the Dutch Standard 720, we conclude that the other information included in the Integrated Annual Report, including the Reports by the Board of Management and Supervisory Board:

- Is consistent with the financial statements and does not contain material misstatements;
- Contains the information as required by Part 9 of Book 2 and sections 2:135b and 2:145 sub-section 2 of the Dutch Civil Code.

Basis for our conclusions
We conducted our assurance engagements in accordance with Dutch law, including the Dutch Standards on Auditing and the Dutch Standard 3810N, "Assurance engagements relating to sustainability reports", which is a specific Dutch Standard that is based on the International Standard on Assurance Engagements (ISAE) 3000 (Revised) "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information". Our responsibilities under those standards are further described in the section Our responsibilities in this report.

We believe the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our conclusions.

Our independence
We are independent of KPN in accordance with the EU Regulation on specific requirements regarding statutory audit of public-interest entities, the Wet toezicht accountantsorganisaties (Wta, Audit firms supervision act), the Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. This means that we do not perform any activities that could result in a conflict of interest with our independent assurance engagements. Furthermore, we have complied with the Verordening gedrags- en beroepsregels accountants (VGBA, Dutch Code of Ethics).

Reporting criteria

The information in the scope of our engagements needs to be read and understood together with the reporting criteria. KPN is solely responsible for selecting and applying these reporting criteria, taking into account applicable law and regulations related to reporting. The reporting criteria used for the preparation of the Integrated Annual Report are described below.

The absence of an established practice on which to draw, to evaluate and measure sustainability information allows for different, but acceptable, measurement techniques and can affect comparability between entities and over time.

Consolidated Financial Statements:	International Financial Reporting Standards as adopted by the European Union (EU-IFRS) and Part 9 of Book 2 of the Dutch Civil Code.
Corporate Financial Statements, Report by the Board of Management and the Supervisory Board:	Part 9 of Book 2 of the Dutch Civil Code.
Remuneration Report:	Sections 2:135b and 2:145 sub-section 2 of the Dutch Civil Code.
Sustainability information including the CO_2e emission data 2020 (Scope 1 and 2) and the underlying energy data:	GRI Standards (comprehensive option) and the applied supplemental reporting criteria as disclosed in Appendix 3: Transparency of the Integrated Annual Report. These criteria include the Greenhouse Gas Protocol (WRI/WBCSD).

The scope of our engagements

Our engagements scope

The Integrated Annual Report 2020 (hereafter: the Report) of KPN consists of the financial statements and other information, including Reports by the Board of Management and Supervisory Board, that provide altogether an overview of the policies, activities, events and performances related to the financial position, results, cashflow as well as the sustainable development of KPN. The following information in the Report has been in scope for our assurance engagements:

- The consolidated financial statements, comprising:
  - The Consolidated Statement of Financial Position as at 31 December 2020;
  - The Consolidated Statements of Profit or Loss, Other Comprehensive Income, Changes in Equity and Cash Flows for 2020;
  - The Notes comprising a summary of the significant accounting policies and other explanatory information.
- The corporate financial statements, comprising:
  - The Corporate Statement of Financial Position as at 31 December 2020;
  - The Corporate Statement of Profit or Loss for 2020;
  - The Notes comprising a summary of the accounting policies and other explanatory information.
- The sustainability information in scope comprising:
  - Reasonable assurance - The CO_2e emission data 2020 (Scope 1 and 2) of own operations in the Netherlands and the underlying energy data as presented on page 57 of the Report;
  - Limited assurance - The sustainability information in the following chapters and appendices:
    - Chapters: 'KPN at a glance', 'The value we create' and 'Tax and regulation';
    - Appendices: Appendix 2, 3, 5, 6, 7, 8, 9 and 10.
- In addition to the financial statements and the sustainability information in scope and our combined independent auditor's report, the Report contains other information, including the Reports by the Board of Management and Supervisory Board, the Remuneration Report and Other information as required by Part 9 of Book 2 of the Dutch Civil Code.

Limitations to the scope of our assurance engagements

The sustainability information contains prospective information, such as ambitions, strategy, plans, targets, expectations and estimates. Inherent to prospective information, the actual future results are uncertain. We do not provide any assurance on the assumptions and achievability of prospective information in the sustainability information.

The references to external sources or websites in the sustainability information are not part of the sustainability information as reviewed by us. We therefore do not provide assurance on this information.

Our scope for the group audit of the financial statements

KPN is head of a group of entities, both in the Netherlands and abroad. The Dutch entities and segments thereby form the majority of the business. The financial information of all these entities has been included in the consolidated financial statements.

Because we are ultimately responsible for the opinion, we are also responsible for directing, supervising and performing the group audit. In this respect we have determined the nature and extent of the audit procedures to be carried out for group entities. Decisive were the size and/or the risk profile of the group entities or operations. On this basis, we selected group entities for which an audit or review had to be carried out on the complete set of financial information or specific items.

Our group audit mainly focused on the more significant segments, including 'Consumer', 'Business', 'Wholesale' and 'Network, Operations and IT'. We performed full scope audit procedures on the financial information of these segments.

At other group entities we performed review procedures or specific audit procedures. We audited the group consolidation, financial disclosures and a number of complex items ourselves at the company's head office. These included revenue assurance, purchase price allocation, taxation, fixed assets and goodwill impairment, pensions, derivative financial instruments, hedge accounting and share-based payments. We involved several EY specialists to assist the audit team, including specialists from our tax, valuations, actuarial and treasury departments.

By performing audit procedures at segment and at corporate level as mentioned above, we have been able to obtain sufficient and appropriate audit evidence about the group's financial information to provide an opinion about the consolidated financial statements.

Other information

Our focus on fraud and non-compliance with laws and regulations

Our responsibility

Although we are not responsible for preventing fraud or non-compliance and cannot be expected to detect non-compliance with all laws and regulations, it is our responsibility to obtain reasonable assurance that the financial statements, taken as a whole, are free from material misstatement, whether caused by fraud or error.

Non-compliance with laws and regulations may result in fines, litigation or other consequences for KPN that may have a material effect on the financial statements.

Our audit response related to fraud risks

In order to identify and assess the risks of material misstatements of the financial statements due to fraud, we obtained an understanding of KPN and its environment, including KPN's internal control relevant to the audit and in order to design audit procedures that are appropriate in the circumstances. As in all of our audits, we addressed the risk of management override of internal control. We do not audit internal control per se for the purpose of expressing an opinion on the effectiveness of the KPN's internal control.

We considered available information and made enquiries of relevant executives, directors (including internal audit, legal, compliance, human resources and segment directors) and the supervisory board. As part of our process of identifying fraud risks, we evaluated fraud risk factors with respect to financial reporting fraud, misappropriation of assets and bribery and corruption in close co-operation with our forensic specialists.

In our process of identifying fraud risks, we considered whether the COVID-19 pandemic gives rise to specific fraud risk factors resulting from a dilution in the effectiveness of controls as a result of the general disruption associated with remote working, illness and workforce reductions, supply chain failures and pressure to make emergency procurements.

We evaluated the design and the implementation and, where considered appropriate, tested the operating effectiveness, of internal controls that mitigate fraud risks. In addition, we performed procedures to evaluate key accounting estimates for management bias in particular relating to important judgment areas and significant accounting estimates as disclosed in Note 2 to the financial statements. We have also used data analysis to identify and address high-risk journal entries.

We incorporated elements of unpredictability in our audit. We considered the outcome of our other audit procedures and evaluated whether any findings were indicative of fraud or non-compliance. If so, we reevaluate our assessment of fraud risk and its resulting impact on our audit procedures.

Our audit response related to risks of non-compliance with laws and regulations

We assessed factors related to the risks of non-compliance with laws and regulations that could reasonably be expected to have a material effect on the financial statements from our general industry experience, through discussions with the management board, reading minutes, inspection of internal audit and compliance reports, and performing substantive tests of details of classes of transactions, account balances or disclosures.

We also inspected lawyers' letters and correspondence with regulatory authorities and remained alert to any indication of (suspected) non-compliance throughout the audit. Finally, we obtained written representations that all known instances of non-compliance with laws and regulations have been disclosed to us.

Our focus on going concern

We performed the following procedures in order to identify and assess the risks of going concern and to conclude on the appropriateness of management's use of the going concern basis of accounting. Management made a specific assessment of KPN's ability to continue as a going concern and to continue its operations for at least the next 12 months. We discussed and evaluated the assessment with management exercising professional judgment and maintaining professional skepticism, and specifically focusing on the process followed by management to make the assessment, management bias that could represent a risk, the impact of current events and conditions have on KPN's operations and forecasted cash flows, with a focus on whether KPN will have sufficient liquidity to continue to meet its obligations as they fall due. We consider based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on KPN's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion.

Our conclusions are based on the audit evidence obtained up to the date of our combined independent auditor's report. However, future events or conditions may cause a company to cease to continue as a going concern.

Materiality

General

The scope of our assurance procedures is influenced by the application of materiality. Our assurance engagements aim to provide assurance about whether the financial statements and the sustainability information in scope are free from material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the (economic) decisions of users taken on the basis of the Report. The materiality affects the nature, timing and extent of our assurance procedures and the evaluation of the effect of identified misstatements on our conclusions.

Financial statements

For the audit of the financial statements our considerations regarding the materiality are as follows.

Materiality	EUR 45,000,000
Benchmark used	2.0% of adjusted earnings before interest, tax, depreciation and amortization after lease (EBITDA AL).
Additional explanation	The users of the financial statements of a for-profit entity typically focus on operating performance, particularly profit before tax. Over the past years KPN's profit before tax heavily fluctuated, resulting from the impact of the discontinuance of operations and other non-recurring transactions. Furthermore, we note that in KPN's external communications, earnings before interest, tax, depreciation and amortization after lease (EBITDA AL) is commonly used to report on financial performance. Considering these aspects, we have concluded that EBITDA AL is the most appropriate and stable benchmark for KPN to base our materiality upon. The materiality is thereby set at EUR 45,000,000, using a percentage of 2.0%, which is at the lower end of a generally accepted range. Last year we used the same percentage and amount.

We have also taken into account misstatements and/or possible misstatements that in our opinion are material for the users of the financial statements for qualitative reasons.

We agreed with the Supervisory Board that misstatements in the financial statements in excess of EUR 2.25 million, would be reported to them, as well as smaller misstatements that in our view must be reported on qualitative grounds.

Sustainability information

Based on our professional judgment we determined materiality levels for each part of the sustainability information and for the sustainability information as a whole. When evaluating our materiality levels, we have taken into account quantitative and qualitative considerations as well as the relevance of information for both stakeholders and the organization.

For CO_2e emission data 2020 (Scope 1 and 2) of own operations in the Netherlands and the underlying energy data we have determined the materiality at 5% deviation.

We agreed with the Supervisory Board that misstatements which are identified during our assurance engagement and which in our view must be reported on quantitative or qualitative grounds, would be reported to them.

Key audit & assurance matters

Key audit and assurance matters are those matters that, in our professional judgment, were of most significance in our assurance procedures for the financial statements and the sustainability information in scope. We have communicated the key audit and assurance matters to the Supervisory Board. The key audit and assurance matters are not a comprehensive reflection of all matters discussed.

In previous year 'IFRS 16' had been identified as key audit matter. Since KPN incorporated IFRS 16 in their internal processes and recording, this is no longer a key audit matter.

These matters have been addressed in the context of our assurance procedures for the financial statements and the sustainability information in scope as a whole and to conclude thereon, and we do not provide a separate conclusion on these matters.

General observation

For the audit of the financial statements, we rely on KPN's internal control framework and its governance. The framework is maintained by the business and continuously tested by KPN Risk Management and KPN Audit. The Management Board and Audit Committee are being informed of the outcome of the tests performed on a quarterly basis. For purposes of our audit, we assess the adequacy of the framework and we test the work of KPN Risk Management and KPN Audit. We believe that KPN's internal control framework meets the required criteria and it allows us to perform a system-based audit in an effective manner.

In 2020 we had to perform our procedures to a greater extent remotely due to the COVID-19 measures. This limits our observations and increases the risk of missing certain signals. In order to compensate for the limitations related to physical contact and direct observation, we performed alternative procedures to obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. In performing our audit procedures we maintained our professional skepticism and remained alert for any possible impact of the COVID-19 pandemic on the financial statements. We reviewed management's assessment of the impact of the COVID-19 pandemic and the disclosures

Other information

relating to significant assumptions and estimates in the financial statements as disclosed in Note 2.

The key audit matters addressed below are all covered by KPN's internal control framework and have been audited by us with satisfactory results. For the interest of the reader, we highlight the most important elements we focused on in 2020.

Key audit matter	How our audit addressed the matter	Key observations
Valuation of (in)tangible assets, including goodwill		
Under IFRS, it is required to annually test the amount of goodwill and intangible assets with an indefinite life for impairment. KPN's disclosures about goodwill and intangible assets are included in Note 11. No impairments of goodwill and intangible assets with indefinite life were recorded during 2020. On assets with finite lives an impairment test has to be performed if indications of impairment exist. Some triggering events were identified, for example in the area of hardware and software that required impairment testing and for which minor impairments were recorded, as included in Note 10 and 11. The impairment tests were important for our audit as the related asset amounts are significant and the assessment process itself is complex and requires judgment. The impairment test includes assumptions about future market or economic conditions.	We compared forecasted revenue and profit margins for all cash generating units with the approved KPN strategic plan. We also verified the assumptions to which the outcome of the impairment test is most sensitive and reviewed the company's statement that the headroom of the CGU's is more than sufficient and therefore no sensitivity analysis needs to be disclosed in Note 11. Our audit procedures included, among others, using EY valuation specialists to assist us in verifying the assumptions and methodologies used by KPN and evaluating the historical accuracy of management's estimates that drive the assessment, such as strategic plans and expected growth rates.	We concur with management that there is no need for impairments of goodwill and intangible assets with indefinite life and agree with the disclosures in Note 11. We concur with management on the impairments recorded.
Valuation of deferred tax assets		
At 31 December 2020 the deferred tax assets (DTA) are valued at EUR 567 million and related disclosures are included in the notes to the consolidated statement of profit or loss in Note 8. KPN assessed whether the DTA can be recovered and sufficient sources of income are available. In anticipation of the proposed loss compensation rules as of 1 January 2022, which were part of the 2021 Budget Proposals and were for technical reasons not yet enacted per 31 December 2020, KPN provided a recoverability analysis based on the current loss compensation rules and the new compensation rules. The outcome of both analyses is that the DTA can be recognized for the full amount as disclosed on page 71. This item was significant to our audit because the assessment process is complex and judgmental and is based on assumptions about expected future market or economic conditions.	Our audit procedures related to the deferred tax assets included, amongst others, using EY tax specialists to assist us in verifying and interpreting the agreements ('vaststellingsovereenkomsten') and other agreements reached with the Dutch Tax Authorities as well as evaluating the assumptions, such as expected future taxable income and methodologies used by the company. In addition, the EY tax specialists assessed whether DTA's are at risk due to exposures which could lead to adjustments of the Net Operating Losses. This entailed reviewing KPN's latest approved strategic plan. We discussed this plan with management and determined the reasonableness of the assumptions used regarding the recoverability of the deferred tax assets and assessed the plan's assumptions and sensitivities and evaluating the historical accuracy of management's estimates that drive the assessment. In auditing the tax positions we have taken into consideration the current applicable Dutch tax law with respect to income tax rate as well as the proposed loss compensation rules as of 1 January 2022.	We concur with the deferred tax assets recorded and the disclosures in Note 8.
Reliability of IT systems, including security, cybercrime and data privacy		
At KPN, processes are highly automated and KPN continuously invests in simplification and improvement of IT systems, which has led to several changes in 2020 that have been discussed on page 34. Reliability and security of IT systems are thereby high on the agenda of KPN and for that purpose KPN's internal control framework includes several controls to ensure, inter alia, proper identity, access and change management of its IT systems. KPN also has a security team in place focusing on policies, security management and a team of ethical hackers. This team tests the security of KPN's IT environment and imitates behavior of hackers to stay continuously up to date with the latest developments and helps KPN in managing their own security risks, including cybercrime and data privacy as disclosed on page 46 till 48 of the Integrated Annual Report.	As part of our audit, we have reviewed the quality of KPN's IT systems and the controls embedded therein with a purpose to express an opinion on the financial statements. For this purpose, we performed our own procedures and reviewed and tested the work done by KPN Risk Management and KPN Audit. Since this is highly specialized work, our audit team includes IT specialists.	In a few instances, we identified situations where controls needed improvement. KPN has set-up remediation procedures that we have also reviewed and tested with satisfactory results.

For the assurance procedures concerning the sustainability information in scope, we identified the following key assurance matters:

Key assurance matter	How our review addressed the matter	Key observations
Estimations and assumptions in Scope 3 (CO_2e emissions) and energy savings by customers		
Inherent to the nature of information on Scope 3 (CO_2e emissions and energy savings by customers), is that they are to a large extent based on the use of estimates and underlying assumptions as disclosed on page 188 of the Integrated Annual Report.	Our review procedures focused on evaluating the suitability and consistent application of the reporting criteria and assessing the reasonableness of the assumptions made. We have also reviewed whether the disclosures in the Report are adequate.	We assessed the reporting criteria as suitable and consistently applied and the assumptions made to be reasonable. We agreed that the methodologies used are sufficiently disclosed in Appendix 3.
Disclosure of methodology for RepTrak pulse score (reputation) and Net Promoter Score in the Netherlands (customer satisfaction)		
The indicators RepTrak and NPS are identified by KPN as part of their representation of key achievements. The indicators are for a substantial part measured by third parties. The outcomes are influenced by the methodologies used by the third parties.	Our review procedures focused on evaluating whether the methodologies are suitable and assessing whether the transparency on the methodologies and its changes in the NPS methodology, as disclosed in Appendix 3 in KPN's Report, are sufficient for a proper understanding by the reader.	We assessed the reporting criteria to be suitable and consistently applied. We agreed that the methodologies used are sufficiently disclosed in Appendix 3.

Report on other legal and regulatory requirements

Engagement
We were engaged by the Supervisory Board as auditor of Koninklijke KPN N.V. on 9 April 2014, as of the audit for the year 2015 and have operated as statutory auditor since that date.

No prohibited non-audit services
We have not provided prohibited non-audit services as referred to in Article 5(1) of the EU Regulation on specific requirements regarding statutory audit of public-interest entities.

Responsibilities

Responsibilities of Board of Management and the Supervisory Board
The Board of Management (hereafter: management) is responsible for the preparation and fair presentation of the financial statements in accordance with EU-IFRS and Part 9 of Book 2 of the Dutch Civil Code, and for the preparation of the other information, including the Report by the Board of Management in accordance with Part 9 of Book 2 of the Dutch Civil Code, the other information required by Part 9 of Book 2 of the Dutch Civil Code and the remuneration report in accordance with section 2:135b and 2:145 sub-section 2 of the Dutch Civil Code.

Management is also responsible for the preparation of reliable and adequate sustainability information in accordance with the GRI Standards (comprehensive option) and the applied supplemental KPN reporting criteria, including the identification of stakeholders and the determination of material topics. The choices made by management in respect of the scope of the Report and the reporting criteria are set out in the section entitled Appendix 3: Transparency in the Integrated Annual Report.

Furthermore, management is responsible for such internal control as management determines is necessary to enable the preparation of the Report that is free from material misstatement, whether due to fraud or error.

As part of the preparation of the financial statements, management is responsible for assessing KPN's ability to continue as a going concern. Based on the financial reporting frameworks mentioned, management should prepare the financial statements using the going concern basis of accounting unless management either intends to liquidate KPN or to cease operations, or has no realistic alternative but to do so. Management should disclose events and circumstances that may cast significant doubt on KPN's ability to continue as a going concern in the financial statements.

The Supervisory Board is responsible for overseeing the KPN's reporting process.

Our responsibilities
Our responsibility is to plan and perform the assurance engagements in a manner that allows us to obtain sufficient and appropriate assurance evidence for our conclusions.

Our assurance procedures aimed at obtaining reasonable assurance have been performed with a high, but not absolute, level of assurance, which means we may not detect all material errors and fraud during our audit. The assurance procedures performed to obtain a limited level of assurance (review) are aimed on the plausibility of information and vary in nature and timing from, and are less in extent, than for obtaining reasonable assurance. The level of assurance obtained in a review is therefore substantially less than the assurance obtained in an audit.

Other information

We apply the "Nadere voorschriften kwaliteitssystemen" (NVKS, Regulations for Quality management systems) and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and other applicable legal and regulatory requirements.

An informative summary of the work performed as the basis of our conclusions is included in the Annex.

Amsterdam, 19 February 2021

Ernst & Young Accountants LLP

signed by F.J. Blenderman

Annex to the combined independent auditor's report

Work performed

We have exercised professional judgment and have maintained professional skepticism throughout the assurance engagements performed by a multi-disciplinary team, in accordance with Dutch Standards on Auditing and the Dutch Standard 3810N, ethical requirements and independence requirements.

Our audit to obtain reasonable assurance about the financial statements (consolidated and corporate) included the following:

- Identifying and assessing the risks of material misstatement of the financial statements, whether due to fraud or errors, designing and performing audit procedures responsive to those risks, and obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtaining an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Evaluating the overall presentation, structure and content of the financial statements, including the disclosures.
- Evaluating whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Our review to obtain limited assurance about the sustainability information in scope included amongst others:

- Performing an analysis of the external environment and obtaining an understanding of relevant social themes and issues and the characteristics of the company.
- Evaluating the appropriateness of the reporting criteria used, their consistent application and related disclosures in the sustainability information. This includes the evaluation of the results of the stakeholders' dialogue and the reasonableness of estimates by management.
- Obtaining an understanding of the reporting processes for the sustainability information, including obtaining a general understanding of internal control relevant to our review.
- Reconciling the relevant financial information with the financial statements.
- Obtaining an understanding of the procedures performed by the internal audit department of KPN.
- Identifying areas of the sustainability information with a higher risk of misleading or unbalanced information or material misstatements, whether due to fraud or errors. Designing and performing further procedures aimed at determining the plausibility of the sustainability information responsive to this risk analysis. These further review procedures consisted amongst others of:
  - Interviewing management and relevant staff at corporate level responsible for the sustainability strategy, policies and results.
  - Interviewing relevant staff responsible for providing the information for, carrying out internal control procedures on, and consolidating the data in the sustainability information.
  - Obtaining assurance information that the sustainability information reconciles with underlying records of the company.
  - Reviewing, on a limited test basis, relevant internal and external documentation.
  - Performing an analytical review of the data and trends in the information submitted for consolidation at corporate level.
- Evaluating the consistency of the sustainability information in scope with the information in the Report which is not included in the scope of our assurance engagement.
- Evaluating the overall presentation, structure and content of the sustainability information.
- Considering whether the sustainability information as a whole, including the disclosures, reflects the purpose of the reporting criteria used.

In addition to the procedures mentioned above, for the CO_2e emission data 2020 (Scope 1 and 2) of own operations in the Netherlands and the underlying energy data we designed and performed further audit procedures responsive to the risks identified, and obtained audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk that the CO_2e emission data 2020 is misleading or unbalanced, or the risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from errors. Fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. These further audit procedures included the following procedures:

- Obtaining a more detailed understanding of systems and reporting processes, including obtaining an understanding of internal control relevant to our assurance engagement, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Evaluating the design and implementation of the relevant internal controls during the reporting year.
- Conducting more in-depth analytical procedures and substantive testing procedures on the relevant data.
- Evaluating relevant internal and external documentation, on a test basis, to determine the reliability of the CO_2e emission data 2020 (Scope 1 and 2) of own operations in the Netherlands and the underlying energy data.

We have read the other information. Based on our knowledge and understanding obtained through our audit of the financial statements or otherwise, we have considered whether the other information contains material misstatements. By performing these procedures, we comply with the requirements of Part 9 of Book 2 and Section 2:135b sub-Section 7 of the Dutch Civil Code and the Dutch Standard 720. The scope of the procedures performed on the other information is substantially less than the scope of those performed in our audit of the financial statements or in our review of the sustainability information.

Communication

We communicate with the Supervisory Board regarding, among other matters, the planned scope and timing of the assurance procedures and significant findings, including any significant findings in internal control that we identify during our assurance engagements. In this respect we also submit an additional report to the Audit Committee in accordance with Article 11 of the EU Regulation on specific requirements regarding statutory audit of public-interest entities. The information included in this additional report is consistent with our audit opinion in this auditor's report.

We provide the Supervisory Board with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Supervisory Board, we determine those matters that were of most significance in the audit of the financial statements, the review of the sustainability information in scope and the audit of the CO_2e emission data 2020 (Scope 1 and 2) of own operations in the Netherlands and the underlying energy data of the current period and are therefore the key audit and assurance matters. We describe these matters in our combined independent auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, not communicating the matter is in the public interest.

Appendices

Appendix 1: Alternative Performance Measures

In the discussion of KPN's financial results, a number of alternative performance measures (non-GAAP figures) are used to provide readers with additional financial information, that is regularly reviewed by management. These non-GAAP figures should not be viewed as a substitute for KPN's financial results as determined in accordance with IFRS, which are presented in KPN's Consolidated Financial Statements. Also, the additional information presented is not uniformly defined by all companies, including KPN's peers. Therefore, the non-GAAP figures presented may not be comparable with similarly named numbers and disclosures by other companies. In addition, readers should be aware that certain information presented is derived from amounts determined under IFRS, but is not in itself an expressly defined GAAP measure. Such non-GAAP measures should not be viewed in isolation or as an alternative to an equivalent GAAP measure.

KPN's management considers these non-GAAP figures, combined with GAAP performance measures and in conjunction with each other, the most appropriate to measure the performance of the group and its segments. The non-GAAP figures are used by management for planning, reporting (internal and external) and incentive purposes.

All non-GAAP figures are based on continuing operations unless stated otherwise.

KPN's main non-GAAP figures are explained hereafter.

EBITDA

KPN defines EBITDA as operating result before depreciation (including impairments) of PPE and amortization (including impairments) of intangible assets. Note that KPN's definition of EBITDA deviates from the literal definition of earnings before interest, taxes, depreciation and amortization and should not be considered in isolation or as a substitute for analyses of the results as reported under IFRS as adopted by the European Union.

€ million	2020	2019
Total revenues and other income	**5,303**	**5,702**
Cost of goods & services	1,284	1,301
Personnel expenses	892	1,027
Information technology/Technical infrastructure	328	353
Other operating expenses	335	443
Total operating expenses (excl. D&A)	**2,839**	**3,124**
EBITDA	**2,464**	**2,578**

Adjusted revenues and adjusted EBITDA after leases (Adjusted EBITDA AL)

Adjusted revenues are derived from revenues (including other income), adjusted for the impact of incidentals. Incidentals are non-recurring transactions which are not directly related to day-to-day operational activities at or over EUR 5m, unless significant for the specific reportable segment.

Adjusted EBITDA AL is derived from EBITDA, adjusted for the impact of restructuring costs and incidentals ('adjusted') and for lease-related expenses ('after leases' or 'AL'). Lease-related expenses in this definition are the depreciation and impairment expenses of right-of-use assets and interest on lease liabilities, as well as the gains or losses arising upon remeasurement or (early) termination of a lease.

Key items between reported and adjusted revenues

€ million	FY 2020 reported	Incidentals	FY 2020 adjusted	FY 2019 reported	Incidentals	FY 2019 adjusted	y-on-y reported	y-on-y adjusted
Consumer	2,863	-	2,863	2,916	-	2,916	-1.8%	-1.8%
Business	1,853	11	1,841	2,068	25	2,043	-10%	-9.9%
Wholesale	641	17	624	817	190	627	-22%	-0.5%
Network, Operations & IT	9	-	9	6	-	6	65%	65%
Other (incl. eliminations)	-63	-	-63	-105	-	-105	-40%	-40%
KPN Group	**5,303**	**28**	**5,275**	**5,702**	**215**	**5,486**	**-7.0%**	**-3.9%**

Revenue incidentals

€ million	Segment	2020	2019
Book gain on sale of NLDC	Wholesale	-	171
Book gain on sale of International Network Services	Business	-	25
Book gain on sale of KPN Consulting	Business	11	-
Change in revenue related provisions	Wholesale	17	20
Total revenue incidentals		**28**	**215**

Key items between reported and adjusted EBITDA AL

€ million	2020	2019	y-on-y
EBITDA	**2,464**	**2,578**	**-4.4%**
Incidentals	28	210	-87%
Restructuring	-36	-115	-69%
Lease-related expenses			
Depreciation right-of-use assets	-130	-138	-5.6%
Interest lease liabilities	-22	-28	-21%
Adjusted EBITDA after leases	**2,320**	**2,317**	**0.1%**

EBITDA AL incidentals

€ million	Account	2020	2019
Book gain on sale of NLDC	Revenue	-	171
Book gain on the sale of International Network Services	Revenue	-	25
Book gain on sale of KPN Consulting	Business	11	-
Change in revenue related provisions	Revenue	17	20
Addition to asset retirement obligation	Other operating expenses	-	-
Change of provisions	Other operating expenses	-	-6
KPN Group		**28**	**210**

Net opex reduction program

KPN's net opex reduction program is directed at reducing KPN's net indirect operating expenses after leases. The program is directed at the operating expense categories personnel, IT/TI, other operating expenses and lease-related expenses, excluding restructuring costs and incidentals. Through its nature, the program will also mean a reduction in FTEs. The baseline for measurement is the operating expense level at the end of 2018.

The baseline is adjusted for major changes in the composition of the group in the years 2019-2021 (acquisitions and disposals).

The program has generated net indirect opex savings of EUR 278m by the end of 2020.

Free cash flow (FCF)

FCF is defined as cash flow from continuing operating activities plus proceeds from disposals of PPE minus capex (investments in PPE and software) and adjusted for repayments of lease liabilities.

€ million	2020	2019
Net cash flow provided by operating activities from continuing operations	**2,043**	**2,005**
Capex	-1,147	-1,115
Proceeds from real estate	4	1
Repayments of lease liabilities	-135	-141
Free cash flow from continuing operations (incl. TEFD dividend)	765	750
Free cash flow from continuing operations (excl. TEFD dividend)	**765**	**726**

Operational free cash flow

Operational free cash flow is defined as adjusted EBITDA AL minus capital expenditures (capex) being expenditures on property, plant and equipment (PP&E) and software.

€ million	2020	2019
Adjusted EBITDA AL	**2,320**	**2,317**
Capex	-1,147	-1,115
Operational free cash flow	**1,172**	**1,202**

Leverage ratio

KPN defines its leverage ratio as net debt (excl. lease liabilities) divided by the 12-month rolling adjusted EBITDA AL. The ratio is adjusted for major changes in the composition of the KPN Group (acquisitions and disposals) when applicable.

Net debt is defined as gross debt less net cash and short-term investments. Gross debt is defined as the nominal value of interest-bearing financial liabilities representing the net repayment obligations in euro, excluding derivatives, related collateral and leases, and taking into account 50% of the nominal value of the hybrid capital instruments.

For the calculation of KPN's leverage ratio, see Note 12.4 to the Consolidated Financial Statements.

Appendices

Appendix 2: Connectivity of non-financial information

Reference	Strategic pillar	Material topic	GRI reference	Impact/ SDG
Customer value	Grow & strengthen customer footprint	- Customer interaction - Fair access to KPN fixed network	Customer interaction: Own indicator	9. Industry, Infrastructure and Innovation

Critical performance indicator	Target 2020	Result 2020	Result 2019	Result 2018	Target 2021	Target 2022	Target > 2025
NPS CM total	21	11	19	14	13	N/a	N/a
NPS BM total	2	-2	-4	-1	4	N/a	N/a

Reference	Strategic pillar	Material topic	GRI reference	Impact/ SDG
Impact on society	Grow & strengthen customer footprint	- Customer interaction - Social community investments	Economic performance Customer interaction: Own indicator	4. Quality Education

Critical performance indicator	Target 2020	Result 2020	Result 2019	Result 2018	Target 2021	Target 2022	Target > 2025
% chronically ill children provided with a KPN Klasgenoot	100%	100%	100%	100%	100%	100%	100%
# chronically ill children provided with a KPN Klasgenoot	N/a	847	1,046	1,041			

Reference	Strategic pillar	Material topic	GRI reference	Impact/ SDG
Network infrastructure	Leverage & expand superior network	- Network quality, reliability and availability - Responsible operations	Network quality, reliability & availability: Own indicator	9. Industry, Infrastructure and Innovation 11. Sustainable Cities and Communities

Critical performance indicator	Target 2020	Result 2020	Result 2019	Result 2018	Target 2021	Target 2022	Target > 2025
FttH households	N/a	2.78m	2.47m	2.35m	3.23-3.28m	N/a	> 50% of NL in 2023 ~65% of NL in 2025
# mobile sites modernized and 5G ready	N/a	2,803	641	N/a	>80%[1]	> 95%[1]	
Weighted downtime (compared to last year YTD)[2]	N/a	N/a	-36%	-25%	Replace with target on network availability	N/a	N/a
Average 4G/5G download speed at year-end[3]	75Mbps	97Mbps	68Mbps	53Mbps	>115Mbps	>130Mbps	>160Mbps

1 Population coverage

2 New indicator, starting in 2021

3 In 2018-2020 we reported on Average 4G download speed per year-end

Reference	Strategic pillar	Material topic	GRI reference	Impact/ SDG
Focused innovation and digitalization	Grow & strengthen customer footprint	- Data and information protection - Sustainable ICT solutions - Responsible operations	Customer privacy, data and information protection: Own indicator	3. Good Health and Well-being 9. Industry, Infrastructure and Innovation

Critical performance indicator	Target 2020	Result 2020	Result 2019	Result 2018	Target 2021	Target 2022	Target > 2025
# of professionals with secure digital access to healthcare information	55,000	69,770	N/a	N/a	70,000	81,360	130,250
# of clients and patients using healthcare facilities to live with more autonomy	14,000	11,815	N/a	N/a	12,500	13,000	14,500

Reference	Strategic pillar	Material topic	GRI reference	Impact/ SDG
Safeguarded privacy and security	Leverage & expand superior network	- Data and information protection	Customer privacy, data and information protection: Own indicator	9. Industry, Infrastructure and Innovation 11. Sustainable Cities and Communities

Critical performance indicator	Target 2020	Result 2020	Result 2019	Result 2018	Target 2021	Target 2022	Target > 2025
% of Dutch people that believe their data is safe with KPN	70%	66%	68%	69%	70%	71%	73%
% of Dutch municipalities monitored for cyber security attacks so that the appropriate mitigation can take place	40%	5%	N/a	N/a	40%	N/a	N/a

Reference	Strategic pillar	Material topic	GRI reference	Impact/ SDG
Sustainable employability	Leverage & expand superior network Grow & strengthen customer footprint Simplify & streamline operating model	-Attractive working conditions - KPN's corporate governance and human rights compliance	Supplier selection and good governance: Own indicator	5. Gender Equality 8. Decent Work and Economic Growth

Critical performance indicator	Target 2020	Result 2020	Result 2019	Result 2018	Target 2021	Target 2022	Target > 2025
Overall % of women at KPN in the Netherlands	24%	21%	21%	22%	24%	25%	25%
Sustainable employability: % of employees with a new job < 1 year after leaving KPN	>80%	75%	85%	85%	>80%	>80%	N/a
Employee survey score for engagement	80%	86%	77%	77%	82%	83%	83%

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Reference	Strategic pillar	Material topic		GRI reference		Impact/ SDG		
Environmental performance	Leverage & expand superior network	- Environmental performance - Sustainable ICT solutions		Materials, effluents and waste		12. Responsible Consumption and Production		
	Critical performance indicator	**Target 2020**	**Result 2020**	**Result 2019**	**Result 2018**	**Target 2021**	**Target 2022-2024**	**Target > 2025**
	Energy savings by customers as % of KPN Group[1]	94%	309%	126%	88%	200%	125%	N/a
	CO_2e reduction in the chain (scope 3) compared to 2014	17%	17%	16%	16%	18%	N/a	20% in 2025 50% in 2040
	% reduction of energy consumption of KPN Group compared to 2010	29%	37%	30%	27%	44%	49% in 2023	55% in 2030
	Absolute car-fuel savings compared to 2010	50%	74%	49%	45%	70%	60%	only fossil fuel free inflow cars from 2025
	% collected customer premises equipment	80%	92%	74%[2]	67%	85%	90%	N/a
	Climate-neutral own operations	100%	100%	100%	100%	100%	100%	100%
	% reuse and recycling[3]	79%	81%	78%	77%	82%	84% in 2022 85% in 2023	Close to 100% circular
	% fossil fuel free cars added to company fleet in reporting year (lease pool + engineers)	35%	46%	33%	19%	48%	from 2023 only fossil fuel free cars added to our lease pool	100%

1 Avoided energy consumption by Teleworking has been restated for 2019 using an updated norm for the number of hours teleworking per week per teleworker. See Appendix 7 Table 9 for further information.

2 Restated from 78% to 74%. See Appendix 7, Table 10 for further information.

3 Results 2018-2019 have been restated due to improved calculation method and performance of post-incineration recycling of residual waste. For 2019 also due to restated volumes.

Reference	Strategic pillar	Material topic		GRI reference		Impact/ SDG		
Responsible supply chain	Leverage & expand superior network	- Supplier selection and good governance - KPN's corporate governance and human rights compliance		Supplier selection and good governance: Own indicator		12. Responsible Consumption and Production 17. Partnership for the Goals		
	Critical performance indicator	**Target 2020**	**Result 2020**	**Result 2019**	**Result 2018**	**Target 2021**	**Target 2022**	**Target > 2025**
	% realized improvements on corrective action plans	75%	91%	88%	77%	75%	N/a	N/a
	% high-risk Tier I, Tier II and Tier III suppliers audited	40%	32%	41%	42%	40%	N/a	N/a

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Appendix 3: Transparency, materiality and stakeholder engagement

About this report

Scope

The Integrated Annual Report was published on 22 February 2021.

The scope of the information in this report covers the KPN Group and subsidiaries in which KPN has a majority shareholding. This scope is the same as the previous year's report. Unless stated otherwise, references to KPN should be read as referring to the KPN Group. For our non-financial information, we include new acquisitions in our report as of the first full year of ownership. Non-financial information for divestments that occurred during the reporting year is excluded for the full year.

The data in this report refers to KPN's performance and not to that of our subcontractors, unless stated otherwise. The full scope of the financial information is reported in the Consolidated Financial Statements (p. 106). The report specifically reviews developments and performance in 2020 and is based on topics identified as highly material for KPN. The described scope applies to all material topics. Aspects of a more static nature (such as management approaches to our ESG themes and our stakeholders) or with less reporting priority (such as the list of external memberships) are included in the GRI index (p. 221) or reported on corporate.kpn.com/dutchsociety.htm.

Reporting criteria

The purpose of this report is to inform stakeholders about KPN's role in society, in connection with the main strategic objectives and targets. Stakeholders are defined as all people and organizations affected by KPN's operations or with whom a relationship is maintained, such as employees, governments and regulators, the investor community, suppliers, customers and society. The section 'Stakeholder dialogue' in this appendix provides more information on stakeholder approach for specific stakeholder groups.

This report is prepared in line with the International Integrated Reporting Council (IIRC) Integrated Reporting (IR) framework and we comply with the EU Directive Non-Financial Reporting. For the sustainability information included in this report KPN follows the Global Reporting Initiative (GRI) Standards - Option Comprehensive and self-developed reporting criteria as disclosed in this appendix. The Option - Comprehensive of the GRI Standards means that KPN reports on all general standard disclosures and all specific standard disclosures related to identified material topics.

The process for defining the material topics and report content, as well as the list of material topics, is described in the materiality determination. The results of this assessment (list of material topics for KPN, including their reporting priority) determine which GRI standards are set out in this report and which indicators are featured only on the website or in the GRI index. The overview can be found in the GRI index (p. 221).

Quantitative data concerning the workforce and financial results set out in this report has been collected using our financial data management system. The remaining data has been collected using a standardized questionnaire that was completed with data from information management systems by the responsible business units. The Internal Audit and Corporate Control departments used the consistency and availability of supporting evidence as the basis for their assessment of the data reported at group level. Validation criteria set out in advance were also used to assess the data.

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EU Directive: Disclosure of non-financial information and diversity information

Requirements EU Directive	Subtopic	Chapter / Page reference (starting page)
A brief description of the business model	The business environment	Our purpose and the world around us (p. 9) Strategy, key performance and value creation model (p. 12) Our valuable assets (p. 62)
	Organization and structure	Strategy, key performance and value creation model (p. 12) Our valuable assets (p. 62)
	Markets where the undertaking operates	Our purpose and the world around us (p. 9) Strategy, key performance and value creation model (p. 12) Our valuable assets (p. 62)
	Objectives and strategies	Strategy, key performance and value creation model (p. 12) Our valuable assets (p. 62)
	Main trends and factors that may affect the undertaking's future development	Our purpose and the world around us (p. 9)
Relevant social and personnel matters (e.g. HR, safety etc.)	A description of the policies pursued, including due diligence	Our performance: Sustainable employability (p. 51)
	The outcome of those policies	Our performance: Sustainable employability (p. 51)
	Principle risks in own operations and within value chain	Our performance: Sustainable employability (p. 51) Appendix 4: List of top risks (p. 198)
	How risks are managed	Compliance and risk (p. 73) Appendix 4: List of top risks
	Non-financial key performance indicators	Our performance: Sustainable employability (p. 51)
Relevant environmental matters (e.g. climate-related impacts)	A description of the policies pursued, including due diligence	Our performance: Environmental performance and responsible supply chain (p. 55)
	The outcome of those policies	Our performance: Environmental performance and responsible supply chain (p. 55)
	Principle risks in own operations and within value chain	Our performance: Environmental performance and responsible supply chain (p. 55) Appendix 4: List of top risks (p. 198)
	How risks are managed	Compliance and risk (p. 73) Appendix 4: List of top risks (p. 198)
	Non-financial key performance indicators	Our performance: Environmental performance and responsible supply chain (p. 55)
Relevant matters with respect for human rights (e.g. labor protection)	A description of the policies pursued, including due diligence	Our performance: Sustainable employability (p. 51) Procurement and suppliers (p.59)
	Principle risks in own operations and within value chain	Our performance: Sustainable employability (p. 51) Procurement and suppliers (p. 59) Appendix 4: List of top risks (p. 198)
Relevant matters with respect to anti-corruption and bribery	A description of the policies pursued, including due diligence	Maintaining effective risk management (p. 73) Our performance: Environmental performance and responsible supply chain (p. 55)
	The outcome of those policies	Our performance: Sustainable employability (p. 51) Compliance and risk (p. 73)
	Principle risks in own operations and within value chain	Our performance: Sustainable employability (p. 51) Compliance and risk (p. 73)
	How risks are managed	Our performance: Sustainable employability (p. 51) Compliance and risk (p. 73)
	Non-financial key performance indicators	Our performance: Sustainable employability (p. 51)
Insight into diversity (Board of Management and Supervisory Board)	A description of the policies pursued	Our performance: Sustainable employability (p. 51) Report by the Supervisory Board (p. 89)
	Diversity targets	Our performance: Sustainable employability (p. 51) Report by the Supervisory Board (p. 89)
	Description of how the policy is implemented	Our performance: Sustainable employability (p. 51) Report by the Supervisory Board (p. 89)
	Results of the diversity policy	Our performance: Sustainable employability (p. 51) Report by the Supervisory Board (p. 89)

Taskforce on Climate-related Financial Disclosures

KPN recognizes the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD) as an important step in providing transparency on climate strategy. We have mapped TCFD elements to this report (see sections on environmental performance, responsible supply chains and related appendices). KPN's risk framework is described in the chapter Compliance and risk (p. 73) and Appendix 4: List of top risks (p. 198) contains the list of top risks.

TCFD element	TCFD recommendation	KPN reporting on TCFD guidelines
Governance	Describe the governance of Board of Management related to climate-related risks and opportunities	Compliance and risk (p.73)
	Describe the role of management on the judgement and governance of climate-related risks and opportunities.	Compliance and risk (p.73) Appendix 4: List of top risks (p.198)
Strategy	Describe the climate-related risks and opportunities as described on short, midterm and long-term timeframe.	SWOT (p.10) Compliance and risk (p.73) Appendix 4: List of top risks (p.198)
	Describe the impact of climate-related risks and opportunities on business activity, strategy and financial planning of the organization.	Compliance and risk (p.73) Appendix 4: List of top risks (p.198)
	Describe the agility of the strategy, taking climate-related scenarios into account, amongst others a scenario to stay within the 2-degrees Celsius limit for global warming.	Our performance: Environmental performance and responsible supply chain (p.55) Compliance and risk (p.73) Appendix 4: List of top risks (p.198) We performed scenario analysis on long-term energy pricingtaking the impact of CO_2e-price regulation into account.
Risk Management	Describe the climate-related risks and opportunities as described on short, midterm and long term timeframe.	Compliance and risk (p.73) Appendix 4: : List of top risks (p.198)
	Describe the processes the organization uses to manage climate-related risks and opportunities.	Compliance and risk (p.73) Appendix 4: List of top risks (p.198)
	Describe how processes for the identification, assessment and management of climate-related risks are integrated into the risk approach of the organization.	Compliance and risk (p.73) Appendix 4: List of top risks (p.198)
Indicators and objectives	Describe the organizational processes for identification and assessment of climate-related risks.	Compliance and risk (p.73) Appendix 4: List of top risks (p.198)
	Report on scope 1, 2 and 3 emissions	Our performance: Environmental performance and responsible supply chain (p.55)
	Report on performance to climate-related objectives	Our performance: Environmental performance and responsible supply chain (p.55)

External assurance

EY was engaged as an independent assurance provider to perform an assurance engagement with the aim of obtaining reasonable assurance on CO_2e emission data 2012 (scope 1 and 2) of own operations in the Netherlands and the underlying energy data as presented in this Report, and limited assurance on other sustainability information as disclosed in the following chapters and appendices:

- Chapters 'KPN at a glance', 'Our value for stakeholders', 'Our performance', 'Our valuable assets' and 'Tax and regulation'
- Appendices 2: Connectivity of non-financial information, 3: Transparency, materiality and stakeholder engagement, 5: Glossary, 6: Social figures, 7: Environmental figures, 8: Supply chain, 9: Tax overview for continuing operations per country, 10: GRI index

The key social and environmental figures, which are available in appendices 6 and 7, are also part of this report. This report provides more detailed numbers on key figures that reflect on high material topics within the report (such as CO_2e emissions and electricity consumption). This report also contains prospective information, such as ambitions, strategy, targets and expectations. Inherent to this information is that actual future results may be different from the prospective information and as such may be uncertain. Therefore, the assumptions and feasibility of this prospective information are not covered by the external assurance.

The Audit Committee approved every engagement of the external auditor, after pre-approval by the internal auditor, in order to avoid potential breaches of the external auditor's independence. For more details we refer to the Combined Independent Auditor's Report (p. 171).

Reporting ambitions

KPN adheres to several reporting benchmarks, such as the Dow Jones Sustainability Index (DJSI) and the Carbon Disclosure Project (CDP) . In this way, our performance and way of reporting can be compared to peers and expectations from the industry and other stakeholders. Reporting ambitions for the coming years are: to keep reporting in line with the IIRC framework and in accordance with GRI standards; to keep reporting on high material topics; to report more on qualitative and quantitative value creation for society; and to maintain a leading position in several benchmarks like the DJSI and CDP.

Appendices

Scoping and calculation methodologies for environmental figures

Scoping and calculation of reported emissions

The report includes reporting on CO_2e emissions in the chapter Our performance: Environmental performance and responsible supply chain (p. 55) and Appendix 7:Environmental figures (p. 213). Reporting is done in accordance with the guidance and standards of the Greenhouse Gas Protocol and the ISO 14064-1 standard. KPN uses the operational control approach when reporting CO_2 emissions. Carbon dioxide (CO_2) is the most relevant greenhouse gas for KPN. Where available, CH_4 and N_2O are taken into consideration in the greenhouse gas emissions information. The term 'CO_2e-emissions' is used to refer to the greenhouse gas emissions reported on. These are stated in CO_2 equivalents. The emissions report is subdivided in scope 1-3 as set out below.

Scope 1 – Direct emissions

- Fuel consumption of the lease vehicle fleet (employees' passenger vehicles and commercial vehicles)
- Heating of buildings (gas)
- Consumption of coolants for air conditioning and/or cooling
- Fuel consumption of emergency power generators

Scope 2 – Indirect emissions

- Electricity consumption of the fixed and mobile networks, data centers, offices and shops
- District heating
- District cooling

The accuracy of the electricity consumption data is a key factor in the reliability of the CO_2e emissions calculations. In the data-collection process, a number of factors affect the accuracy of the collected data. In general, data originating from direct measurements and recordings or invoices, including measurements from third parties, are the most accurate.

The net Scope 2 emissions are market-based and calculated based on the tank-to-wheel (TTW) CO_2e emissions factors for renewable electricity. For renewables (wind, biomass, solar), the TTW values are all zero. The CO_2e emissions of the well-to-tank (WTT) phase are accounted for in our Scope 3 emissions (category 3 – fuel and energy-related activities). Due to new Dutch reporting principles on determining the carbon emissions of the average gridmix the CO_2e value (gram CO_2/kWh) of the gridmix is increased. 2020 is calculated with the new value and previous years are restated. Both the location-based and market-based Scope 2 emissions are published in Our performance: Environmental performance and responsible supply chain (p. 55).

Electricity providers estimate the consumption for part of our network operations - as monthly meter readings are not always conducted - so there is some uncertainty around the accuracy and completeness of our energy consumption. To improve the accuracy, transparency and reliability of our energy data, we are migrating to remote readable meters, reviewing administrative processes and updating profiles with our electricity providers.

Scope 3 – Other indirect emissions:

- Emissions in the upstream value chain (during the production phase of products, services and equipment at suppliers).
- Emissions in the downstream value chain (during the use phase, including recycling and disposal of the products, services and equipment)

The results are presented in Our performance: Environmental performance and responsible supply chain (p. 55). and in Table 7 of Appendix 7:Environmental figures (p. 213). We have used two main methodologies to calculate Scope 3 emissions: the spend-based method, which takes procurement data and calculates the emissions within an environmentally extended input output (EEIO) model to assess the emissions, and the process-based method, which uses quantity-based data to evaluate the emissions associated with specific activities, e.g. kWh of energy usage or quantity of materials purchased to manufacture goods. In both cases, we used actual data covering January to November, extrapolating it to a full year.

All parameters used in the Scope 3 calculations are checked annually whether new values are available or not. We have updated the grid mix (see scope 2). Suppliers with zero net emissions are assessed and adjusted accordingly. The table below describes the calculation of emission methods, coverage and assurance. We improved in 2020 the CAT13 calculation method using the number of customers instead of the number installed devices. This gives a more accurate and reliable figure of the electricity consumption and corresponding carbon impact of the installed base.

Scope CO_2e	Standard	Scope	Coverage	Approach	Location- / Market-based	Assurance	Emission factor / Green energy
Scope 1	GHG Protocol Scope 1 Guidance	KPN Group	98% of all KPN business units and subsidiaries (opex/FTE)	Operational control approach	Location-based	NL: Reasonable	co2emissiefactoren.nl version 4-1-2021 Gold standard & REDD+ forest compensation projects
Scope 2	GHG Protocol Scope 2 Guidance	KPN Group	98% of all KPN business units and subsidiaries (opex/FTE)	Operational control approach	Location-based	NL: Reasonable	co2emissiefactoren.nl version 4-1-2021 100% green electricity
Scope 3 Cat: 1, 2, 5, 9	GHG Protocol Scope 3 Guidance	Netherlands	98% of all KPN business units and subsidiaries (opex/FTE)	Spend-based (Environmentally Extended Input Output data (EEIO) approach)	Location-based	Limited	UK DEFRA 2014 (Indirect emissions from the supply chain) and CBS Statline The EEIO-factors are corrected for inflation.
Scope 3 Cat: 3, 6, 7, 11, 13	GHG Protocol Scope 3 Guidance	Netherlands	98% of all KPN business units and subsidiaries (opex/FTE)	Process- and activity-based	Location-based	Limited	co2emissiefactoren.nl version 4-1-2021
Scope 3 Cat: 4, 8, 10, 12, 14, 15	GHG Protocol Scope 3 Guidance	Netherlands	98% of all KPN business units and subsidiaries (opex/FTE)	Not applicable for KPN	Not applicable	Limited	Not applicable

Energy consumption and carbon emissions avoided through customers using our IT solutions

The calculation of avoided energy consumption, CO_2e emissions and cost reduction for customers is based on models per service.

The results are presented in Our performance: Environmental performance and responsible supply chain (p. 55) and in Table 9 of Appendix 7:Environmental figures (p. 213).

Avoided energy consumption	Kind of avoidance (most impact)	KPN measurement	Source external information
Teleworking (enabled by KPN connectivity)	Avoided travel	Market share of broadband subscribers based on Telecompaper Research	Publicly available statistics and reports from Statistics Netherlands, Kennisinstituut voor Mobiliteitsbeleid, ECN, Netbeheer Nederland, Milieu Centraal, Telecompaper and other sources
KPN audio conferencing	Avoided travel	Number of audio conferences; average number participants per meeting	Publicly available statistics and reports from Statistics Netherlands, Kennisinstituut voor Mobiliteitsbeleid, British Telecom and CarbonTrust
KPN hosting	Electricity savings	Volume-hosting services	Statistics Netherlands
Dematerialization	Energy and raw materials savings	CD and DVD papers avoided by e.g. Spotify, Netflix	NVPI, Sociaal en Cultureel Planbureau, SVDJ, RVO, CE Delft, WWF and, CarbonTrust
iTV cloud solution	Energy and raw materials savings	Number of customers, energy consumption KPN Cloud for iTV	Stichting KijkOnderzoek
KPN video conferencing	Avoided travel	Number of video conferences; average travel savings per meeting	Statistics Netherlands' research on movement in the Netherlands

We used actual data covering January to November in the calculation, extrapolated for the full year. All parameters are annually checked by KPN for updates. Navigant Consulting has performed a sanity check on the savings calculation of Teleworking how the COVID-19 impact is implemented in the model. For the parameters saved on office space and the extra electricity and gas consumption at home when working at home (rebound effect), the values used in the teleworking savings calculation are based on averages. We use the average between the lowest and highest reported value in reports and research. Cost savings are based on the average fuel, electricity and gas prices published by Statistics Netherlands and Milieu Centraal.

Scope and calculations for KPI % reuse and recycling

The KPI % reuse and recycling covers the outflow of KPN materials and waste destined to be reused, recycled, incinerated or landfilled. This means the scope includes, but is not limited to:

- Regular waste streams from KPN offices and operations
- Obsolete (end-of-use) equipment and inventory coming from KPN operations, offices and shops
- Obsolete (end-of-use) customer-premises equipment and mobile phones that are collected via KPN return programs and processed by KPN or on KPN's behalf

The scope therefore does not include obsolete (end-of-use) customer-premises equipment, mobile phones and related

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packaging that are not collected via KPN return programs. In this case, the customer is responsible for disposing of this in accordance with the law, regulations and local waste-collection procedures.

The outflow of materials and waste is reported in table 10 of Appendix 7. The following disposal methods are reported with reference to GRI-306-2: reuse (i), recycling (ii, iii), incineration (iv, v) and landfill (vii). The other disposal methods, i.e. deep well injection (vi), on-site storage (viii) and other (ix), do not apply. The waste disposal method is mostly determined by selected service partners and their waste-disposal contractor, which are challenged on methods and performance. As part of our circular ambitions, we promote reuse over recycling and incineration with energy recovery over landfill to minimize ecological impacts. Service partners report the waste volumes (tons) on a quarterly basis. These volumes are allocated to the four types of disposal method based on processing rates (%) from direct information or public information. The KPI % reuse and recycling is then calculated by dividing the tons reuse and recycling by the total volume.

Other calculation methodologies

RepTrak

RepTrak has been developed by the Reputation Institute and is used as a method to calculate the reputation score of companies worldwide. The RepTrak methodology also measures the drivers of reputation and the consequences for supportive behavior. The Reputation Institute's policy is to adjust all RepTrak scores by standardizing them against the aggregate distribution of all scores obtained from the Reputation Institute's Annual Global RepTrak Pulse. Standardization has the effect of lowering scores in countries that tend to over-rate companies, and has the effect of raising scores for companies in countries that tend to rate companies more negatively. All RepTrak scores are culturally standardized. This means that all RepTrak results are comparable across countries, industries and over time. Every month, the progress on the key attributes that stimulate reputation and supportive behavior is measured.

The results are based on a minimum of 300 respondents per company each quarter. The data collection method is an online interview of 20 minutes. The qualified respondents have to be familiar or very familiar with the company. The Reputation Institute started using an updated cultural bias adjustment procedure on 1 January 2011, whereby the cultural adjustment analysis was rebased based on the latest reputation scores. Because KPN was already in the middle of setting KPIs, we asked the Reputation Institute to report KPN's reputation scores using the 'old' cultural bias adjustment analysis. Hence, this report shows 'unrebased' reputation scores for KPN. KPN reports the fourth quarterly average in the report.

Net Promoter Score (NPS)

We use NPS as the leading indicator to measure customer loyalty. The NPS results included in this report are calculated and provided by a leading market-research company in the Netherlands. NPS is based on direct customer input, with the key question being whether a customer would recommend KPN to someone else. Depending on the score they give, the customer is classified as a 'promoter' or a 'critic'. The NPS is calculated by subtracting the percentage of 'critics' from the percentage of 'promoters'. The result is displayed as an absolute number instead of a percentage, within a range of -100 to +100.

In this report, all NPS results refer to Q4 of the respective year, based on a three-month rolling average (December 2020 is based on October 2020, November 2020 and December 2020). The NPS Consumer and NPS Business reflect a weighted average based on 2018 revenues. NPS Business combines this with EBITDA margins for segments.

Materiality and stakeholder engagement determination

Materiality

The annual materiality assessment ensures KPN is aware of what is happening around us, where we can have an impact and how we can add focus to our efforts. We conducted an extensive assessment in 2018 . This assessment consisted of both an internal consultation held with employees, representing all sections of KPN, as well as an online survey sent to over 2,500 external stakeholders, representing various stakeholder groups. The outcomes resulted in a list of material topics, which was aligned with the guidelines and standards of the Global Reporting Initiative (GRI). we conducted a review process in 2020, based on the 2018 and 2019 results. The process for this consisted of three steps, detailed below.

Step 1: Review relevance topics for 2020

We applied the same definition of materiality as in 2019 to ensure alignment with the GRI minimum requirements, while incorporating insights from other reporting initiatives. For this report, the definition applied for a material topic is any topic that significantly influences the organization or on which the organization has a significant impact with its activities. This includes positive and negative and direct and indirect influences (risk/opportunity) and impact.

Through a standards, peers, trend and media analysis, we concluded that the 2019 list of topics provided a complete basis for the 2020 report. Furthermore, we conducted an email consultation and several interviews with internal stakeholders to review the context relevance and gain qualitative input on the role and responsibility stakeholders expect of KPN in relation to the topics.

We added one topic after the consultation with stakeholder representatives and adjusted the definition of another topic. These were added to the long list of topics for step 2, which already included the existing topics and definitions.

Step 2: Review impact relevance and maturity

For the second step, to assess the relevance of topics in a KPN context, we conducted an email consultation of internal KPN representatives, followed by an interactive online session to gain qualitative input on the relevance of the topics in terms of risk and opportunity. The outcomes resulted in the below list of adjustments, additions and combinations of topics resutling from step 1 and 2.

Fair access to KPN fixed network - input from step 1	New topic as a result of input from stakeholder representatives and discussion of the topics competition and regulation stemming from the completeness analysis.
Customer interaction - input from step 1	Adjusted definition/impact based on KPN's customer journey and brand identity developments.
Social community investments	Adjusted topic title and scope of definition based on reconsideration of KPN's social responsibility measures (beyond KPN's core business) in relation to COVID-19.
Responsible operations	Adjustments in definition scope, broadening the focus of KPN's responsibility towards health and safety of people in or affected by KPN's operations.
Sustainable ICT solutions	Combined topics 'Sustainable ICT solutions' and 'Innovations in products and services'; participants felt that the impact of these topics was similar.
Environmental performance	Combined topics 'Energy use' and 'Circular operations'; even though the impact and focus of these topics differs in term of KPN influence, participants felt that KPN's environmental performance was not given enough importance as a separate topic and that the topics should therefore be combined.
Attractive working conditions	Combined topics 'Professional development opportunities' and 'Employee diversity & equal opportunity' into 'Attractive working conditions' would better cover the topic of employee wellbeing which, according to the participants, was not highlighted enough on the shortlist.

Participants also provided input on the internal scoring, resulting in the below matrix. The combination of the horizontal axis and the vertical axis determines the degree of impact that KPN has on the topic in society. KPN divides the results into these categories:

- Material topics: we aim to fulfill a leading role on these topics by developing policies, setting targets and defining KPIs to monitor and report on our impact.
- Other topics: we want to demonstrate our social responsibility in these areas, and although we monitor these topics, our reporting on them is more concise.

In order to see where GRI topics are translated into KPN topics, please see the cross reference in Appendix 2 Connectivity of non-financial information.

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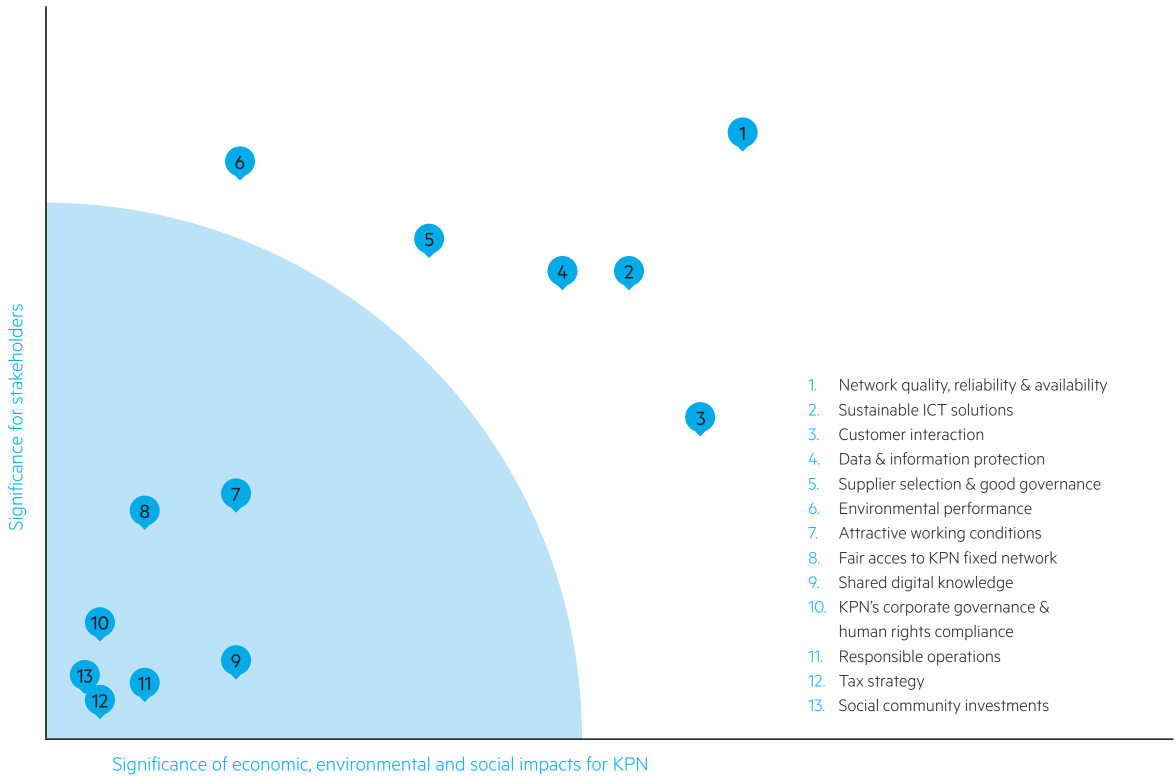
KPN materiality matrix 2020



Step 3: Approval and integration in the report
Based on the priority outcomes of the materiality analysis, approved by the Board of Management, we determined which material topics would be addressed in the report, including the scope and aspect boundaries of all topics. The definitions per topic are described in the below table.

Topic 2019	Topc 2020	Definition
Network quality, reliability & availability	Network quality, reliability & availability	The impact the quality and reliability of KPN's networks have on the accessibility of high-speed internet - and therewith the availability of critical communications (short-term) and the contribution to growing economic and social activity (long-term).
Sustainable ICT solutions / Innovations in products and services	Sustainable ICT solutions	The impact that KPN has with his digital product innovation and future-proof technologies on the acceleration of digitalization and reduction of GHG emissions
Customer interaction	Customer interaction	The impact honest, transparent and relevant communication and marketing (in line with brand identity) has on the sense of appreciation of customers
Data & information protection	Data & information protection	The impact KPN's data protection has on safeguarding the privacy & identity of customers & employees
Supplier selection & good governance	Supplier selection & good governance	The impact that KPN's selection of suppliers has on Dutch society and the impact good governance among KPN's suppliers and respected human rights have on local communities
Energy use / Circular operations	Environmental performance	The impact KPN's energy use for own operations (technologies, networks) and circular approach (sourcing of virgin materials, extended product use, high end second life of product and materials) has on the circular economy, biodiversity and climate change.
Professional development opportunities / Employee diversity & equal opportunity	Attractive working conditions	The impact that providing attractive and fair working conditions (professional development, health & safety, diversity & equality promoting measures) has on KPN's workforce employability, well being and welfare
Topic not existing in 2019 assessment	Fair access to KPN fixed network	The impact that being a decent company and offering fair access to KPN's fixed network (non discriminatory treatment access seekers) has on KPN's competition position
Shared digital knowledge	Shared digital knowledge	The impact KPN has with sharing his knowledge on digital technologies, on preparing and influencing people and society (government) for a digital future.
KPN's corporate governance & human rights compliance	KPN's corporate governance & human rights compliance	The impact that responsible governance (e.g. anti corruption, anti fraud, anti money laundering) and respected human rights (e.g. related to child labour , bonded labour , safety hazards) have on business continuity and trust.
Responsible operations	Responsible operations	
Tax strategy	Tax strategy	The impact of a tax strategy that is compliant with all relevant laws, regulations and international standards that strives to the most tax efficient and responsible approach in the interest of all stakeholders of KPN.
Community investment and sponsoring	Social community investments	The impact KPN's social / community investments on digital access (information and communication technologies) and sponsoring have on digital and social inclusion of everyone and anywhere.

Stakeholder dialogue

KPN is in continuous dialogue with a diverse set of stakeholders, with equally diverse interests and motivations. These dialogues take place on different levels within our organization and are often a part of our daily business. Members of the Board of Management attend the most important stakeholder dialogues, in which a variety of stakeholders are present. The below table provides insight into all the interactions we had with different stakeholders.

Stakeholder group	What they expect	How we engage (incl. frequency)	Main topics in 2020	Our response
Employees	Employees expect us to provide opportunities to develop in a dynamic workplace. For them, this translates to an attractive, effective and inspiring work environment (physical, technology, learning and development); simplicity in data, organization, technology and processes; transparency in the organization, and from leadership, a recognizable culture and values, and excellent development opportunities. New generations expect generational awareness, dynamic career perspectives, continuous feedback, mentoring and coaching, empowermen, purpose and agility.	To some, the changing conditions in the world and the labor market may feel like a threat. That is a natural reaction and we see it as our responsibility as an employer to both create awareness of the consequences of the fast-changing environment and encourage and enable people to seize the opportunities this offers. In the long run, KPN's HR function will increasingly be using data, digital tools and robotization & AI to create an employee experience that responds to increasing consumerism and will result in alternative employment relations.	• Save and COVID-19 proof work environment for all employees • Leadership based on our leadership profile – giving purpose, engaging people, delivering performance. • Maximize internal mobility with continuous support on personal development • Strategic workforce management that focuses on future skills and capabilities, rationalization and standardization, contract independent sourcing and capacity planning • A future-proof organizational design with room for authenticity, diversity and inclusiveness • New way of performance management with maximal room for personal development	• Create a safe and digital work environment, with attention for the psychical and mental wellbeing of our employees • Continuous investment and development of our employees with a enlarged digital L&D offer

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Stakeholder group	What they expect	How we engage (incl. frequency)	Main topics in 2020	Our response
Government and regulators	The government and regulators expect us to comply with the rules and regulations and meet the requirements for licensing. They also expect us to be climate responsible and transparent in our communication. One of their goals is to create a level playing field and protect the interests of end-users. They expect us to run infrastructure and services considered as very important to the Dutch economy and Dutch society at large and to create coverage of high-speed networks, wireless and wireline.	We proactively engage with the government and regulators. We engage in a continuous dialogue to explain our efforts and results. Furthermore, we work together with (local) governments on innovation (e.g. IoT) projects, generating energy and cost savings.	• Avoiding non-compliance • Integrity and transparency • Concerns intensified concerning national cybersecurity throughout 2020.	• We continued our compliance efforts through programs such as optimizing our business control system, external reviews, benchmarking, enhanced compliance training and top management meetings • We work continuously to meet compliance requirements through clear and practical legal advice, clear operational procedures, related control mechanisms, and clear and safe ways to report potential misconduct • We interact closely with ACM in relation to compliance, incidents and potentially different views on the interpretation of the law
Investor community	The investor community – financial markets in general, our shareholders, debt investors and research analysts – expects us to be extensive and transparent. We should be clear and consistent in communicating our financial and operational performance, strategy, objectives, and outlook, and transparent about environmental, social and corporate governance topics, including executive remuneration. Their main interest is our commitment to creating value. They want timely and accurate updates and ample opportunity to seek clarification and ask questions.	We organize key corporate events such as the Annual General Meeting of Shareholders and Capital Markets Days, and we meet with (potential) investors, analysts and credit rating agencies during (virtual) roadshows and conferences. We also provide relevant company information through timely press releases and regular publications such as our quarterly results and Integrated Annual Report.	• Potential changes in strategic direction following management changes late last year • Accelerated rollout of fiber leading to potentially higher Capex • The effect of COVID-19 on operational and financial performance and liquidity position • KPN's brand strategy and effect on operational KPIs. • Continued declining revenues, with growing adjusted EBITDA after leases • Continued subdued free cash flow performance impacted by investments in working capital • Regulatory uncertainty from annulment of significant market power by court, but possibly renewed fixed access regulation from European Electronic Communications Code	• Organized a virtual Strategy Update positioning the strategy for the coming years as an acceleration of some key strategic items rather than a new strategic direction • Highlighted that total Capex will peak at € 1.2bn in 2021 with fiber Capex increasing to € 450-500m, partly offset by a continued decline of non-fiber Capex. Indicated that total Capex will be in the range of € 1.1-1.2bn in 2022 and 2023 • Outlined the impact of COVID-19 in quarterly results disclosure with qualitative impact on key trends and quantitative impact on key financial items • KPN's brand strategy and flexible KPN Hussel proposition are aimed at driving value per household by focusing on the flagship KPN brand and fixed-mobile convergence • Revenue trend is driven by strategic decisions (customer migrations) and COVID-19. Strong cost management led to substantial indirect opex savings in 2020, supporting growing adjusted EBITDA after leases • Negative change in working capital is partly driven by installments paid to fiber contractors, by lower opex due to continuous cost savings, and by different Capex phasing compared to 2019. We realized free cash flow (excl. TEFD dividend) of ~€750m and continued growth of regular dividend per share in 2020 • KPN's fixed access network is no longer regulated, however KPN has reconfirmed its open wholesale policy based on its voluntary offer and the long-term contracts it has in place with several parties

Stakeholder group	What they expect	How we engage (incl. frequency)	Main topics in 2020	Our response
Suppliers	Our suppliers expect to maintain a long-term commitment and cooperation with us. Furthermore, they expect simple contracts, fair prices, acceptable payment terms and compliance with the core principles of data protection. Together we should look for opportunities regarding sustainable cost reduction.	KPN has a central corporate procurement organization that is responsible for contracting deals with suppliers. We make sure the principles of our suppliers' CSR policies are in line with our own. We are constantly in touch with our suppliers and invite them to our annual Supplier Day. We increasingly partner with them on sustainable solutions. We are also a member of the Joint Audit Cooperation (JAC), an association of 17 telecom operators that aims to verify, assess and develop CSR implementation across the manufacturing centers of important multinational suppliers.	• We adjusted our procurement policy in 2020, introducing a new process for suppliers from non-EU countries, mainly to assess potential geopolitical risks involved. One of the reasons we set up this non-EU suppliers procedure was the increased impact of geopolitical issues on international business in the past few years.	• Together with our suppliers we implemented sustainable solutions which resulted in cost reductions, as well as reductions in energy and material use. • We aim for all suppliers we do business with to comply with the KPN Supplier Code of Conduct or have their own equivalent code. Our Code of Conduct helps to ensure that all our suppliers are committed to conducting their business in a manner that is ethical, legal environmentally friendly, respectful of human rights and socially responsible, and adheres to JAC standards too. • KPN has integrated the EcoVadis Scorecard. This is an evaluation of how well a company has integrated the principles of CSR into their business and management system. The assessment is part of our tender process. The scope criteria are across four themes: environment, labor & human rights (Employee Health & Safety, Working Cond., Soc. Dialogue, Child Labor, Forced Labor & Human Trafficking, Diversity, Discrimination and External Stakeholder Human Rights, ethics & sustainable procurement. If the outcome of the assessment is <35 points, the supplier must draw up an improvement plan in order to mitigate identified risks for the purpose of achieving a score of the least 35 points in a later assessment.
Business customers	Customers expect KPN to help them with the digital transformation within their companies. They want sincere and proactive advice that meets their specific needs. Business customers also expect effortless IT solutions and there is a growing customer demand for continuous accessibility, as well as fast and reliable fixed and mobile connections. When problems do occur, they expect KPN to solve them adequately and demonstrate customer-centric behavior.	We talk to our business customers every day via account managers, service managers, in our XL stores, our contact centers and our Business Partners. We give customer the opportunity for 'Advies op Afstand', an online video solution for contact. We also engage with them through customer panels, quarterly market research and workshops connecting customers' strategies with KPN, as well as social media through our B2B platform, The Digital Dutch. We engage through our Customer Experience Lab in which we test the needs and experience of the customers. We closely monitor our business customers' satisfaction and loyalty through NPS.	• Digital Dutch Experience • Improve customer experience & loyalty • Migrations of customers to our target portfolio	• We started a large-scale roll-out of fiber broadband including high-speed internet business parks • We continue to inspire our customers with our online Digital Dutch platform. We co-create content with our customers to inspire others with our customers in the podcast Digital Heroes and proactively engage with our customers in other Dutch forums • Growth in professional services supported by integrated solutions at KPN's larger customers

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Stakeholder group	What they expect	How we engage (incl. frequency)	Main topics in 2020	Our response
Retail customers	Our retail customers expect high-quality products and services for the right price. This includes failure-free networks, clear propositions and processes, a quick and proper response to questions and complaints and good communication. They want sincere and proactive advice about the best possible subscriptions that meet their needs. They also want their loyalty to be acknowledged and appreciated.	We communicate 24/7 with our customers on our front ends (through customer service, our engineers, in our stores and on social media). We collect and monitor both requested and unrequested customer feedback on a daily basis and share these customer voices throughout the company. We also use external panels for our Brand NPS and RepTrak to objectively monitor our reputation.	• Always being connected • A seamless and easy digital experience • Sustainability • Best proposition for households • More use of our networks and more use of customer service due to COVID-19	• We continued the roll-out of fiber broadband, for both existing, new and future customers • We further improved our digital experience • We launched new iTV software with new customer UI • Due to COVID-19 and the related uptake in the use of our network and customer service, we did everything to keep all customers connectedher improved our digital experience
Society	Society expects us to have a positive influence on Dutch society. They expect us to be socially and environmentally responsible and to be a good corporate citizen. They want products and services that help to solve social and environmental issues. They also expect us to be a frontrunner in sustainability and other societal issues by creating sustainable partnerships. KPN has the potential to lead debates, e.g. on privacy and the data use.	We are active in working groups initiated by NGOs and participate in or liaise with organizations such as the European Telecommunications Network Operators' Association (ETNO), the International Telecom Union (ITU), the United Nations Global Compact Foundation, the Dutch Association of Investors for Sustainable Development (VBDO), the ICT Coalition and Circle Economy. Furthermore, we organize an annual meeting with stakeholders to discuss our contribution to society and the desired next steps	Topics discussed with our societal partners were: • How can KPN enforce the beneficial effects of the increased digitalization (a.o. working from home) and safeguard the beneficial environmental effects • How to interact with suppliers on the living- wage standard • What actions does KPN take to stimulate diversity and reduce the gender pay gap • Taking the next step to develop impact measurement	• We developed a new Way of Working that we also promote outside KPN • We put Living Wage on the agenda of JAC and made it a proposal to act upon. • We introduced a recruitment approach aimed at diversity and did an investigation on the existing gender pay gap • We carried out a branch-wide impact study on climate and on employees and we published a handbook on impact measurement for network organizations.

How we engage with policymakers

KPN actively engages with policymakers in politics and government, and sponsors activities that help to generate public debate around the consequences of digitalization, as well as develop actions to address them. For KPN, as a predominantly Dutch operation, policy is primarily shaped in Brussels and The Hague. The focus of our engagement is therefore aimed at policy makers in these cities. To increase relevance with policymakers, our aim is to cooperate as much as possible with other like-minded companies. As such, KPN participates in trade organizations active in the Netherlands as well as at a European level, and contributes to these organizations.

These contributions account for the majority of the disclosed amounts. The sums apportioned to Brussels are part of the sums disclosed in the Transparency Register to which KPN has subscribed from the start. The Transparency Register also encompasses an estimation of cost of staff. KPN also participates in global organzations like GSMA, which aims to develop the mobile industry worldwide, and which engages with policymakers in Europe and elsewhere, too.

Finally, KPN contributes to ITU, which is a standardization body and a United Nations Agency, but which is not a trade organization and therefore is not included in the sums presented.

KPN does not financially, or in any other way, support political parties or candidates for political positions. KPN does engage with national and regional authorities through knowledge-sharing to facilitate informed regulatory policy measures. KPN contributes to sector organizations representing the interests of KPN in specific fields. Management upholds strict standards on ethical and transparent behavior.

Employees who are politically active must ask for permission if they have paid political functions, e.g. as a member of municipal or regional councils. In the past, KPN's policy has always been to approach policymakers directly. KPN does not use external public affairs agencies to speak on its behalf.

KPN presents the amount of money spent on public affairs in three categories. KPN does not disaggregate these figures further, as we are not at liberty to divulge the contributions to individual organizations.

Type of Trade organization	Geographic scope	Spend in 2020 in EUR	Focus of membership (non-exhaustive)
Trade bodies representing the interests of mobile operators worldwide	Global	173,354	Develop the mobile industry worldwide with a focus on a level playing field and predictability of the law. Create common standards and encourage sustainable innovation
Trade body representing Europe's telecommunications network operators	European Union	65,789	Create a level playing field within the EU based on an unambiguous and predictable legal situation Focus on the European Electronic Communications Code, the General Data Protection Regulation, ePrivacy, and the Privacy Shield
Trade body representing industry and employers in the Netherlands	The Netherlands and the European Union	415,565	Monitor and influence nationwide issues that are of importance across sectors, e.g. include creating a prosperous investment climate, fiscal climate, social agenda and a digital agenda
Trade association for IT, telecom and internet companies	The Netherlands	38,115	Monitor, influence and increase awareness of (issues in) the digital economy, e.g. on continuity and security and privacy
Trade association in the technology industry	The Netherlands	136,125	Monitor and influence national policies in particular for the manufacturing industries, such as health care, metallurgy, microconductor industry, and the digital industry
Trade association for the positioning of the Netherlands defense- and safety-related industry	The Netherlands	42,308	Monitor and influence national policies specifically in the field of national security
Trade body and knowledge center representing commercial users of electricity and waterin the Netherlands	The Netherlands and the European Union	27,302	Representing the interests of small, medium and larger organizations that use water and electricity on a professional basis
Trade body representing the interests of the cybersecurity sector	The Netherlands and the European Union	15,000	Aims to increase the digital resilience of the Netherlands and to increase the quality and transparency within the growing cybersecurity sector
Platform for businesses in the Benelux region	Benelux and the European Union	11,000	Platform for businesses in the Benelux, identifying areas where, from a business perspective, closer collaboration and integration is required
Coalition formed to stimulate AI	The Netherlands	18,150	Coalition bringing together organizations to facilitate an organized approach with regard to Artificial Intelligence
Platform for information society	The Netherlands	24,200	Neutral platform where government, knowledge institutions, business and civil society organizations collaborate on public-private partnerships and share knowledge about the responsible design of our digitalizing society
Cluster in the security domain	The Netherlands	24,200	Network of businesses, governments and knowledge institutions, that work together on knowledge development and innovation in security
Association for data-driven marketing	The Netherlands	13,098	Association advocating responsible data-driven marketing, unlocking the potential withing the regulatory framework

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Appendix 4: List of top risks

Category	Risk	Countermeasures	Evaluation
Fast-changing market conditions: strong competition	KPN faces strong competition on services and network access from current competitors as well as new market entrants and OTT players. Competition in Consumer, Business and Wholesale markets may be based on price, content, increased investment in customer acquisition or retention costs, subscription options, coverage and service quality. For wholesale, competition could increase due to the potential reregulation of fixed access networks. Most of our services are increasingly based on technology standards, limiting the possibilities for differentiation from competitors. Our competitive position could be threatened by the inconsistent actions of competitors without own fixed networks, e.g. in the roll-out of fiber networks or in the adoption of pricing strategies. These factors could lead to lower profitability as well as lower market shares. **Impacted strategic objective** Grow & strengthen customer footprint	• Implement a superior network in the Netherlands by: o Accelerating fiber roll-out for Consumer and Business market, increasing availability of high access speeds and improving in-home Wi-Fi coverage o Full modernization of mobile network by enabling the latest innovative technologies o Moving to All-IP infrastructure. • Offer fixed-mobile converged services and competitive price/ portfolio combinations, such as KPN Hussel for Consumer market and KPN EEN MKB, Smart integrations and Smart combinations for Business market. • Improve NPS and offer high quality of service to customers. • Maintain focus on high-value customers in both Consumer and Business markets. • Launch targeted household approach and household-centric propositions. • Introduce new innovative products and services to meet changing customer needs, such as super Wi-Fi. • Lean operating model: acceleration of simplification and digitalization program. This will lead to improved time-to-market, better quality of service and a simplified and agile organization. It will also lead to a structurally lower level of operational costs and swift response to new market developments. • Strengthen distribution power with business partners, online channels and shops. • Strategic partnerships and cooperation with OTT players including third party services such as gaming, pay TV. • Rationalize our brand portfolio: focus on the strong KPN-brand by expanding KPN's service with the best elements of the individual brands to offer customers in all segments better user experience. • Improve customer loyalty and customer experience by optimization and digitalization of customer journeys and implementing advanced data analytics programs. • KPN Ventures to form partnerships with innovative companies and apply their innovations in our products and services.	**Likelihood** High **Impact** High **Trend** Stable **Monitoring KPI:** • Market shares, net adds • Service revenues • ARPU, ARPA
Fast-changing market conditions: disruptive technologies or business models	KPN's business model and financial performance could be affected by (disruptive) technologies, changing customer behavior and new players (including big tech companies). KPN's response to new technologies (such as blockchain, AI, fintech, quantum computing, software-defined networks, alternative network providers, integrated optics and Li-Fi), changing customer behavior and market developments and its ability to successfully introduce new competitive products or services are essential to KPN's performance and profitability in the long run. The introduction of new products and services such as new propositions may be unsuccessful and/or untimely. This could lead to lower profitability as well as lower market shares. **Impacted strategic objective** Leverage & expand superior network Grow & strengthen customer footprint	• Develop new services, business models and pricing models. • Continue the exploration of how KPN can adequately respond to changes in the (telecommunications) market and value chain by implementing new business initiatives in line with KPN's strategy. • Develop strategic partnerships with OTT players and network suppliers. • Implement an agile organization, technology (such as applying open innovation models and standardized technology) and processes to enable swift response to new market developments. • '5G field labs', open innovation hub and proof of concepts (e.g. in software defined networks and network function virtualization) to test new technologies with customers. • KPN Ventures: scout, invest in, and create collaborations with innovative technology companies to enhance innovation in key areas such as IoT, the smart home, cybersecurity, cloud computing, data services, digital healthcare, mobile/video (OTT) services and networking technology. • Perform timely scenario analyses to identify (and act upon) disruptive technologies and changing customer preferences.	**Likelihood** Medium-high **Impact** High **Trend** Increasing risk **Monitoring KPI:** • Revenues existing business (Mobile, Fixed, TV. etc.)
Operational and quality-related incidents	KPN's services, technical infrastructure and IT may be vulnerable to damage, service interruptions, operational issues and loss/theft or manipulation of customer data. These incidents could be caused by failures in the network systems, power supplies, failures and bugs in supporting computer systems, disasters	• Implement a superior network including a resilient design of our networks in the Netherlands by: – Accelerating fiber roll-out for the Consumer and Business markets, increasing availability of high access speeds and improving in-home Wi-Fi coverage – Fully modernizing the mobile network by enabling the latest innovative technologies. – Moving to an All-IP infrastructure.	**Likelihood** Medium **Impact** High **Trend** Stable **Monitoring KPI:** • NPS NL • # major incidents • Damage per incident per service

Category	Risk	Countermeasures	Evaluation
	(e.g. fire), human errors, supplier failures, absenteeism, terrorism or pandemics or by the reduction of legacy systems. During the COVID-19 crisis, our customers and society relied heavily on our networks and services, making them more sensitive and vulnerable to network disruptions. Continued climate changes in the future could lead to rising sea levels, extreme rainfall, flooding or extreme heat; these weather conditions could also disrupt our systems, networks and services. Such incidents could have a negative impact on society, the quality of our services, reputation, profitability and customer satisfaction. **Impacted strategic objective** Leverage & expand superior network	• Lean operating model: acceleration of simplification, automation and digitalization program for improved quality of service. • In order to increase our operational performance as a company, KPN has established the "Operations Stability Program". This – KPN wide-program is focused on increasing the availability of our (critical) services to our customers. It covers several streams, addressing business continuity management, architecture and recovery times, as well as cultural and behavioral aspects. The program is driven by the TDO Leadership and one of our strategic programs. • Monitor performance of technical infrastructure (e.g. traffic growth and utilization rate), IT (predictive analysis of required maintenance) and network components, connections and platforms, and improve (insight in) network redundancy. • Continuous improvement of operational processes and systems (including problem management). • Business continuity management and back-up and recovery plans in case of emergencies (including pandemics) and adequate external communication (e.g. escalation procedures, corporate crisis management teams and public affairs). • Follow up recommendations for improved resilience of networks (e.g. regarding the critical network disruption in June 2019). • Regional roaming in which a part of mobile voice traffic can be transferred to other operators in the event of calamities. • Insurance agreements to cover liability claims from customers or third parties in case of service disruptions. • Continued implementation of the regularly updated KPN Security Policy. • Perform scenario analyses for climate change: assess the effects of climate change (such as flooding or heating risks) on our critical infrastructure and implement additional protective measures where necessary.	• Network availability
Strategic transformation	KPN may not make enough progress with essential simplification and transformation actions, e.g. phasing out legacy networks and systems, simplifying our processes and services, digitalizing the business, organizational transformation (more lean and flat), postmerger integration of our acquisitions or strengthening our capabilities and culture. These actions should result in essential cost reductions, increased agility (e.g. improved time-to-market of new innovative services) and higher-quality of services (e.g. higher NPS and 'first time right'). Global pandemics such as the COVID-19 pandemic could delay the implementation of restructuring and consequently to lower cost savings in the medium term. If KPN cannot realize simplification and transformation in time, we may not be able to adequately respond to our competitors actions, which could lead to lower cost savings and profitability in the future. **Impacted strategic objective** Simplify & streamline operating model (e.g. new ways of digital working, continue strong and disciplined cost savings program)	• Lean operating model: acceleration of simplification and digitalization program (digital customer interaction, digital employee mindset, simple IT architecture and technology). This will lead to improved time-to-market, better quality of service and a simplified and agile organization. It will also lead to a structurally lower level of operational costs. • Rationalization of networks: shutting down legacy networks, moving to a single core network and virtualization. • Rationalization of products and services, IT, datacenters and technical infrastructure. • Increased use of standard (cloud) building blocks in networks. • Focused innovation and govern innovations and simplification at executive level; strong planning of new innovation and simplification project.	**Likelihood** Medium **Impact** Medium **Trend** Stable **Monitoring KPI:** • Opex reduction • Progress on strategic transformation projects • # legacy lines to be migrated
Sustainability	KPN may fail to meet stakeholder expectations relating to energy, emissions and sustainability. This could lead to a loss of customers, a loss of future profitability in the future and reputational damage. **Impacted strategic objective** Recognition as ESG frontrunner	• Embed sustainability in our corporate strategy, ambitions and targets. • Maintain KPN's climate neutral performance (green energy). • Continued efforts to reduce energy use and emissions for our own operations and in the supply chain. • Implement circular operations and services to reduce our footprint, e.g. by collecting customer equipment for reuse and recycling, increasing the longevity of our products and, where possible, switch to less virgin materials.	**Likelihood** Low **Impact** Low **Trend** Stable **Monitoring KPI:** • Energy consumption • Carbon emissions • Circularity (long term goal: close to 100% as of 2025) • Percentage of waste

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Category	Risk	Countermeasures	Evaluation
		• Continue KPN's CO_2e-reduction objectives as approved by the Science Based Targets Initiative (SBTI), which means they are in line with the climate goals of the Paris Agreement. • Measure energy savings from ICT solutions for our customers. • External communication program about KPN's activities in terms of corporate social responsibility, sustainability, energy management and the benefits for KPN customers and Dutch society.	• Ranking in DJSI and CDP or similar future ratings
Information security threats	Generic threats by malicious actors to the security of KPN's networks, IT and (customer) data. Malicious actors, especially those motivated by financial gain, tend to operate on a cost/reward basis. The perpetrators of cybersecurity attacks generally fall into the following categories: nation states, organized criminals, hacktivists, terrorists and insiders. **Impacted strategic objective** Leverage & expand superior network	• Implementation of baseline security measures according to the KPN Security Policy. • Continuously improvement of security according to the KPN Security Lifecycle. • Role-based security awareness of KPN employees, partners and suppliers. • Enhanced risk intelligence and increased network visibility. • Continuously develop of security capabilities (people and tools). • Execute strategic security actions, e.g. permanent vulnerability management, identity and access management, endpoint protection, and security incident & event management. • Introduce cyber threat hunting. • Increase cybersecurity exercises to improve response readiness.	**Likelihood** High **Impact** High **Trend** Increasing risk **Monitoring KPI:** • Potential harm of security incident • Average # days to close incidents and vulnerabilities • # data leakages • Severity and # security incidents
Regulatory compliance	KPN may face issues in relation to non-compliance with regulation, including –but not limited to– telecommunications, privacy and consumer protection regulations. These incidents can lead to fines or have a negative impact on KPN's reputation and relationship with regulators and/or supervisors. **Impacted strategic objective** Generic	• Centralized organization for compliance and risk management • Compliance training sessions for staff and management, e.g. e-learnings about the company codes for all staff KPN employees in the Netherlands. • Proactive internal compliance investigations. • Surveys and culture improvement programs. • Improve and maintain a robust internal control framework dedicated to complying with specific regulations. • Ringfence Wholesale within operations. • Quarterly compliance report for Board of Management	**Likelihood** Medium **Impact** Medium **Trend** Stable **Monitoring KPI:** • Fines • # compliance incidents reported to regulator
Tax	• Adverse decisions or interpretations of tax authorities on pending disputes or changes in tax treaties, tax laws, OECD guidelines, EU directives and other rules could have a material adverse effect on KPN's net result and cash flow. • Notwithstanding the fact that KPN is committed to be fully compliant with the relevant laws and regulations and adheres to its tax strategy and policy (see ir.kpn.com), some of KPN's tax positions could be perceived negatively by the political environment and society, which could lead to reputational damage. • With regard to WBSO and innovation box benefits, KPN has a declining number of eligible hours for WBSO, mainly due to divestments and lower qualifying capex budgets for innovation. • If business results are lower than expected, KPN's net DTA may have to be impaired, partly or in full. • The introduction of new mobile consumer propositions in August 2016 caused a change in the VAT calculation methodology, which resulted in a lower remittance of VAT from August 2016 until December 2018. KPN's view is not shared by the Dutch tax authorities. Based on the applicable regulations, KPN concluded that a positive outcome of this dispute is very unlikely and therefore recorded a contract liability for the VAT amount. A potentially negative outcome of a forthcoming court proceedings will lead to a negative cash flow in future years. **Impacted strategic objective** Generic	• Act in line with our company-wide tax strategy and tax policy. • Continuously monitoring of internal control framework for key tax risk areas. • Maintain good working relationships with tax authorities. • Conduct tax planning, while remaining compliant with all relevant laws, regulations and international standards. • If (taxable) profits do not develop according to plan, timely action/tax planning is needed to avoid impairment (loss) of DTA. • Defending KPN's position in the courts.	**Likelihood** Medium-high **Impact** High **Trend** Increasing risk **Monitoring KPI:** • Effectiveness of tax control framework

Category	Risk	Countermeasures	Evaluation
Electromagnetic fields	Although there is no evidence that electromagnetic fields of (mobile) equipment or base stations pose health risks, a change in this view could expose us to significant claims and litigations, a severe drop in our mobile business or high compliance costs from new laws and regulations (e.g. major changes in our mobile networks). The public perception of electromagnetic fields or the actions of anti-5G movements could hinder the roll-out of mobile networks or disrupt our (critical) communications equipment, which could lead to service disruptions and higher operating costs. **Impacted strategic objective** Leverage & expand superior network	• Monitor national and international scientific research on the effects of electromagnetic fields on health, provide data to longitudinal and other research. • Strict adherence to all national and international standards for electromagnetic fields. • Increase pressure on government (EU -via GSMA- and national) to calm the debate surrounding electromagnetic fields. • Provide the public with adequate scientific information on the effects of electromagnetic fields. • Start escalation procedures and continuous consultation with police, local authorities, industry representatives (Monet) and owners of mobile sites on preventive and protective measures (e.g. surveillance) to protect mobile sites.	**Likelihood** Very low **Impact** High **Trend** Stable **Monitoring KPI:** • Research developments
Impact of new regulations	New regulatory decisions in the EU and the Netherlands could affect KPN's future operations and profitability, such as decisions regarding continuity, end user protection, having a level playing field in access regulation and between telco and internet players, (national) security and spectrum auctions. **Impacted strategic objective** Generic	• Proactive stakeholder and reputation management including dialogue with regulators, national security agencies and decision makers • Periodic report to the Board of Management on status of new laws and regulations	**Likelihood** Medium-high **Impact** Medium **Trend** Increasing risk **Monitoring KPI:** • N/a
Uncertainty about KPN's future business model to recover high investments	The telecom and ICT market is characterized by increasing competition, accelerating changes in customer behavior, accelerating technological developments, increasing data use, increasing price pressure and shrinking markets. Due to these developments, high investments in our assets such as technical infrastructure (access and core networks), IT infrastructure, licenses and goodwill may not be recovered, as KPN's business models to generate revenue and cash flow streams could change in future. Also, changes in assumptions such as profitability, network penetration, long-term growth and discount rate could negatively affect the value of cash-generating units. These factors could lead to impairments of assets, licenses and goodwill. **Impacted strategic objective** Leverage & expand superior network	• Robust capex planning, supported by a data-driven decision-making process and based on RoCE and NPV analyses. • Cross- and upselling of new services such as IoT, cloud, security and content to add value to our connectivity and access portfolio. • Steer customer lifetime value (CLV) steering by monitoring end-to-end profitability of services and business lines. • Long-term vision of our networks, to optimize and align future investments (both timing, size and technology) with our commercial portfolio, market developments and financial performance. • Continuously monitor strategic business plans and performance, e.g. utilization and return on investments. • Develop strategic partnerships and investigate options for network sharing. • Implement a solid investment policy. • Monitor profitability of the cash-generating units and network penetration.	**Likelihood** Medium **Impact** Medium-high **Trend** Stable **Monitoring KPI:** • RoCE • Capex as % of Revenues • Utilization of networks
Delayed roll-out of new networks	The telecommunications industry is characterized by rapid technological changes and innovations. To meet future customer needs and stay ahead of our competitors, KPN must continuously invest in its infrastructure to upgrade, modernize and simplify our networks and supporting systems. The modernization of our fixed networks (e.g. fiber roll-out) and mobile networks could be delayed, e.g. due to higher costs, lack of	• Continuously monitor strategic business plans and performance, e.g. organic growth of EBITDA and FCF, utilization and return on investment. • Robust capex planning, supported by a data-driven decision making process and based on NPV analyses. • Perform RoCE analyses on current and future investments. • Develop strategic partnerships and investigate options for network sharing. • Close long-term contracts with suppliers and contractors to safeguard construction capacity for the near term.	**Likelihood** Low-medium **Impact** High **Trend** Decreasing risk **Monitoring KPI:** • Net cash flow from operating activities • Progress in fiber roll out and network modernization

Appendices

Category	Risk	Countermeasures	Evaluation
	construction capacity, the COVID-19 and other pandemics or initiatives of (new) competitors. Also, if KPN cannot generate sufficient cash flows in future, we will not be able to realize and finance the required investments. This could lead to a higher churn of customers, declining market share and lower revenues and profitability. **Impacted strategic objective** Leverage & expand superior network		
Spectrum auctions	Participation in spectrum auction in the Netherlands in 2022 (3500 MHz): in acquiring the required frequency blocks KPN may have to pay a high price for the required spectrum. **Impacted strategic objective** Leverage & expand superior network	• Thorough preparation by experienced KPN team and external experts; extensive auction simulations. • Investigate alternative combinations of spectrum and advanced techniques to meet customer demands. • Prudent financial policies to secure adequate funding. • Proactive stakeholder management and dialogue with regulators and other governmental bodies.	**Likelihood** Medium **Impact** High **Trend** Stable **Monitoring KPI:** • KPN spectrum position relative to competitors
New business initiatives not sufficient to compensate declining existing business	KPN may not be able to sufficiently grow and monetize new business initiatives and opportunities in the near future to compensate declining existing business, which may jeopardize KPN's profitability. **Impacted strategic objective** Grow & strengthen customer footprint	• Focused innovation initiatives such as IoT and 5G, new business as well as strategic partnerships and cooperation with OTT players (open innovation model) to ensure KPN meets the changing customer needs and adapts to a dynamic market. • 5G field labs, KPN Innovation Playground and proof of concepts (e.g. in software defined networks and network function virtualization) to test new technologies with customers. • Open innovation hub to incorporate innovation themes in KPN's strategy. • KPN startup community to co-operate with startups and scout new innovative technologies. • KPN Ventures to form partnerships with innovative companies. • Allocate capex budgets for innovative new business • Steer migration of customers from legacy to new innovative portfolio • Accelerate digitalization of processes and customer services to foster swift development and roll out of new innovations.	**Likelihood** Medium-high **Impact** Medium **Trend** Stable **Monitoring KPI:** • Revenues new business and legacy services • Market sizes (IoT, etc.) • OIT IT and Telco • Incubator budget
Financing KPN and volatile financial markets	KPN requires solid access to (debt) capital markets to finance its operations and refinance its outstanding debt. The pressure on KPN's financial framework may increase in the event of higher net debt levels and/or lower profitability. In that case, KPN might not be able to maintain its current credit ratings, which could negatively affect pricing and availability of financing resources. **Impacted strategic objective** Net debt/EBITDA ratio < 2.5	KPN ensures solid access to debt capital markets by: • Committing to an investment-grade credit profile. • Maintaining a strong liquidity position and prefunding debt redemptions. • Monitoring and forecasting of metrics used by rating agencies. • Maintaining discipline in allocating capital to investment opportunities and shareholder remuneration.	**Likelihood** Low-medium **Impact** Medium-high **Trend** Decreasing risk **Monitoring KPI:** • Credit rating • Net debt/EBITDA ratio • Liquidity forecast • Rating metrics (used in credit rating) • Dividend pay-out ratio • Interest cover ratio
	Uncertainty or changes in financial markets could negatively affect pricing and availability of KPN's funding sources. **Impacted strategic objective** Generic	• Forecasting cash flow to ensure sufficient liquidity headroom in both normal and stressed market circumstances. • Maintaining a varied maturity profile, limiting the amount of debt maturing in any one calendar year. • Financing upcoming debt maturities well ahead of their maturity. • Maintaining sufficient liquidity reserves in the form of cash and / or committed credit facilities. • Managing the mix of floating and fixed interest rates • Diversifying funding sources.	**Likelihood** Medium **Impact** High **Trend** Increasing risk **Monitoring KPI:** • Liquidity forecast • Redemption profile • Fixed/floating interest rate mix
Equity erosion	Group equity position may be negatively impacted by impairments of goodwill or other assets, lower profits or future dividend payments. If our equity position is too low, it could potentially limit our dividend payments to shareholders. **Related strategic objective** Generic, progressive dividend policy	• Improve profitability of KPN Group. • Monitoring (future) development of equity position and solvency ratio. • Balanced shareholder remuneration in relation to profit and cash flow development.	**Likelihood** Low **Impact** Medium **Trend** Decreasing risk **Monitoring KPI** • Group equity position • Free distributable reserves • Dividend pay out ratio (based on net profit)

Category	Risk	Countermeasures	Evaluation
Reliance on suppliers and their products and services	KPN relies heavily on the products and services of external suppliers. This reliance concerns adequate telecommunications equipment, software and IT services, and contractors' ability to build and roll out telecommunications networks, as well as suppliers' ability to deliver technical support. This reliance could potentially lead to unbalanced supply-demand relationships and an inability to obtain products and services at a competitive price and quality. Containment measures for pandemics could impact the financial health of suppliers which could affect the quality and continuity of our services and projects. Scarcity could lead to increasing prices. We have also identified a risk of an inappropriate level of back-to-back contracting with regards to customer requirements on e.g. price and services in supplier agreements. KPN suppliers could breach relevant legislation such as data protection, security, privacy, IPR, human rights and/or environmental laws, which could negatively impact KPN's reputation. **Impacted strategic objective** Leverage & expand superior network	• Establishing a strong and centralized demand and contract management organization that defines, enforces and monitors supplier compliance with contract terms and preparation of re-transition plans as fallback scenario. • Continuously monitor the availability and timely delivery of critical products and services with key suppliers and update business continuity plans accordingly. • Simplify the supplier landscape in line with KPN's strategy and cost focus. • Evaluate outsourced activities in terms of effectiveness and efficiency and (where applicable) prepare a re-transition plan for insourcing. • Include the possibility to terminate contracts based on non-performance and in that case migrate the activities to other suppliers. • Include a right to audit clause in supplier contracts and the possibility to conduct regular audits. • Monitor compliance of suppliers with the KPN Security Policy. • Align customer contract requirements with supplier contract requirements (this alignment is part of the governance rules for outsourcing), in line with requirements and policies of the General Counsel Office. • Share the KPN Supplier Code of Conduct with all suppliers and request all medium and high risk suppliers to confirm compliance with this code • For high-risk suppliers, carry out audit procedures to evaluate suppliers' compliance with international standards for human rights and environmental laws, and monitor timely follow-up on main audit findings. • Promote transparent pricing and way of doing business. • Secure long term commitments with contractors and key suppliers, e.g. for fiber roll-out.	**Likelihood** Medium-high **Impact** Medium-high **Trend** Increasing risk **Monitoring KPI:** • Spend development: % spend at top 20 suppliers • JAC audit results
Employment and diversity	As the war for talent rapidly increases, KPN may not be able to attract and retain qualified and diverse employees, . This could lead to insufficient competencies among KPN's workforce. Employees or new candidates may also have negative perceptions about KPN as an employer. If KPN does not meet the diversity goals and 'social return' requirements, this could impact KPN's future profitability (e.g. lower margins in business market for public sector), customer satisfaction and reputation. Reorganizations could lead to employees being less motivated personnel and/or key staff leaving the company, and so a loss of knowledge and continuity. **Impacted strategic objective** Generic	• Improve skilled and talented workforce by: – Employing innovative and inspiring talent management programs to attract and maintain qualified staff (both in the Netherlands and abroad). – Discovering new talent and making KPN more attractive to talented employees across the organization. – Launching a new employer identity campaign and accompanying labor market strategy to attract external staff with new capabilities. – Promoting initiatives in technical education initiatives at high schools and universities to attract a new and diverse workforce. – Employing targeted development programs to attract new recruits for specific subjects such as security and cloud. • Communicate clearly to (key) staff about KPN's strategy and reasons for reorganizing and value their opinions. • Sustainable employability and mobility: support employees in acquiring different skills, enabling them to find a new role inside or outside KPN. • Maintain or improve employee engagement and attractiveness as employer. • Continue to implement KPN's policy to improve diversity in KPN's workforce. • Implement of a strategic plan on inclusion and social return.	**Likelihood** Medium **Impact** Medium **Trend** Stable **Monitoring KPI:** • Employee engagement • % women in CLA 12 and higher • KPN's ranking in 'attractive employer' benchmarks
Adverse macroeconomic conditions	The economic climate could deteriorate in the short term, e.g. Because of the impact of the COVID-19 or other pandemics, continued political uncertainties in Europe and the United States and increasing protectionism and polarization in global trade. This could lead to a drop in customer spending in both the Consumer and Business markets and higher bad debt, and consequently lead to lower future revenue growth, profitability and cashflows. **Impacted strategic objective** Grow & strengthen customer footprint	• Close monitoring of and swift response to new market developments and trends, e.g. by performing scenario analyses and drafting contingency plans such as plans for cost-cutting initiatives and restructurings. • Lean operating model: acceleration of simplification and digitalization program. This will lead to improved time-to-market, better quality of service and a simplified and agile organization, as well as a structurally lower level of operational costs. • Seize new opportunities by innovating and introducing new services, to compensate for (accelerating) decline in telecom and IT businesses.	**Likelihood** High **Impact** Medium-high **Trend** Increasing risk **Monitoring KPI** • Order intake, sales • Organic revenue growth • Bad debt, deferred customer payments

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Category	Risk	Countermeasures	Evaluation
Pandemics	Global epidemics or pandemics such as COVID-19 and the accompanying containment measures could have several adverse effects on our business in the coming years: • Lower business revenues, e.g. caused by lower roaming revenues, lower handset sales and cancellations or postponement of sales contracts in business market (e.g. IT projects). • Increasing interruptions in the continuity and quality of our services, e.g. caused by sickleave of key staff or disruptions in the international supply chain leading to a shortage of network equipment or devices. • Lower operational cash flows due to increasing bad debt in Consumer, Wholesale or Business markets (especially when the Dutch government reduces its COVID-19 support packages). Overall, the risk could lead to lower profitability of our operations and declining customer satisfaction. **Impacted strategic objective** Grow & strengthen customer footprint	• Implement a superior network including a resilient design of our networks in the Netherlands, to offer our customers reliable and robust telecom services. • Hire trained staff who are committed to delivering a high quality of customer services amid the challenging conditions of a pandemic. • Offer excellent remote customer services e.g. via video chats or helpdesks. • Accelerate the digitalization program for improved digital customer journeys and quality of service. • Continuously assess our revenue risk profile and focus on services that are relevant for customers during a pandemic, such as broadband, security and videoconferencing services. • Implement protective and preventive measures for engineers and shop staff. • Implement strong network facilities for office staff to work from home. • Corporate Pandemic Team that co-ordinates, in close cooperation with Board of Management, the necessary actions in response to national virus developments and new regulations. • Continue to execute cost-saving programs to offset declining revenues. • Revisit roaming contracts and improve working capital management. • Prepare fallback scenarios and dual sourcing contracts if suppliers are unable to deliver their products and services due to the effects of a pandemic or containment measures.	**Likelihood** High **Impact** Low-medium **Trend** Stable **Monitoring KPI** • Order intake, sales • Organic revenue growth • Bad debt, deferred customer payments
Geopolitical developments for suppliers, which could trigger security, business continuity and reputational risks	Geopolitical volatility, driven by rising international tensions, protectionism and security concerns, may impact our ability to do (sourcing) business in any part of the world. These concerns could lead to bans and other sanctions on suppliers of hardware and software from countries with offensive cybersecurity activities. Such sanctions could significantly impact the supply chain and products of those suppliers and consequently also harm KPN's availability, innovation roadmap and use of network equipment. Additionally, public opinion of these vendors could lead to reputational damage and loss of consumer or business customers. The Dutch government or other regulating bodies may impose additional security requirements or ultimately a ban of a vendor in order to mitigate or prevent possible security issues that some vendors (or the originating countries) could present for Dutch society. If we can no longer use the equipment of those vendors in (parts of) our networks, it could lead to higher and unexpected investment and maintenance costs in the future. **Impacted strategic objective** Leverage & expand superior network	• Conduct frequent threat analyses and closely monitor the latest global and political developments in general and specifically US and EU actions regarding suppliers from countries with offensive cybersecurity activities. • Perform scenario analyses during network and solution design to assess potential implications of geopolitical developments for suppliers and the impact these have on associated risks. • Prepare fallback scenarios and policies if KPN can no longer acquire or use hardware and software from specific suppliers and avoid dependence on single vendors or countries for critical or vital services. • Implement new governmental regulations by defining KPN's critical assets and implementing technical and process security measures to sustain trusted service delivery with specific suppliers (Vendor Security Assurance program). • Ensure good relations with relevant national security agencies and political decision makers. • Maintain strong PR and communication with customers and other stakeholders regarding the use of equipment from specific suppliers and KPN's high security standards. • Implement structural risk management processes in the RFP and contracting phases to be able to respond to global and political developments for vendors and their country of origin. • Include the possibility to terminate contracts due to geopolitical developments and governmental decisions. • In the longer term, consider using open source and standardized network equipment and interfaces to limit dependence on specific suppliers or proprietary hardware and software.	**Likelihood** High **Impact** High **Trend** Increasing risk **Monitoring KPI** • N/a

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Appendix 5: Glossary

3G
Third-generation mobile system, which is based on the UMTS universal standard.

4G
Fourth-generation mobile system, a standard for wireless communication delivering high-speed data for mobile phones and data terminals.

5G
Fifth-generation mobile system, a standard for wireless communication delivering high-speed data for mobile phones and data terminals, exceeding 4G speeds. 5G targets high data rates, reduced latency, energy saving, higher system capacity and massive device connectivity.

A

ACM (Authority for Consumers and Markets)
The ACM acts as a regulator in the Netherlands and is responsible for monitoring compliance with antitrust rules.

ADR
American depository receipt.

Adjusted revenues
Adjusted revenues are derived from revenues (including other income) and are adjusted for the impact of restructuring costs and incidentals. Incidentals are non-recurring transactions of EUR 5m or over unless significant for the specific reportable segment, which are not directly related to day-to-day operational activities.

Adjusted EBITDA AL
Adjusted EBITDA AL (adjusted EBITDA after leases) are derived from EBITDA and are adjusted for the impact of restructuring costs and incidentals and for lease costs, including depreciation of right-of-use assets and interest on lease liabilities. Incidentals are non-recurring transactions of EUR 5m or more unless significant for the specific reportable segment, which are not directly related to day-to-day operational activities.

AI (artificial intelligence)
AI is the intelligence demonstrated by machines.

API (application programming interface)
A digital socket that can provide developers with controlled access to internal services.

ARPU (average revenue per user)
ARPU is the sum of connection fees, monthly fixed subscription revenues, traffic revenues and gross service-provider revenues less related discounts during a one-month period, divided by the average number of customers during that month. Gross service-provider revenues represent revenues generated by third-party providers. KPN accounts for the net part as gross service-provider revenues.

Average 4G download speed
The average download speed is based on the results of a speedtest that customers initiate on 4G with their smartphone. Robot measurements and customers using networks other than KPN's are excluded from the results.

Average maximum download speed broadband fixed
The average maximum download speed that we report is the predicted technical speed, based on the best available technologies, per address. Figures are based on year-end data.

B

BCF (business control framework)
The BCF contains all corporate policies and guidelines that are mandatory for KPN segments and entities. It forms the cornerstone of the governance of the KPN Group.

B2B
Business-to-business, commercial transactions between businesses.

Broadband
Broadband refers to telecommunication that provides multiple channels of data over a single communications medium, typically using some form of frequency or wave division multiplexing.

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C

Capex (capital expenditure)
Investments in property, plants, equipment and software.

CDP
The CDP (formerly the Carbon Disclosure Project) is a joint initiative of investors worldwide that questions and benchmarks listed companies on their approach to climate change.

Churn (calculated on an annual basis)
The number of customers no longer connected to an operator's network divided by the operator's customer base.

Circular economy
The circular economy is a generic term for an industrial economy that is producing no waste and pollution and in which material flows are of two types: biological nutrients, designed to re-enter the biosphere safely, and technical nutrients, which are designed to circulate at high quality in the production system without entering the biosphere.

Climate-neutral
For KPN, climate-neutral means operating with zero net CO_2e emissions.

Cloud services
Cloud services are standardized IT capability (services, software or infrastructure) delivered via internet technologies in a pay-per-use, self-service way.

C2B
Consumer-to-business, a business model in which consumers create value and businesses consume that value.

CO_2e
Carbon dioxide equivalent, is a standard unit for measuring carbon footprints. The idea is to express the impact of each different greenhouse gas in terms of the amount of CO_2 that would create the same amount of warming. That way, a carbon footprint consisting of different greenhouse gases can be expressed as a single number.

Conflict minerals
Conflict minerals are minerals mined under conditions of armed conflicts and human rights issues. These minerals are used in a variety of products, including consumer electronic devices such as mobile phones.

CSR (corporate social responsibility)
CSR, to KPN, is the integrated vision of entrepreneurship, in which the company takes responsibility and creates value in economic (profit), ecological (planet) and social (people) terms. We incorporate CSR into our business and by doing so, take our social responsibility and contribute to societal challenges.

Customer base
Customer base is the total number of subscribers.

D

DEFRA
UK Department for Environment, Food & Rural Affairs. DEFRA has published conversion factors to calculate greenhouse gas emissions.

DJSI (Dow Jones Sustainability Index)
The DJSI series is a collection of indices that track the performance of companies that are frontrunners in terms of CSR. The DJSI is based on an analysis of corporate economic, environmental and social performance. There are several sub-indices based on geographical parameters.

DSL (digital subscriber line)
DSL is a technology for bringing high bandwidth information to homes and small businesses over copper PSTN lines. The widely used term xDSL refers to different variations of DSL, such as ADSL, HDSL, VDSL and SDSL.

E

EBITDA
Operating result before depreciation and impairments of property, plant and equipment and amortization and impairments of intangible assets.

EBITDA AL
EBITDA AL (EBITDA after leases) are derived from EBITDA and adjusted for lease costs, including depreciation of right-of-use assets and interest on lease liabilities.

EcoVadis
EcoVadis is an international platform that assesses the material CSR impacts of companies. Purchasing organizations can integrate EcoVadis Scorecards into their day-to-day business practices driving their organization to make more sustainable procurement decisions, while positively incentivizing trading partners that align with their sustainability practices.

EEIO (environmentally extended input output data)
EEIO models estimate energy use and/or GHG emissions resulting from the production and upstream supply chain activities of different sectors and products. The resulting EEIO emissions factors can be used to estimate cradle-to-gate GHG emissions for a given industry or product category. EEIO models are derived by allocating national GHG emissions to groups of finished products based on economic flows between industry sectors.

ESG (Environmental, social and corporate governance)
Environmental, Social, and Corporate Governance (ESG) refers to the three central factors in measuring the sustainability and societal impact of an investment in a company or business.

Externally
An externality is an economic term referring to a cost or benefit incurred or received by a third party. However, the third party has no control over the creation of that cost or benefit.

F

FTE (full-time equivalent)
The equivalent of the number of employees with a full-time contract. FTEs are calculated compared to the standard number of contract hours per employment group within KPN.

FttH (Fiber to the Home)
FttH is defined as an access network architecture in which the final part of the connection to the home also consists of optical fiber.

FttH households
FttH households are defined as premises to which an operator can connect in a service area. Fiber is available, at least, at the premises property boundary.

FCF (Free cash flow)
FCF is defined as cash flow from continuing operating activities plus proceeds from real estate, minus capital expenditures (Capex), being expenditure on PP&E and software and adjusted for repayments of lease liabilities.

G

Gbps (Gigabit)
A gigabit is a unit denoting the speed of data transfer. It is the speed in billions of bits per second.

GHG (Greenhouse Gas) Protocol
The GHG Protocol is a multi-stakeholder partnership of business, non-governmental organizations (NGOs), governments and others that develop internationally accepted GHG accounting and reporting standards for organizations.

Green electricity
Green electricity is electricity from renewable sources. KPN only uses wind energy and electricity from biomass that does not compete with food production.

GRI (Global Reporting Initiative)
The Global Reporting Initiative is an organization that publishes international standards for CSR reporting.

H

High-risk supplier
Our procurement process includes an assessment of all new contracted suppliers, classifying them based on the potential social and environmental risk their operations, products and services represent. We assess this risk based on three parameters: geographical areas, spend and potential environmental impact of a supplier's operations, products or services. High-risk suppliers are audited by independent external auditors once every two to four years.

I

IT
IT refers to information technology.

IoT (Internet of Things)
The Internet of Things connects objects such as garbage bins or cars via a chip with the internet. This offers many opportunities, such as Smart City solutions.

IPTV
IPTV is a system through which television services are delivered using the internet protocol suite over a packet-switched network such as the internet. iTV is KPN's IPTV offering in the Netherlands.

ISDN (Integrated services digital network)
A form of digital telephony. It is an alternative to the analogue POTS. With ISDN, more data can be transported over a copper two-wire connection at the district level than is usually possible with POTS.

ISO (International Organization for Standardization)
This organization is responsible for international management standards such as ISO 14001, ISO 140064-1, ISO 27001 and ISO 22301 (mentioned in this report).

iTV
iTV stands for interactive TV. With iTV, the customer can easily choose when, where and which programs to watch.

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J

JAC (Joint Audit Cooperation)
The JAC is a cooperation of 13 European telecommunication operators (including KPN) focusing on the social, ethical, and environmental conditions across their supply chains.

K

KPN Mooiste Contact Fonds
This KPN foundation supports societal initiatives aimed at stimulating social contact, by combining people and technological resources to best advantage.

L

LGBTQI+
Lesbians, gays, bisexuals, transgenders, queers, intersexuals and people with other sexual and/or gender identity. KPN Pride is an inclusive community for LGBTQI+, and all colleagues (including heterosexuals) who are interested in LGBTQI+ subjects related to the KPN workfloor.

LCE
LCE refers to large and corporate enterprises.

M

M2M (machine-to-machine)
Direct communication between devices using any communications channel, including wired and wireless.

Market share
Market share is the percentage or proportion of the total available market that is being serviced by KPN. These figures are based on externally available market data, which may not be completely accurate, and may partially be based on estimates.

Mbps (Megabits per second)
A megabit is a unit denoting the speed of data transfer. It is the speed in millions of bits per second. The bandwidths of broadband networks are often indicated in Mbps.

MHz (Megahertz)
MHz is one million hertz (a unit of frequency).

Modernized site
A site is considered to be modernized when the equipment is being replaced by future-proof equipment that is also able to handle 5G traffic.

MTA
MTA refers to mobile terminating access.

N

NPS (Net Promoter Score)
NPS is a metric for measuring customer loyalty, based on whether customers would recommend KPN to someone else.

Non-conformities
Non-conformities are identified when a supplier is found to be in breach of any of the JAC Supply Chain Sustainability Guidelines that form the set of common requirements expected from the ICT industry.

Normalized ETR
Normalized ETR is defined as the total ETR excluding incidentals (such as return to provisions), major changes in the composition of the group, changes in (de-)recognition of deferred taxes and changes in tax law.

Notice and Take Down code
A code that specifies how organizations have to deal with reports of unlawful content on the internet. Content is removed by the host following notice. Notice and take down is widely operated in relation to copyright infringement, as well as for libel and other illegal content We are committed to removing content related to Child Sexual Abuse Material within 24 hours after notification by our national hotline, Expertisebureau Online Kindermisbruik (Expertise Center for Online Child Abuse).

O

OTT (over-the-top)
In broadcasting, over-the-top content (OTT) refers to the delivery of audio, video, and other media over the internet for which no subscription to a traditional cable or satellite operator is required. A famous example is WhatsApp, which is replacing text messaging.

P

Product with improved circular design
Our "number of products with an improved circular design" KPI measures our progress on our circular ambitions. This cumulative number shows how many products we have improved the design of to make them more circular. We regard a product as having improved design for circularity if the design changes lead to (1) reduced use of virgin raw materials and/or (2) extended lifetime or improved resource efficiency and/or (3) improved opportunities for re-using components or recycling materials and/or (4) improved energy efficiency. We count a product from the year in which it enters KPN's value chain of operations – that is, when we can actually use or sell it.

PSTN (Public Switched Telephone Network)
Globally used telephone network

R

RepTrak
RepTrak, developed by the Reputation Institute, is a method to calculate a reputation score of companies. KPN's reputation is based on three out of twelve RepTrak attributes that are kept confidential and are stable over the years.

Return on capital employed (ROCE)
Return on capital employed is calculated by the net operating profit less adjustments for taxes divided by capital employed, on a 4-quarter rolling basis. Net operating profit is the adjusted EBITA (excluding incidentals and amortization of other Intangibles, and including restructuring costs). KPN defines capital employed as the carrying amount of operating assets and liabilities, which excludes goodwill and the other intangibles.

Roaming
Transfer of mobile traffic from one network to another, referring to the exchange of international mobile traffic.

S

Scope 1
Direct greenhouse gas emissions occurring from sources that are owned or controlled by an organization.

Scope 2
Indirect greenhouse gas emissions from the generation of purchased electricity, heating or cooling consumed by an organization.

Scope 3
Other direct greenhouse gas emissions as a consequence of the activities of the company, but occurring from sources not owned or controlled by an organization.

Service revenues
Service revenues are defined as the aggregate of connection fees, monthly subscription fees and traffic fees. The term service revenues refers to wireless service revenues.

SME
SME refers to small and medium enterprises.

Stakeholder
Stakeholders are the people or organizations with an interest in the company, such as customers, employees, shareholders, suppliers, governments and media.

Subscriber
A subscriber is defined as an end-user with a connection to the mobile or fixed networks and/or service platforms of KPN.

Sustainable Development Goals (SDGs)
On 25 September 2015, countries within the United Nations adopted 17 goals to end poverty, protect the planet, and ensure prosperity for all as part of a new sustainable development agenda. Each goal has specific targets to be achieved in 2030. Also known as Global Goals.

T

Tier standards (I to IV)
Telecommunications Infrastructure Standard for data centers. Tier levels describe the availability of data at a location. The higher the tier, the greater the availability. Tier IV is the highest level and entails independent dual-powered cooling and expected data availability of 99.995% or higher.

TSR (total shareholder return)
A measure of the performance of different companies' stocks and shares over time. TSR is calculated from the growth in capital from purchasing a share in the company, assuming that the dividends are reinvested each time they are paid. This growth is expressed as a percentage as the compound annual growth rate.

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V

Value over volume
Term used to describe the strategy to have more focus on value instead of numbers and sales.

VBDO (Vereniging van Beleggers voor Duurzame Ontwikkeling)
The Dutch Association of Investors for Sustainable Development (VBDO) works to create a sustainable capital market, a market that considers not only financial criteria but also non-financial, social and environmental criteria. VBDO's vision is to increase sustainability awareness among companies and investors.

Virgin materials
Materials sourced directly from nature in their raw form, such as wood or metal ores. Manufacturing products using virgin materials uses much more energy and depletes more natural resources, as opposed to producing goods using recycled materials.

Virtualization
The separation of the physical hardware and the functions to run the network in software.

W

Weighted downtime
The weighted downtime concerns the average monthly time period in which a combination of KPN platforms and systems is inaccessible to clients due to major incidents, weighted by the impact of this downtime.

WBSO (Wet bevordering speur- en ontwikkelingswerk)
The WBSO is a subsidy that is intended for every entrepreneur in the Netherlands who conducts research into technological innovations.

Appendices

Appendix 6: Social figures

Table 1: Total number of employees (in FTEs and number)

		2020		2019		2018	
		FTE	Number	FTE	Number	FTE	Number
KPN The Netherlands	overall	10,102	10,691	11,248	11,913	12,412	13,157

Table 2: Employee contract type (in % of total number of employees)

		2020	2019	2018
KPN The Netherlands	permanent	96.6	94.4	93.6
	temporary	3.4	5.6	6.4

Table 3: Employee employment type (in % of total number of employees)

		2020	2019	2018
KPN The Netherlands	part-time	27.2	26.6	26.9
	full-time	72.8	73.4	73.1

Table 4: Composition of employees per age category (in % of total number of employees)

		2020	2019	2018
KPN The Netherlands	< 30 years	7.7	10.0	10.6
	30 - 50 years	51.7	52.9	53.6
	> 50 years	40.6	37.1	35.8

Table 5: Remuneration difference in % between the average salary of men and women

		2020	2019	2018
KPN The Netherlands	overall	1.52	1.98	2.25

Table 6: Gender proportion among employees (in FTE and numbers, both as % of total)

		2020		2019		2018	
		FTE	Number	FTE	Number	FTE	Number
KPN The Netherlands	male	80.3	78.6	80.7	78.9	80.2	78.2
	female	19.7	21.4	19.3	21.1	19.8	21.8

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Table 7: Gender proportions at management level (in % of total top and middle management)

		2020		2019		2018	
		Top	Middle	Top	Middle	Top	Middle
KPN The Netherlands	male	76.4	84.2	77.4	83.8	78.2	83.8
	female	23.6	15.8	22.6	16.2	21.8	16.2

Table 8: Employees covered by a collective bargaining agreement (in % of total number of employees)

		2020	2019	2018
KPN The Netherlands	collective bargaining agreement	92.3	84.8	84.5
	workforce represented in a formal joint management-worker health and safety committee	98.9	97.4	96.8

Table 9: Employee training: average number of hours and costs (in hours and euro per FTE)

		2020	2019	2018
KPN The Netherlands	hours/FTE	67.7	87.2	77.1
	euro/FTE	1,507	2,047	1,895

Table 10: Employee turnover (in % of total number of employees)

		2020	2019	2018
KPN The Netherlands	intake	2.0	2.8	4.2
	exit	11.6	19.8	14.4

Table 11: Accident rate (in accidents per 100 FTEs)

		2020	2019	2018
KPN The Netherlands	accidents (% of total employee number)	0.43	0.43	0.20
	fatality rate (accidents per 100 FTE)	0	0	0

Table 12: Absentee rate (in % of total number of employees)

		2020	2019	2018
KPN The Netherlands	absentee rate (accidents per 100 FTE)	4.23	4.40	4.25

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Appendix 7: Environmental figures

Notes

As outlined in the Combined Independent Auditor's Report (page 171), Appendix 7 is part of the assurance scope of EY's assurance procedures over KPN's 2020 sustainability information.

Scoping and calculation methodology of the reported items are specified in Appendix 3 Transparency, materiality and stakeholder engagement (page 185). Coverage of all figures according to materiality assessment (98% of operational cost).

Table 1: Energy consumption (in PJ)

	Target 2030 compared to base year	Target 2023 compared to base year	2020[1]	2019	2018	2017	2010 base year
The Netherlands			2.428	2.728	2.841	2.82	3.662
KPN non-NL entities			-	-	-	0.012	0.217
KPN Group	**-55%**	**-49%**	**2.428**	**2.728**	**2.841**	**2.832**	**3.879**
Energy directly consumed			0.246	0.386	0.445	0.483	-
Energy indirectly consumed			2.182	2.342	2.396	2.349	-
KPN Group	**-55%**	**-49%**	**2.428**	**2.728**	**2.841**	**2.832**	**3.879**

1 In 2020, energy consumed decreased by 37% compared to base year

Table 2: Electricity consumption (in GWh)

	Target 2030 compared to base year	Target 2023 compared to base year	2020[1]	2019	2018	2017		2010 base year	
						NL	KPN Group	NL	KPN Group
Network			548	580	595	581	583	694	697
Offices & Shops			25	37	36	33	34	70	72
KPN Group	**-48%**	**-42%**	**573**	**617**	**631**	**614**	**617**	**764**	**769**

1 Electricity consumption decreased by 25% versus base year

Table 3: Fuel consumption, lease vehicle fleet

	Unit	Target as from 2025	Target 2021 compared to base year	2020[1]	2019	2018	2017	2010 base year
Petrol, diesel and LPG	1,000 liter	100% inflow of fossil fuel free cars	-70%	4,311	8,457	9,346	9,429	16,597
Electric	MWh			1,891	1,756	839	271	-

1 Fuel consumption decreased by 74% versus base year

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Table 4: Other Energy consumption KPN Group

	Unit	2020	2019	2018	2017
Natural gas	1,000 m3	2,746	2,580	3,424	4,390
Heating purchased	GJ	23,531	27,618	29,653	32,279
Cooling purchased	GJ	97,191	92,891	94,571	95,139
Diesel for emergency power generators	1,000 liter	140	116	103	129

Table 5: CO_2e emissions own operations Scope 1 and 2 (in kTon)[1]

	Target 2050	2020	2019	2018	2017	2010 base year
Scope 1 KPN NL	0	0	0	0	0	58.8
Scope 2 KPN NL	0	0	0	0	0	35.9
KPN non-NL entities	-	-	-	-	0	25.0
KPN Group	**0**	**0**	**0**	**0**	**0**	**119.7**

1 The reported emissions in the table are net scope 1 and scope 2 market based. In the table in section CO_2e emission and energy managementent (p. 57) both net and gross scope 1 emissions are reported as well as the location and market based scope 2 emissions.

Table 6: Energy efficiency and Carbon intensity indicators target

	Target 2021	2020	2019	2018	2017	2010
Ton CO_2 per Gb/s KPN Netherlands (2010=100)	0	0	0	0	0	100
GWh per Gb/s Network Netherlands (2010=100)	3.8	3.9	5.4	5.6	7.8	100

Table 7: CO_2e emissions Scope 3 (in kTon) KPN The Netherlands

	Target 2040 compared to base year	Target 2025 compared to base year	Target 2021 compared to base year	2020	2019	2018	2017	2014 base year
CAT1 Purchased goods and services				504.4	498.7	518.6	544.3	535.1
CAT2 Capital goods				203.4	198.5	174.9	162.8	237.5
CAT3 Fuel and energy related activities				2.7	5.1	9.7	26.9	93.0
CAT4 Upstream transportation and distribution				-	-	-	-	-
CAT5 Waste generated in operations				0.0	0.1	0.5	0.1	0.3
CAT6 Business travel				0.9	3.2	3.1	3.5	3.2
CAT7 Employee commuting				2.9	16.5	15.9	15.5	17.7
CAT8 Leased assets				-	-	-	-	-
CAT9 Downstream transportation and distribution				15.2	17.6	18.3	19.6	23.0
CAT10 Processing of sold products				-	-	-	-	-
CAT11 Use of sold products[1]				2.0	2.4	2.6	3.3	4.4
CAT12 End-of-life				-	-	-	-	-
CAT13 Downstream leased assets[1,2]				154.0	155.4	155.2	168.8	149.2
CAT14 Franchises				-	-	-	-	-
CAT15 Investments				-	-	-	-	-
Total CO_2e emissions	**-50%**	**-20%**	**-18%**	**885.4**	**897.5**	**898.9**	**944.7**	**1,063.2**
Total upstream CO_2e emissions				**714.3**	**722.1**	**722.7**	**753.0**	**886.8**
Total downstream CO_2e emissions				**171.1**	**175.5**	**176.2**	**191.8**	**176.5**

1 Due to new Dutch reporting principles the CO_2e conversion factor of the gridmix is increased from 413 to 475 g CO_2e/kWh. 2020 is calculated with 475g and previous years are restated. See Appendix 3 (p. 185) for further information.

2 In 2020, KPN improved its calculation method using the number of customers instead of the number of installed devices.

Table 8: Other environmental impacts KPN Group

	Unit	Target 2021	2020	2019	2018	2017
Materials usage						
Cable length[1]	1,000 km		~618	~587	~571	~566
Paper consumption	Tons		201	268	459	505
% FSC or PEFC	%		100%	100%	100%	100%
Coolants (e.g. R407C and R417A)	kg		661	657	826	839
Water	1,000 m^3					
Consumption offices and shops			49.2	52.4	66.5	76.0
Consumption operations			34.7	31.7	51.7	91.7
KPN Group		**80**	**83.9**	**84.1**	**118.2**	**167.7**

1 Restated 2017-2019 for FttH roll-out and empty fiber optic ducts

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Table 9: Estimated avoided energy consumption and CO_2e emissions by usage of KPN

	Target 2021	Target 2020	2020[1]	2019[4]	2018	2017
Estimated avoided energy consumption (in PJ)						
Teleworking (enabled by KPN connectivity)[2]			7.199	3.065	2.144	1.434
Dematerialisation			0.170	0.169	0.131	0.130
KPN Audioconferencing[3]			0.077	0.109	0.135	0.130
KPN Videoconferencing[3]			0.027	0.050	0.053	0.056
KPN Hosting services			0.020	0.032	0.030	0.035
KPN iTV Cloud solution			0.014	0.012	0.018	0.018
Total estimated avoided energy consumption			**7.507**	**3.437**	**2.511**	**1.804**
Total energy consumption KPN			2.428	2.728	2.841	2.832
% Avoided energy consumption compared to energy consumption KPN	200%	94%	**309%**	**126%**	**88%**	**64%**
Estimated avoided CO_2e-emissions (in kTon)			**2020**[1]	**2019**[4]	**2018**	**2017**
Teleworking (enabled by KPN connectivity)[2]			548.6	259.7	172.3	114.5
Dematerialisation			11.9	12.4	10.4	10.3
KPN Audioconferencing[3]			5.3	8.3	10.2	10.0
KPN Videoconferencing[3]			1.8	3.7	3.8	4.2
KPN Hosting services			2.6	4.3	3.5	4.0
KPN iTV Cloud solution			2.4	2.1	2.5	2.5
Total estimated avoided carbon emissions			**572.6**	**290.5**	**202.7**	**145.4**
Avoided Particulate matter emissions (PM_{10}) in tons			**2020**[1]	**2019**[4]	**2018**	**2017**
Total avoided PM_{10} emissions[2]			1,798	795	not calc.	not calc.

1 Large increase in avoided energy consumption, CO_2e-emissions and PM_{10} emissions due to increased teleworking caused by COVID-19 pandemic.

2 Avoided energy consumption, CO_2e-emissions and PM_{10} emissions by Teleworking are calculated for 2020 and have been restated for 2019 using an updated norm for the number of hours teleworking per week per teleworker. We switched to a new source (Kennisinstituut voor Mobiliteitsbeleid) which provides more up to date values, as our previous used source (CBS) no longer published updated figures as of 2017. See Appendix 3 (p. 185) for further information.

3 Decrease in usage of dedicated audio-/videoconferencing services due to intensified usage of cloud collaboration tools and applications like e.g. Microsoft Teams and ZOOM.

4 Restated based on the new emission factor for electricity gridmix in the Netherlands to make like for like comparison with 2020 emission figures possible

Table 10: Circular information on reuse, recycling and disposal

Total outflow	Unit	Target 2021	Target 2020	Result 2020	Result 2019[1]	Result 2018	Result 2017
Total volume non-hazardous materials & waste[2]	**ton**			**7,803**	**6,863**	**6,494**	**5,344**
Reuse	ton			1,018	561	497	347
Recycling	ton			5,263	4,780	4,490	3,203
Incineration	ton			1,397	1,366	1,359	1,644
Landfill	ton			125	156	148	150
Total volume hazardous materials & waste	**ton**			**367**	**190**	**105**	**56**
Reuse	ton			1	-	-	-
Recycling	ton			295	148	75	53
Incineration	ton			62	39	20	3
Landfill	ton			9	3	10	-
Total volume	**ton**			**8,170**	**7,053**	**6,599**	**5,400**
% Reuse	%			12%	8%	8%	6%
% Recycling	%			69%	70%	69%	61%
% Reuse and Recycling[2]	**%**	**82%**	**79%**	**81%**	**78%[3]**	**77%**	**67%**
% Incineration	%			17%	20%	21%	30%
% Landfill	%			2%	2%	2%	3%
Collected equipment							
Modems and TV settop boxes	%	**85%**	**80%**	**92%[4]**	**74%[5]**	**67%**	**69%**
Mobile phones	%			4%	5%	6%	6%

1 2019 volumes restated due to 2019 data received with delay in 2020 (368 tons).

2 Results 2017-2019 have been restated due to improved calculation method and performance of post-incineration recycling of residual waste.

3 Result also restated due to restated volumes.

4 Increase to 92% due to increased attention on collection of equipment by service engineers and returns by customers.

5 Restated from 78% to 74% due to scoping to KPN owned equipment.

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Appendix 8: Supply chain

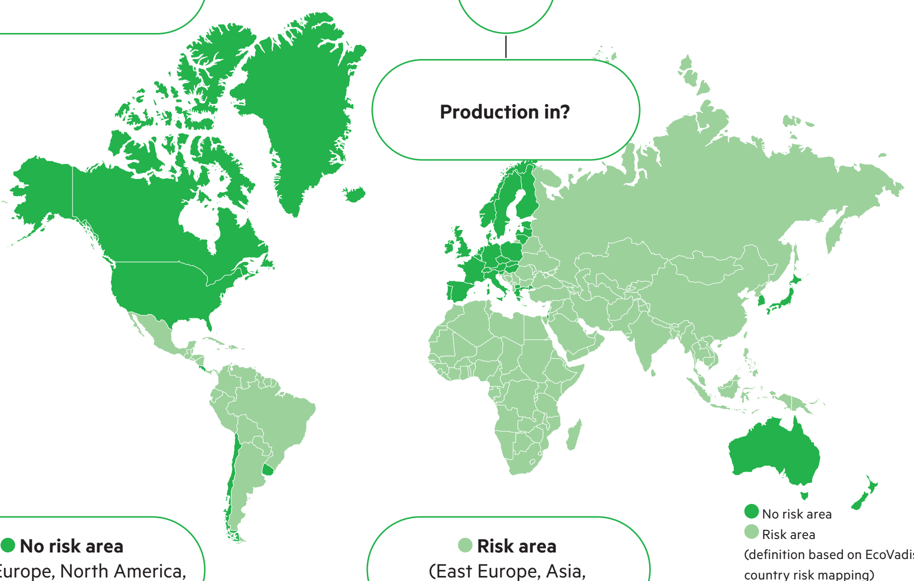
Risk level decision maker

Yearly contractual spend?

<€100k

>€100k

Production in?



No risk area
(West Europe, North America, Japan, Australasia)

Risk area
(East Europe, Asia, Latin America)

Intangible / Service
(software products / licenses, consulting)

Tangible / Product
(products such as hardware, handsets, CPE, connection equipment)

Buying by EU reseller or distributor?

yes

no

No risk
Signed supplier Code of Conduct

Medium risk
Signed supplier Code of Conduct (SCOC)

High risk
Signed SCOC and onsite audit

Assessing our suppliers

KPN works together with suppliers in order to purchase their products and services. We critically review these suppliers in terms of their environmental impact and the working conditions of their staff.

Our sourcing process (new, extension or renewal of products or services) therefore includes a qualification process. This entails classifying the supplier based on the potential social and environmental risks that its operations, products and services represent.

We assess these risks based on three parameters (see decision tree on the previous page):

- Geographical areas
- Spend
- Potential environmental impact of a supplier's operations, products or services.

For the definition of the risk of countries of production we use the EcoVadis country risk mapping.

In total we have 4,790 Tier I suppliers, and 1,435 contracted Tier I suppliers. In 2020, we identified 34 high risk suppliers based on the definition above.

JAC audits

High risk Tier I, Tier II, Tier III and Tier IV suppliers to KPN are audited by the Joint Audit Cooperation (JAC) association.

Between 2010 and 2020, together with other JAC members, 537 audits were carried out in production plants (Tier I, II, III and IV) in Asia, North America, Latin America, Eastern and Western Europe and Oceania, covering a total of more than 1.3 million workers. During 2020, audits were conducted in Australia, China, Czech Republic, India, Indonesia, Israel, Mexico, Russia, Taiwan, Tunisia and Vietnam.

During 2020, JAC raised 96 environmental issues at suppliers following on-site audits. 87 environmental issues were resolved during 2020 (these also include issues raised in previous years). 72 of 96 issues raised in 2020 are still pending. In 2020, JAC raised 398 CSR issues at suppliers following on-site audit relating to working hours and health & safety at suppliers. 384 issues in these two categories were resolved during 2020 (these included issues from previous years). 235 of 398 issues raised in 2019 are still pending.

During 2020, JAC has raised 508 issues relating to human rights (these include the following auditing categories: health & safety, working hours, child labor & juvenile workers, wages & compensation, forced labor & prison labor, discrimination, disciplinary practice and freedom of association). 482 were resolved during 2020 (including issues raised in previous years). 296 out of 508issues raised in 2020 are still pending.

During 2020, JAC raised 14 CSR issues at suppliers following on-site audits relating to child labor & juvenile workers. 12 issues were resolved during 2020 (including issues raised in previous years). 5 out of 14 issues raised in 2020 are still pending.

During 2020, JAC has raised 61 issues relating to business ethics (including corruption). 41 issues were resolved during 2020 (including issues raised in previous years). 47 of 61 issues raised in 2020 are still pending. In 2020, JAC raised 20 CSR issues at suppliers following on-site audits relating to forced labor & prison labor. 16 of these issues were resolved during 2020 (including issues raised in previous years). 12 of 20 issues raised in 2020 are still pending.

During 2020, JAC has raised 665 CSR issues overall, of which 61 relating to business ethics (including corruption). 41 issues related to business ethics were resolved during 2020 (including issues raised in previous years). 415 out of 665 issues raised in 2020 are still pending. During 2020, no supplier relations were terminated.

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Appendix 9: Tax overview for continuing operations per country

Tax overview for continuing operations per country

In € million or FTE		Total unrelated income[1]	Total related income	Profit before tax excl. Associates and joint ventures	Corporate income tax expense	ETR	Corporate income tax cash flow	Corporate income tax receivable/ payable CY	Other tax cash flow mainly VAT & payroll	Property plant and equipment	Employees end of year
NL	2020	5,273	410	652	-89	13.7%	-0	-0	-1,058	5,422	10,098
(Regular operating activities)	2019	5,633	453	678	-49	7.2%	-6	0	-1,106	5,432	11,241
GERM	2020	0	0	-1	-0	-26.3%	0	0	0	0	4
(Regular operating activities)	2019	1	9	0	0	0.0%	-1	0	0	0	7
IRL	2020	-0	6	-1	1	120.7%	-0	1	0	0	0
(Main activity: insurance)	2019	0	6	2	0	0.0%	0	0	0	0	0
UK[2]	2020	0	0	-4	0	0.0%	0	0	0	0	0
(Main activity: pension)	2019	0	0	-5	0	0.0%	0	0	0	0	0
USA[2]	2020	0	1	-3	0	0.0%	0	0	0	0	0
(Main activity: pension)	2019	1	2	-5	0	0.0%	0	0	0	0	0
Other	2020	0	0	0	0	0.0%	0	0	0	0	0
	2019	1	1	-1	0	0.0%	0	0	0	0	0
Total	2020	5,272	418	643	-88	13.7%	-0	1	-1,058	5,422	10,102
	2019	5,636	471	669	-49	7.3%	-7	0	-1,106	5,432	11,248

1 Unrelated income is the total of revenues and (other) financial income

2 See Note 17 Retirement benefits (page 150)

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Appendix 10: GRI index

GRI Standard	#	GRI Disclosure	Relevant section	Omission
General Disclosures				
Organization Profile	102-1	Name of the organization	Koninklijke KPN N.V.	
	102-2	Activities, brands, products, and services	Our purpose and the world around us (p. 9) Strategy, key performance and value creation model (p. 12) Our value for stakeholders: Customer value (p. 20)	
	102-3	Location of headquarters	Rotterdam, the Netherlands	
	102-4	Location of operations	the Netherlands	
	102-5	Ownership and legal form	Corporate governance (p. 66)	
	102-6	Markets served	Our purpose and the world around us (p. 9) Strategy, key performance and value creation model (p. 12) Our performance: Network infrastructure (p. 33) Our performance: Flexible, simple and converged products and services (p. 36) Our performance: Focused innovation and digitalization (p. 42)	
	102-7	Scale of the organization	Strategy, key performance and value creation model (p. 12) Our value for stakeholders: Shareholder value (p. 24) Our performance: Sustainable employability (p. 51) Financial Statements (p. 103)	
	102-8	Information on employees and other workers	Our performance: Sustainable employability (p. 51) Appendix 6: Social figures (p. 211) All employees (on the payroll as regular staff) are eligible for regular performance and career development reviews. Following the implementation of a different approach, 'Het Goede Gesprek', we no longer collect data on individual performance reviews.	Reporting on employees of contractors is considered not applicable to KPN. Our stakeholders do not request us to report on such information.
	102-9	Supply chain	Our performance: Sustainable employability (p. 51) Our performance: Environmental performance and responsible supply chain (p. 55)	
	102-10	Significant changes to the organization and its supply chain	Strategy, key performance and value creation model (p. 12) Our value for stakeholders: Shareholder value (p. 24) Financial Statements (p. 103) Our performance: Flexible, simple and converged products and services (p. 36) Our performance: Network infrastructure (p. 33) Our performance: Sustainable employability (p. 51) Our performance: Environmental performance and responsible supply chain (p. 55) Corporate governance (p. 66)	
	102-11	Precautionary principle or approach	Compliance and risk (p. 73) For our approach to EMF, see: https://www.overons.kpn/en/kpn-in-the-netherlands/sustainabillity/working-together	
	102-12	External initiatives	The most important charters, principles, or other initiatives to which KPN subscribes or which KPN endorses are: UN Global Compact, UN Declaration on Business and Human Rights, International Labor Organization, OECD Guidelines for Multinational Enterprises, Principles of the World Economic Forum, RE100. For more information and context, see https://www.overons.kpn/en/kpn-in-the-netherlands/sustainabillity/working-together	
	102-13	Membership of associations	Our most important memberships are: ETNO, Green Grid, Mobility Management Task Force, UN Global Compact, ITU, NL Digital, ECP For more information and the most recent overview of memberships, see: https://www.overons.kpn/en/kpn-in-the-netherlands/sustainabillity/working-together	

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GRI Standard	#	GRI Disclosure	Relevant section	Omission
			For information on lobbying activities, see: Appendix 3: Transparency, materiality and stakeholder engagement	
Strategy	102-14	Statement from senior decision-maker	CEO letter to stakeholders	
	102-15	Key impacts, risks, and opportunities	Our purpose and the world around us (p. 9) Strategy, key performance and value creation model (p. 12) Our performance: Environmental performance and responsible supply chain (p. 55) Compliance and risk (p. 73)	
Ethics and integrity	102-16	Values, principles, standards, and norms of behavior	Remuneration Board of Management (p. 94) Our performance: Safeguarded privacy and security (p. 46) Our performance: Sustainable employability (p. 51) Compliance and risk (p. 73) Our performance: Environmental performance and responsible supply chain (p. 55) For more information, see our Code of Conduct and the KPN SpeakUp Line: https://ir.kpn.com/websites/kpn/English/7050/code-of-conduct.html	
	102-17	Mechanisms for advice and concerns about ethics	Employees can seek advice and report violations on ethical and lawful behavior by contacting the KPN Helpdesk Security, Compliance and Integrity. All reports made to this helpdesk are registered. In 2020, 3,613 reports have been made to the helpdesk. However, KPN only registers reports on violations of the Code of Conduct and the subcodes (which include all company policy on ethical and lawful behavior) including the results of formal investigation and follow-up in terms of corrective measures. The system is not yet designed to be able to register requests for advice separately. Reports on possible violations of the KPN Code of Conduct or subcodes (which include all company policy on ethical and lawful behavior) are registered by the KPN Helpdesk Security, Compliance and Integrity. In 2020, 1,407 reports on possible violations have been registered. In 97 occasions, these were followed by corrective measures. KPN does not register the number of complaints about breaches of the company Code or other ethical issues at the helpdesks, social media and mvo@kpn.com. For the Code and more information on anonymous reporting, see: https://ir.kpn.com/websites/kpn/English/7050/code-of-conduct.html Compliance and risk (p. 73)	
Governance	102-18	Governance structure	Corporate governance (p. 66) Compliance and risk (p. 73) Composition of the boards (p. 82)	
	102-19	Delegating authority	Corporate governance (p. 66) Compliance and risk (p. 73) Composition of the boards (p. 82) Report by the Supervisory Board (p. 89)	
	102-20	Executive-level responsibility for economic, environmental, and social topics	Corporate governance (p. 66) Composition of the boards (p. 82) Report by the Supervisory Board (p. 89)	
	102-21	Consulting stakeholders on economic, environmental, and social topics	Corporate governance (p. 66) Composition of the boards (p. 82) Appendix 3: Transparency, materiality and stakeholder engagement (p. 185)	
	102-22	Composition of the highest governance body and its committees	Composition of the boards (p. 82) Report by the Supervisory Board (p. 89)	
	102-23	Chair of the highest governance body	Composition of the boards (p. 82)	
	102-24	Nominating and selecting the highest governance body	Corporate governance (p. 66) Report by the Supervisory Board (p. 89)	

GRI Standard	#	GRI Disclosure	Relevant section	Omission
	102-25	Conflicts of interest	Remuneration Board of Management (p. 94) Corporate governance (p. 66) Report by the Supervisory Board (p. 89)	
	102-26	Role of highest governance body in setting purpose, values, and strategy	Composition of the boards (p. 82) Corporate governance (p. 66) Report by the Supervisory Board (p. 89) Compliance and risk (p. 73)	
	102-27	Collective knowledge of highest governance body	Composition of the boards (p. 82) Corporate governance (p. 66) Report by the Supervisory Board (p. 89) Compliance and risk (p. 73)	
	102-28	Evaluating the highest governance body's performance	Report by the Supervisory Board (p. 89)	
	102-29	Identifying and managing economic, environmental, and social impacts	Compliance and risk (p. 73)	
	102-30	Effectiveness of risk management processes	Compliance and risk (p. 73) Report by the Supervisory Board (p. 89)	
	102-31	Review of economic, environmental, and social topics	Compliance and risk (p. 73)	
	102-32	Highest governance body's role in sustainability reporting	Appendix 3: Transparency, materiality and stakeholder engagement (p. 185)	
	102-33	Communicating critical concerns	Critical concerns are communicated on a quarterly basis to both the Board of Management and the Supervisory Board. This communication consists of a GRIP report, an external audit report and an internal audit report. The GRIP report is most comprehensive and includes all risks for KPN communicated by risk managers. The external audit report comprises mostly financial risks for KPN whereas the internal audit report reports financial and IT security risks. The Board of Management closely monitors all risks and defines procedures and working methods for critical risks. All risks are reviewed by the Audit Committee.	
	102-34	Nature and total number of critical concerns	Reference omitted	The nature and number of critical concerns raised during 2020 cannot be communicated, as this concerns sensitive information.
	102-35	Remuneration policies	Remuneration Board of Management (p. 94) Report by the Supervisory Board (p. 89)	
	102-36	Process for determining remuneration	Remuneration Board of Management (p. 94) Report by the Supervisory Board (p. 89)	
	102-37	Stakeholders' involvement in remuneration	Report by the Supervisory Board (p. 89)	
	102-38	Annual total compensation ratio	We monitor the ratio in annual total compensation for our employees in the main country of operation: the Netherlands. The basis for determining the ratio is the pension base salary, which includes all fixed components of the salary of our employees. For the calculation, we use the annualized salary paid in the reporting year. This is not by definition a full time salary, part time salaries are also included. All bonuses paid during 2020 are included in the calculation, including the value of vested shares or phantom shares received by employees in the reporting year. For the reporting year 2020, the ratio of annual total compensation of the highest-paid individual to the median annual total compensation is 27,6/1. The total annual compensation of the highest paid individual is predominately defined by incentives. Consequently this results in highly fluctuating total annual compensation year-on-year even though base payments remains unchanged.	

Appendices

GRI Standard	#	GRI Disclosure	Relevant section	Omission
	102-39	Percentage increase in annual total compensation ratio	We monitor the ratio in annual total compensation for our employees in the main country of operation, the Netherlands. The basis for determining the ratio is the pension base salary, which includes all fixed components of the salary of our employees. For the calculation, we use the annualized salary as paid in the reporting year. This is not by definition a full time salary, part time salaries are also included. All bonuses paid during 2020 are included in the calculation, including the value of vested shares or phantom shares received by employees in the reporting year. For the reporting year 2020, the annual total compensation of the highest paid individual increased with 22.3% in 2020 (compared with 2019) and the annual total compensation of the median increased with 7.9% in 2020 (compared with 2019). The ratio of the percentage increase of the highest paid individual to the increase of the median annual total compensation of 2020 is 2,82/1.	
Stakeholder engagement	102-40	List of stakeholder groups	Appendix 3: Transparency, materiality and stakeholder engagement (p. 185)	
	102-41	Collective bargaining agreements	Appendix 6: Social figures (p. 211) This indicator supports Principles 1 and 3 of the UN Global Compact.	
	102-42	Identifying and selecting stakeholders	Appendix 3: Transparency, materiality and stakeholder engagement (p. 185)	
	102-43	Approach to stakeholder engagement	Our value for stakeholders: Customer value (p. 20) Appendix 3: Transparency, materiality and stakeholder engagement (p. 185) KPN does not engage with stakeholders exclusively as part of the report preparations process, although all stakeholders input is considered to be of potential value to the report. KPN wants to know what topics stakeholders deem important and actively respond to their rising demands.	
	102-44	Key topics and concerns raised	Our purpose and the world around us (p. 9) Our value for stakeholders: Customer value (p. 20) Appendix 3: Transparency, materiality and stakeholder engagement (p. 185)	
	102-45	Entities included in the Consolidated Financial Statements	Corporate governance (p. 66) Financial Statements (p. 103)	
	102-46	Defining report content and topic Boundaries	Strategy, key performance and value creation model (p. 12) Appendix 3: Transparency, materiality and stakeholder engagement (p. 185)	
	102-47	List of material topics	Appendix 3: Transparency, materiality and stakeholder engagement (p. 185)	
	102-48	Restatements of information	Our value for stakeholders: Shareholder value (p. 24) Appendix 3: Transparency, materiality and stakeholder engagement (p. 185)	
	102-49	Changes in reporting	Appendix 3: Transparency, materiality and stakeholder engagement (p. 185).	
	102-50	Reporting period	1 January 2020 - 31 December 2020	
	102-51	Date of most recent report	21 February 2020	
	102-52	Reporting cycle	Annually	
	102-53	Contact point for questions regarding the report	Colophon	
	102-54	Claims of reporting in accordance with the GRI standards	This report has been prepared in accordance with the GRI Standards: Comprehensive option.	
	102-55	GRI index	The GRI index can be found in the downloadmanager on www.kpn.com/annualreport	
	102-56	External assurance	Combined Independent Auditor's Report (p. 171)	
Material topics				
Network quality, reliability & availability				

GRI Standard	#	GRI Disclosure	Relevant section	Omission
GRI 103: Management approach 2018	103-1	Explanation of the relevant topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 185) Our performance: Flexible, simple and converged products and services (p. 36)	
	103-2	The management approach and its components	Our performance: Flexible, simple and converged products and services (p. 36) Corporate governance (p. 66)	
	103-3	Evaluation of the management approach	Our performance: Flexible, simple and converged products and services (p. 36) Corporate governance (p. 66)	
	Own indicator	FttH Footprint of the Netherlands	Our performance: Flexible, simple and converged products and services (p. 36) Appendix 2: Connectivity of non-financial information (p. 182)	
	Own indicator	# mobile sites modernized and 5G ready	Our performance: Flexible, simple and converged products and services (p. 36) Appendix 2: Connectivity of non-financial information (p. 182)	
Sustainable ICT solutions				
GRI 103: Management approach 2018	103-1	Explanation of the relevant topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 185) Our performance: Focused innovation and digitalization (p. 42) Our performance: Environmental performance and responsible supply chain (p. 55)	
	103-2	The management approach and its components	Our performance: Focused innovation and digitalization (p. 42) Our performance: Environmental performance and responsible supply chain (p. 55) Corporate governance (p. 66)	
	103-3	Evaluation of the management approach	Our performance: Focused innovation and digitalization (p. 42) Our performance: Environmental performance and responsible supply chain (p. 55) Corporate governance (p. 66)	
	Own indicator	# of professionals with secure digital access to healthcare information	Our performance: Focused innovation and digitalization (p. 42) Appendix 2: Connectivity of non-financial information (p. 182)	
	Own indicator	# of clients and patients using healthcare facilities to live with more autonomy	Our performance: Focused innovation and digitalization (p. 42) Appendix 2: Connectivity of non-financial information (p. 182)	
	Own indicator	Energy savings by customers as % of KPN Group energy usage	Our performance: Environmental performance and responsible supply chain (p. 55) Appendix 2: Connectivity of non-financial information (p. 182)	
Customer interaction				
GRI 103: Management approach 2018	103-1	Explanation of the relevant topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 185) Our value for stakeholders: Customer value (p. 20)	
	103-2	The management approach and its components	Our value for stakeholders: Customer value (p. 20) Corporate governance (p. 66)	
	103-3	Evaluation of the management approach	Our value for stakeholders: Customer value (p. 20) Corporate governance (p. 66)	
	Own indicator	Net Promoter Score (NPS)	Our value for stakeholders: Customer value (p. 20) Appendix 2: Connectivity of non-financial information (p. 182)	
	Own indicator	RepTrak	Our value for stakeholders: Customer value (p. 20) Appendix 2: Connectivity of non-financial information (p. 182)	
Data & information protection				

Appendices

GRI Standard	#	GRI Disclosure	Relevant section	Omission
GRI 103: Management approach 2018	103-1	Explanation of the material topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 185) Our performance: Safeguarded privacy and security (p. 46)	
	103-2	The management approach and its components	Our performance: Safeguarded privacy and security (p. 46) Corporate governance (p. 66)	
	103-3	Evaluation of the management approach	Our performance: Safeguarded privacy and security (p. 46) Corporate governance (p. 66)	
GRI 418: Customer privacy 2018	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Our performance: Safeguarded privacy and security (p. 46)	
	Own indicator	% of Dutch people that believe their data is safe with KPN	Our performance: Safeguarded privacy and security (p. 46) Appendix 2: Connectivity of non-financial information (p. 182)	
	Own indicator	% of Dutch municipalities monitored for cyber security attacks so that the appropriate mitigation can take place	Our performance: Safeguarded privacy and security (p. 46) Appendix 2: Connectivity of non-financial information (p. 182)	
Supplier selection & good governance				
GRI 103: Management approach 2018	103-1	Explanation of the material topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 185) Our performance: Environmental performance and responsible supply chain (p. 55)	
	103-2	The management approach and its components	Our performance: Environmental performance and responsible supply chain (p. 55) Corporate governance (p. 66)	
	103-3	Evaluation of the management approach	Our performance: Environmental performance and responsible supply chain (p. 55) Corporate governance (p. 66)	
	Own indicator	% high-risk Tier I, Tier II and Tier III suppliers audited	Our performance: Environmental performance and responsible supply chain (p. 55) Appendix 2: Connectivity of non-financial information (p. 182)	
	Own indicator	% realized improvements on corrective action plans	Our performance: Environmental performance and responsible supply chain (p. 55) Appendix 2: Connectivity of non-financial information (p. 182)	
Environmental performance				
GRI 103: Management approach 2018	103-1	Explanation of the material topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 185) Our performance: Environmental performance and responsible supply chain (p. 55)	
	103-2	The management approach and its components	Our performance: Environmental performance and responsible supply chain (p. 55) Corporate governance (p. 66)	
	103-3	Evaluation of the management approach	Our performance: Environmental performance and responsible supply chain (p. 55) Corporate governance (p. 66)	
	Own indicator	% reduction of energy consumption of KPN Group compared with 2010	Our performance: Environmental performance and responsible supply chain (p. 55) Appendix 2: Connectivity of non-financial information (p. 182)	
	Own indicator	Climate-neutral own operations	Our performance: Environmental performance and responsible supply chain (p. 55) Appendix 2: Connectivity of non-financial information (p. 182)	
	Own indicator	% reuse and recycling	Our performance: Environmental performance and responsible supply chain (p. 55) Appendix 2: Connectivity of non-financial information (p. 182)	

GRI Standard	#	GRI Disclosure	Relevant section	Omission
Other topics				
Economic performance				
GRI 103: Management approach 2018	103-1	Explanation of the material topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 185) Strategy, key performance and value creation model (p. 12) Our value for stakeholders: Shareholder value (p. 24)	
	103-2	The management approach and its components	CEO letter to stakeholders (p. 6) Strategy, key performance and value creation model (p. 12) Our value for stakeholders: Shareholder value (p. 24) Corporate governance (p. 66)	
	103-3	Evaluation of the management approach	Corporate governance (p. 66)	
GRI 201: Economic performance 2018	201-1	Direct economic value generated and distributed	Strategy, key performance and value creation model (p. 12) Our value for stakeholders: Shareholder value (p. 24)	
	201-2	Financial implications and other risks and opportunities due to climate change	Our performance: Environmental performance and responsible supply chain (p. 55) Compliance and risk (p. 73) Appendix 7: Environmental figures (p. 213) KPN discloses all material carbon emissions, climate governance and management approach, including the financial implications of risks regarding climate change and the costs of mitigating actions for the CDP (Carbon Disclosure Project). Find our 2020 disclosure at https://cdp.net/en.	
	201-3	Defined benefit plan obligations and other retirement plans	Financial Statements (p. 103)	
	201-4	Financial assistance received from government	KPN does not receive significant financial assistance from the government.	
Tax				
GRI 103: Management approach 2018	103-1	Explanation of the material topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 185) Tax and regulations (p. 70)	
	103-2	The management approach and its components	Corporate governance (p. 66) Tax and regulations (p. 70)	
	103-3	Evaluation of the management approach	Corporate governance (p. 66) Tax and regulations (p. 70)	
GRI 207: Tax 2019	207-1	Approach to tax	Corporate governance (p. 66) Tax and regulations (p. 70) For our Tax strategy & Policy, see: https://ir.kpn.com/websites/kpn/ English/ 7070/tax-strategy-_-policy.html	
	207-2	Tax governance, control, and risk management	Corporate governance (p. 66) Compliance and risk (p. 73) Tax and regulations (p. 70) For our Tax strategy & Policy: https://ir.kpn.com/websites/kpn/English/ 7070/ tax-strategy-_-policy.html	
	207-3	Stakeholder engagement and management of concerns related to tax	Corporate governance (p. 66) Tax and regulations (p. 70) Appendix 3: Transparency, materiality and stakeholder engagement (p. 185) For our Tax strategy & Policy: https://ir.kpn.com/websites/kpn/English/ 7070/ tax-strategy-_-policy.html	
	207-4	Country-by-country reporting	Tax and regulations (p. 70) Financial Statements (p. 103)	
Materials				

Appendices

GRI Standard	#	GRI Disclosure	Relevant section	Omission
GRI 103: Management approach 2018	103-1	Explanation of the relevant topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 185) Appendix 7: Environmental figures (p. 213)	
	103-2	The management approach and its components	Our performance: Environmental performance and responsible supply chain (p. 55) Corporate governance (p. 66) Appendix 7: Environmental figures (p. 213)	
	103-3	Evaluation of the management approach	Corporate governance (p. 66)	
GRI 301: Materials 2018	301-1	Materials used by weight or volume	KPN is a service provider and not a production company. The materials consumed are therefore limited.	
	301-2	Recycled input materials used	Our performance: Environmental performance and responsible supply chain (p. 55)	
	301-3	Reclaimed products and their packaging materials	Our performance: Environmental performance and responsible supply chain (p. 55) Appendix 7: Environmental figures (p. 213) This indicator supports Principles 8 and 9 of the UN Global Compact.	Reporting on reclaimed packaging material is considered not applicable to KPN. Our stakeholders do not request us to report on such information.
Water and effluents				
Water and effluents	103-1	Explanation of the relevant topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 185) Appendix 7: Environmental figures (p. 213)	
	103-2	The management approach and its components	Our performance: Environmental performance and responsible supply chain (p. 55) Corporate governance (p. 66) Appendix 7: Environmental figures (p. 213)	
	103-3	Evaluation of the management approach	Corporate governance (p. 66)	
GRI 303: Water and effluents 2018	303-1	Interactions with water as a shared resource	Not applicable	
	303-2	Management of water discharge-related impacts	Not applicable	
	303-3	Water withdrawal	Appendix 7: Environmental figures (p. 213). Only applies to third party freshwater.	
	303-4	Water discharge	Only applies to third party water released to municipal water treatment facilities (same volume assumed as reported under 303-3).	
	303-5	Water consumption	Not applicable	
Effluents and waste				
GRI 103: Management approach 2018	103-1	Explanation of the relevant topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement Appendix 7: Environmental figures (p. 213)	
	103-2	The management approach and its components	Our performance: Environmental performance and responsible supply chain (p. 55) Corporate governance (p. 66) Appendix 7:Environmental figures (p. 213)	
	103-3	Evaluation of the management approach	Corporate governance (p. 66)	
GRI 306: Effluents and waste 2016	306-1	Water discharge by quality and destination	Not applicable	

GRI Standard	#	GRI Disclosure	Relevant section	Omission
	306-2	Waste by type and disposal method	Appendix 7: Environmental figures (p. 213)	
	306-3	Significant spills	Not applicable	
	306-4	Transport of hazardous waste	Appendix 7: Environmental figures (p. 213). Only transport of hazardous waste within the Netherlands applies	
	306-5	Water bodies affected by water discharges and/or runoff	Not applicable	

Colophon

For additional information

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Forward-looking statements and management estimates

Certain of the statements we have made in this Integrated Annual Report are 'forward-looking statements'. These statements are based on our beliefs and assumptions and on information currently available to us. They include information concerning our possible or assumed future results of operations, business strategies, financing plans, competitive position, potential growth opportunities, potential operating performance or expense improvements and the effects of future legislation or regulation.

Forward-looking statements include all statements that are not historical facts and can be identified by the use of forward-looking terminology such as the words 'believe', 'expect', 'plan', 'intend', 'anticipate', 'estimate', 'predict', 'potential', 'continue', 'may', 'will', 'should', 'could', 'shall', or the negative of these terms or similar expressions.

Forward-looking statements involve risks, uncertainties and assumptions. Actual results may differ materially from those expressed in these forward-looking statements. No undue reliance should be put on any forward-looking statements. Unless required by applicable law or applicable rules of the stock exchange on which our securities are listed, we have neither the intention nor an obligation to update forward-looking statements after distribution of this Integrated Annual Report. All market share information in this financial report is based on management estimates based on externally available information, unless indicated otherwise.

The terms 'we', 'our' and 'us' are used to describe the company.

We always aim to further improve our CSR activities and reporting. Therefore, we highly appreciate your feedback, questions and comments on our Integrated Annual Report and CSR activities. Please contact mvo@kpn.com.

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