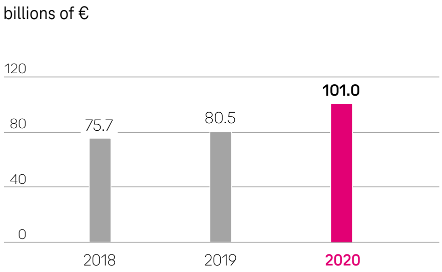
Combined management report

This report combines the Group management report of the Deutsche Telekom Group, comprising Deutsche Telekom AG and its consolidated subsidiaries, and the management report of Deutsche Telekom AG.

Deutsche Telekom at a glance

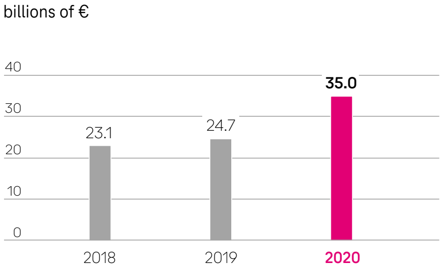
Net revenue

- We look back on a successful 2020 financial year and are well on track to meeting our growth forecast: Net revenue increased by 25.4 % to EUR 101.0 billion. In organic terms, revenue increased by EUR 2.9 billion or 3.0 %.
- Including the revenue contributions from the acquired entity Sprint and including exchange rate differences, our United States segment posted an increase in revenue of 51.4 %. In organic terms, revenue was up 5.0 % against the prior year.
- In our Germany and Europe segments, revenue on an organic basis remained on a par with the prior-year level. Revenue in the Europe segment was down 2.2 % on account of exchange rate effects.
- In our Systems Solutions operating segment, revenue decreased by 5.6 % year-on-year due to the decline in both traditional IT business and project business. The development of the digital solutions business was particularly affected by the impact of the coronavirus pandemic.
- In our Group Development segment, the 3.1 % increase in revenue was driven mainly by operational growth at T-Mobile Netherlands and DFMG.



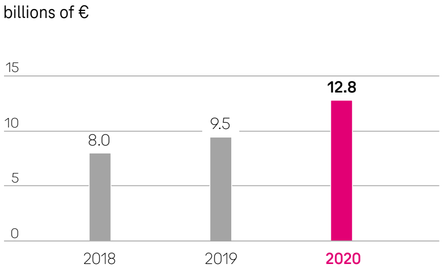
EBITDA AL (adjusted for special factors)[a]

- Adjusted EBITDA AL grew by 41.6 % to EUR 35.0 billion. All segments, with the exception of Systems Solutions, contributed to this growth. Excluding exchange rate effects and changes in the composition of the Group, our adjusted EBITDA AL increased by EUR 2.6 billion or 7.9 %.
- Adjusted EBITDA AL rose sharply by 88.6 % in our United States segment as a result of the acquisition of Sprint and, in particular, the growth in service and terminal equipment revenues. In organic terms, adjusted EBITDA AL grew by 10.8 % year-on-year.
- Our Germany segment recorded an increase in adjusted EBITDA AL of 1.6 %. In Europe the trend remained stable, with adjusted EBITDA AL up 2.1 % in organic terms. Adjusted EBITDA AL grew substantially in our Group Development segment, by 6.6 %.
- At 34.7 %, the Group's adjusted EBITDA AL margin increased by 4.0 percentage points against the prior-year level. The adjusted EBITDA AL margin was 38.8 % in Germany, 34.5 % in Europe, and 34.3 % in the United States.



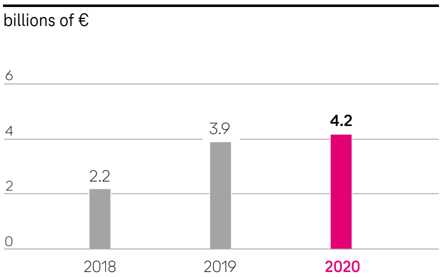
EBIT

- EBIT increased by EUR 3.3 billion to EUR 12.8 billion.
- EBITDA AL was negatively affected by special factors of EUR 1.8 billion compared to expenses of EUR 1.6 billion in the prior year. Expenses of EUR 1.5 billion were recorded in connection with the business combination of T-Mobile US and Sprint; this contrasted with expenses of EUR 0.5 billion in the prior year. Further expenses of EUR 0.4 billion in the first half of 2020, primarily in connection with the coronavirus pandemic, had been classified as special factors in the United States segment. Positive special factors in the amount of EUR 1.6 billion related to the partial reversal of impairment losses on spectrum licenses at T-Mobile US. Other special factors in both the reporting year and the prior year were primarily attributable to staff-related measures.
- Depreciation and amortization were EUR 7.8 billion higher than in the prior year due in particular to the acquisition of Sprint.
- Impairment losses on non-current assets reduced EBIT by EUR 0.8 billion.



Net profit

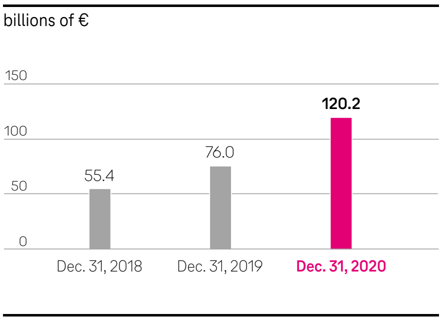
- Net profit increased by EUR 0.3 billion to EUR 4.2 billion.
- Loss from financial activities increased by EUR 1.9 billion to EUR 4.1 billion, largely due to an increase in finance costs of EUR 1.9 billion as a result of the financial liabilities acquired from Sprint and the restructuring begun in connection with this business combination and the related increase in financing, including the handling charges incurred for a briefly utilized bridge loan facility. Other financial income/expense was unchanged at EUR 0.1 billion. This was attributable, on the one hand, to positive effects from the measurement of the stock options to buy shares in T-Mobile US received from SoftBank and, on the other, to lower measurement effects from embedded derivatives at T-Mobile US compared with the prior year and higher interest expense from the measurement of provisions and liabilities.
- Tax expense came to EUR 1.9 billion compared with EUR 2.0 billion in the prior year.
- Profit attributable to non-controlling interests increased by EUR 1.2 billion to EUR 2.6 billion, mainly in our United States segment.
- Adjusted earnings per share amounted to EUR 1.20 compared with EUR 1.04 in the prior year.



[a] Comparatives for 2018 were calculated on a pro forma basis for the key performance indicators redefined in 2019 following the introduction of the IFRS 16 accounting standard.

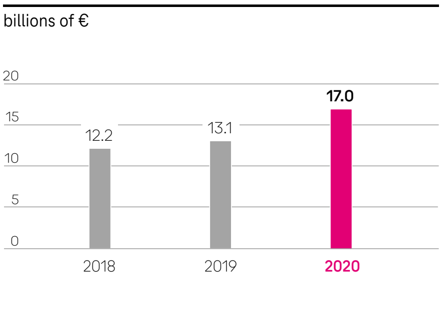
Net debt

- Net debt increased by EUR 44.2 billion to EUR 120.2 billion compared with the end of 2019.
- This increase was mainly attributable to the transfer of liabilities in connection with the business combination with Sprint (EUR 43.5 billion) and additions of lease liabilities (EUR 14.3 billion) primarily as a result of the modification of existing agreements with American Tower on the lease and use of cell sites in the United States. Other factors with an increasing effect were dividend payments (EUR 3.1 billion), including to non-controlling interests, as well as the acquisition of spectrum (EUR 1.7 billion) and forward-payer swaps concluded for borrowings at T-Mobile US (EUR 1.1 billion).
- Free cash flow (EUR 10.8 billion), exchange rate effects (EUR 8.0 billion) as well as the sale of Sprint's prepaid business to DISH (EUR 1.2 billion) in particular reduced net debt.



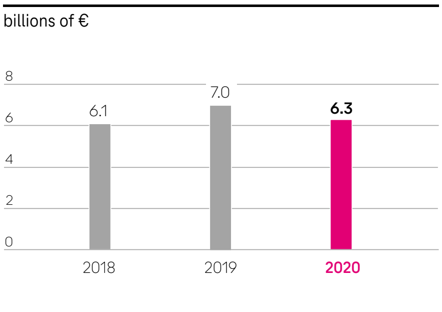
Cash capex (before spectrum investment)

- Cash capex (before spectrum investment) increased by EUR 3.9 billion to EUR 17.0 billion, largely on account of the inclusion of Sprint and the ongoing 5G network build-out in the United States. In Germany and Europe we continued to invest in the provision of broadband and fiber-optic technology and in 5G as part of our integrated network strategy.
- Cash capex (including spectrum investment) increased by EUR 4.3 billion to EUR 18.7 billion. In the reporting period, the United States segment acquired spectrum licenses for a total amount of EUR 1.1 billion. A further EUR 0.4 billion was attributable to spectrum acquisitions in the Europe segment and EUR 0.2 billion to spectrum acquisitions in the Group Development segment. The prior-year figure included EUR 1.2 billion for the acquisition of mobile spectrum licenses, which primarily related to the United States segment.



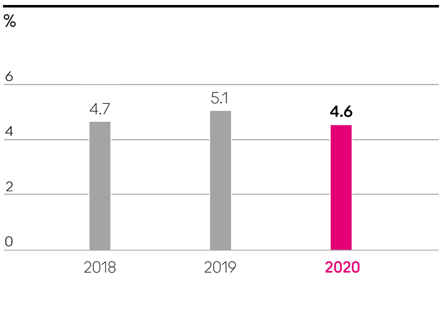
Free cash flow AL (before dividend payments and spectrum investment)[a, b]

- Free cash flow AL (before dividend payments and spectrum investment) decreased by EUR 0.7 billion year-on-year to EUR 6.3 billion.
- Excluding interest payments for zero-coupon bonds and the premature termination of forward-payer swaps in the United States segment, net cash from operating activities increased by EUR 4.4 billion. This was attributable in particular to the sustained positive performance of the operating segments, especially in the United States including Sprint.
- The increase was partially offset by EUR 3.9 billion higher cash capex (before spectrum investment) and in particular by higher interest payments, mainly as a result of the financial liabilities recognized and the restructuring begun in connection with the acquisition of Sprint, and the related increase in financing. Our contractual termination of a revolving factoring agreement in the Germany segment, and higher repayments of lease liabilities primarily in the United States segment, also had a negative effect.



ROCE

- ROCE (return on capital employed) decreased by 0.5 percentage points in the reporting period to 4.6 %.
- This was due to stronger percentage growth in average operating assets (NOA) than in net operating profit after taxes (NOPAT). Both NOPAT and average NOA were affected by the business combination of T-Mobile US and Sprint.
- Average NOA increased due in particular to the spectrum licenses; property, plant and equipment; and right-of-use assets acquired in the Sprint transaction, as well as the modification of the leases concluded with American Tower. In addition, the development of NOA reflects our consistently high investment volume. The positive development in NOPAT was driven primarily by a substantial increase in EBIT at T-Mobile US.



For further information, please refer to the section "Development of business in the Group."

For further information on the level of achievement of our main financial and non-financial key performance indicators, please refer to the relevant section "Development of business in the Group – Comparison of the Group's expectations with actual figures."

[a] Comparatives for 2018 were calculated on a pro forma basis for the key performance indicators redefined in 2019 following the introduction of the IFRS 16 accounting standard.
[b] Before interest payments for zero-coupon bonds and before termination of forward-payer swaps at T-Mobile US.

Group organization

Business activities and segment structure

Business activities. With 242 million mobile customers, 27 million fixed-network lines, and 22 million broadband customers, we are one of the leading integrated telecommunications companies worldwide. We offer our consumers fixed-network/broadband, mobile, internet, and internet-based TV products and services, as well as ICT solutions for our business and corporate customers. We have an international focus and are represented in more than 50 countries. With 226,291 employees worldwide (as of December 31, 2020), we generated revenue of EUR 101.0 billion in the 2020 financial year, despite the negative effects of the coronavirus pandemic. The successful business combination of T-Mobile US and Sprint raised the proportion of net revenue generated internationally to 75.5 %.

Fixed-network business includes all voice and data communications activities based on fixed-network and broadband technology. This includes the sale of terminal equipment and other hardware, as well as the sale of services to resellers. Our mobile communications business offers mobile voice and data services to consumers and business customers; in addition, we sell mobile devices and other hardware. We also sell mobile services to resellers and to companies that buy network services and market them to third parties (mobile virtual network operators, or MVNOs). Drawing on a global infrastructure of data centers and networks, we operate information and communication technology (ICT) systems for multinational corporations and public-sector institutions.

Our responsible corporate governance and business success are based on our shared corporate values and our **Guiding Principles** revised in February 2020. SDG 8 RELATIONSHIPS

For further information on our Guiding Principles, please refer to the section "Employees" and online at www.telekom.com/en/blog/group/article/our-new-purpose-and-revised-guiding-principles-594406

Our **identity** describes the mission of Deutsche Telekom: Why are we here, what does our Company stand for, and what is our purpose? It defines our corporate purpose and describes what we at Deutsche Telekom stand for: We want to be a sustainably growing company that delights its customers, creates value for its investors, and in which employees enjoy their work. Our network is fast, reliable, secure, and should be easily accessible for everyone. At the same time, we are more than just another company that provides society with infrastructure. We want to connect people and make their lives permanently easier and more enriched. This is our mission. We are a close and trusted companion to the customer; transparent, fair, and open to dialog. We identify innovative products at an early stage and develop them in collaboration with our partners. It is our contribution to social togetherness. Our identity reflects all of this and is summarized in one short purpose statement: We won't stop until everyone is connected.

Segment structure. SDG 8 FINANCE Our financial reporting conforms with our Group strategy and is organized according to the following structure:

Deutsche Telekom Group

Group Headquarters & Group Services

Germany	United States	Europe	Systems Solutions	Group Development
Fixed network and mobile communications	Mobile communications	Fixed network and mobile communications	Global ICT solutions	Selected subsidiaries and equity investments

Our Group is divided into five operating segments plus the Group Headquarters & Group Services segment, each of which we describe in detail below.

Our **Germany** operating segment comprises all fixed-network and mobile business activities for consumers and business customers, including separate sales entities in Germany to allow a customer-centric sales approach. As a pioneer of digitalization, the segment offers its customers an individual service and product portfolio that is designed to be innovative while at the same time secure and simple.

Consistent with our efforts to implement our Group strategy pillar “Lead in business productivity,” we realigned our business-to-business (B2B) telecommunications services in the course of the year. To this end, TC Services and Classified ICT, portfolio units previously assigned to the Systems Solutions operating segment, as well as Telekom Global Carrier (TGC) and Network Infrastructure (NWI), which had formerly been reported under the Europe operating segment and the Group Headquarters & Group Services segment respectively, and which together form the business area designated as Deutsche Telekom Global Carrier (DTGC), have been combined in the Germany operating segment. Effective the start of the third quarter of 2020, the management of the Deutsche Telekom Group and hence also the reporting structure were both based on this new segment allocation. As part of these transactions, the assets and liabilities assigned to the business areas were transferred to the Germany operating segment. Prior-year comparatives in these segments (development of operations, customer development, headcount development, and order entry) were adjusted retrospectively. The transactions were consummated under company law on July 1, 2020 (TC Services and Classified ICT) and on October 1, 2020 (DTGC).

The Germany operating segment also focuses on the wholesale business to provide telecommunications services for carriers and, up until the realignment of our B2B telecommunications business, also for our Group’s other operating segments. The bundling of customer service activities places a further focus on customer satisfaction and quality assurance. Build-out of the mobile and fixed networks is managed by the Technology business unit in this segment.

Our **United States** operating segment combines all mobile activities in the U.S. market. The business combination of T-Mobile US and Sprint was completed on April 1, 2020, forming the all-new, larger T-Mobile US. The transaction had previously passed through various approval processes involving numerous national and regional courts and authorities in the United States. Business in the United States developed extremely positively on the back of the various Un-carrier initiatives of the last few years. The new business combination serves to further strengthen this trend. T-Mobile US has the largest 5G network in the United States.

The business combination of T-Mobile US and Sprint took the form of an all-stock transaction. At the completion of the transaction, Deutsche Telekom held around 43.6 % of the shares in T-Mobile US. However, under a proxy agreement reached with SoftBank, at the time the business combination took effect Deutsche Telekom controlled a majority of the voting power of around 68.3 % of shares in the new T-Mobile US. On June 22, 2020, Deutsche Telekom received call options from SoftBank to buy around 101 million T-Mobile US shares, thus securing itself long-term access to the majority shareholding in T-Mobile US. In return, we granted SoftBank the option to immediately sell around 198 million T-Mobile US shares. The sale of the shares held by SoftBank reduced the proportion of T-Mobile US shares for which we can exercise voting rights to around 52.5 % as of August 5, 2020.

The structure of the new T-Mobile US factors in the agreement reached with the U.S. Department of Justice (DoJ), one condition of which was that Sprint divested its prepaid business to satellite TV operator DISH. The agreement also includes the sale of part of the 800 MHz spectrum held by Sprint to DISH. As of July 1, 2020, the U.S. authorities’ requirements regarding the divestiture of Sprint’s prepaid business were duly met and the agreement to sell spectrum to DISH duly confirmed.

Our **Europe** operating segment comprises all fixed-network and mobile operations of the national companies in Greece, Romania, Hungary, Poland, the Czech Republic, Croatia, Slovakia, Austria, North Macedonia, and Montenegro. We are now an integrated provider of telecommunications services in all of our national companies. On November 6, 2020, OTE concluded an agreement with Orange Romania concerning the sale of the 54 % stake in Telekom Romania Communications, which operates the Romanian fixed-network business. The transaction is subject to approval by the authorities. In addition to consumer business, most of the national companies also offer ICT solutions for business customers.

As a leading ICT service provider, our **Systems Solutions** operating segment offers business customers a portfolio of integrated products and solutions. With offerings for connectivity, digital solutions, cloud and infrastructure, and security, in addition to strategic partnerships, we offer our customers help and guidance to implement digital business models. We have been implementing a comprehensive transformation program since 2018, under which we realigned our organization and workflows, adjusted capacities, and developed a new strategy for our portfolio. The portfolio-oriented approach now focuses on six portfolio areas: Managed Infrastructure Services & Private Cloud, Public Cloud Managed Services, SAP, Digital Solutions (including Dedicated System Integration and Health), Road Charging, and Security – comprising both established IT business areas and growth areas. For information on the realignment of the B2B telecommunications business, please refer to the information provided above in connection with the Germany operating segment.

Our **Group Development** operating segment actively manages entities, subsidiaries, and equity investments to grow their value while giving them the entrepreneurial freedom they need to promote their continued strategic development. This approach led to the creation of GD Towers – comprising Deutsche Funkturm (DFMG) and the Dutch cell tower business – within the Group Development segment. Following the integration of Tele2 Netherlands as of the start of 2019, the Dutch MVNO and SIM provider, Simpel, was taken over effective December 1, 2020. This acquisition secures mobile market shares, creates synergies, and makes the Company more competitive in the consumer market. Deutsche Telekom Capital Partners (DTCP) and the Group functions of Mergers & Acquisitions and Strategic Portfolio Management have also been assigned to Group Development.

Group Headquarters & Group Services comprises all Group units that cannot be allocated directly to one of the operating segments, and reports on our Board of Management department for Technology and Innovation. As the organization that sets the direction and provides momentum, it defines strategic aims for the Group, ensures they are met, and becomes directly involved in selected Group projects. Group Services provides services to the entire Group; in addition to typical services provided by Deutsche Telekom Services Europe, such as financial accounting, human resources services, and operational procurement, Group Services also includes placement services provided by our personnel service provider, Vivento. It is in charge of securing external employment opportunities for employees, mainly civil servants, predominantly in the public sector. Further units are Group Supply Services (GSUS) for our real estate management and our strategic procurement, and MobilitySolutions, which is a full-service provider for fleet management and mobility services.

Our Technology and Innovation Board of Management department unites the cross-segment technology, innovation, IT, and security functions of our Germany, Europe, and Systems Solutions operating segments. These include Deutsche Telekom IT, which focuses on the Group's internal national IT projects, and our central innovation unit, Product Innovation and Customer Experience (PIC), which works closely with our operating segments to drive topics such as digitalization, big data, software-defined networks, voicification, virtualization, and cloud services. Our Innovation Hub (IHUB) pools all of the expertise required for future innovation projects in an agile working environment to ensure we stay flexible and innovative. Additional units are Strategy & Technology Innovation (S&TI) and International Technology and Service Delivery (ITS). ITS harmonizes the planning, development, and operation of products, services, and platforms at the national companies in Europe, taking technological and commercial aspects into account. S&TI ensures efficient and customized research and innovation with a focus on mobile and fixed-network communications.

Changes to the organizational structure in 2021

Transfer of the Internet of Things (IoT) growth area. Effective January 1, 2021, Deutsche Telekom assigned the responsibility for business and profit and loss for Deutsche Telekom IoT GmbH from the Systems Solutions operating segment to the business customer unit in the Germany operating segment. The Group subsidiary established in summer 2020 is responsible for the IoT business of Deutsche Telekom. This reassignment puts us in a position to serve the IoT market more quickly and thus to strengthen Deutsche Telekom's position on this growth market.

Transfer of the Austrian cell tower business. As of January 1, 2021, Deutsche Telekom transferred its Austrian cell tower business from the Europe operating segment to GD Towers in the Group Development operating segment to enhance the management efficiency in cell tower business. In addition, GD Towers will increase its efforts to expand third-party business, increase profitability, and develop growth areas.

Combination of the cell tower business in the Netherlands and creation of an infrastructure fund. On January 21, 2021, Deutsche Telekom, Cellnex Telecom S.A., the newly established, independently managed investment company Digital Infrastructure Vehicle I SCSp (DIV), and others signed an agreement to merge Deutsche Telekom's and Cellnex's respective Dutch subsidiaries for mobile infrastructure. Under the deal, the Dutch cell tower company T-Mobile Infra B.V. will be sold to DIV and subsequently merged into Cellnex Netherlands B.V.

Management and supervision

As of December 31, 2020, **Board of Management** responsibilities were distributed across eight Board departments. Four of these cover cross-functional management areas:

- Chairman of the Board of Management

and the Board of Management departments

- Finance
- Human Resources and Legal Affairs
- Technology and Innovation.

In addition, there are four segment-based Board of Management departments:

- Germany
- Europe
- T-Systems
- USA and Group Development.

Changes in the composition of the Board of Management. At its meeting on May 22, 2019, the Supervisory Board of Deutsche Telekom AG resolved to dissolve the Data Privacy, Legal Affairs and Compliance (DRC) Board department effective December 31, 2019. The Internal Audit and Risk Management units were assigned to the Finance Board of Management department. Group Security Governance was assigned to the Board of Management department for Technology and Innovation. The Data Privacy, Legal Affairs, and Compliance units were assigned to the Human Resources Board of Management department and are led by Dr. Claudia Junker, who in her capacity as General Counsel and Executive Vice President reports directly to Birgit Bohle. Birgit Bohle has headed up the extended Human Resources and Legal Affairs Board of Management department since January 1, 2020. Dr. Thomas Kremer left the Group for reasons of age effective March 31, 2020. Until his departure, Dr. Kremer supported the transition to the new structures as part of a designated mandate.

Dr. Dirk Wössner, the Board of Management member for Germany, informed the Supervisory Board of Deutsche Telekom AG in early 2020 of his intention to leave the Group upon expiry of his service contract as of December 31, 2020. On June 18, 2020, the Supervisory Board of Deutsche Telekom AG appointed the former Board of Management member for Europe, Srini Gopalan, as the new Board of Management member for Germany effective November 1, 2020. Dr. Wössner resigned from his position effective midnight on October 31, 2020. On September 7, 2020, the Supervisory Board of Deutsche Telekom AG appointed Dominique Leroy to succeed Srini Gopalan as the Board of Management member for Europe effective November 1, 2020.

Composition of the Board of Management as of December 31, 2020

Members of the Board of Management	Department
Timotheus Höttges	Chairman of the Board of Management (CEO)
Adel Al-Saleh	T-Systems
Birgit Bohle	Human Resources and Legal Affairs
Srini Gopalan	Germany
Dr. Christian P. Illek	Finance (CFO)
Thorsten Langheim	USA and Group Development
Dominique Leroy	Europe
Claudia Nemat	Technology and Innovation

The members of the Board of Management are appointed and discharged in accordance with § 84 and § 85 of the German Stock Corporation Act (Aktiengesetz – AktG) and § 31 of the German Codetermination Act (Mitbestimmungsgesetz – MitbestG).

The **Supervisory Board** of Deutsche Telekom AG advises the Board of Management and oversees its management of business. It is composed of 20 members: 10 represent the shareholders and 10 the employees. The employees' representatives were most recently appointed at the delegates' assembly on November 20, 2018.

Amendments to the Articles of Incorporation are made pursuant to § 179 and § 133 AktG and § 18 and § 21 of the Articles of Incorporation. According to § 21 of the Articles of Incorporation, the Supervisory Board is authorized, without a resolution by the shareholders' meeting, to adjust the Articles of Incorporation to comply with new legal provisions that become binding for the Company and to amend the wording of the Articles of Incorporation.

The compensation system for our Board of Management is oriented towards the long-term performance of our Group. Since 2013, the compensation for our Supervisory Board has no longer included any long-term remuneration components. We complied with the recommendations of the German Corporate Governance Code (GCGC), as amended on February 7, 2017.

For a description of the compensation systems for the Board of Management and the Supervisory Board, please refer to the section "Other disclosures – Compensation report."

Group strategy

Our corporate strategy: Leading European Telco

SDG 8 FINANCE

Since 2014, we have been aligning all of our corporate activities with our Leading European Telco strategy – with the aim of becoming Europe's leading telecommunications provider.

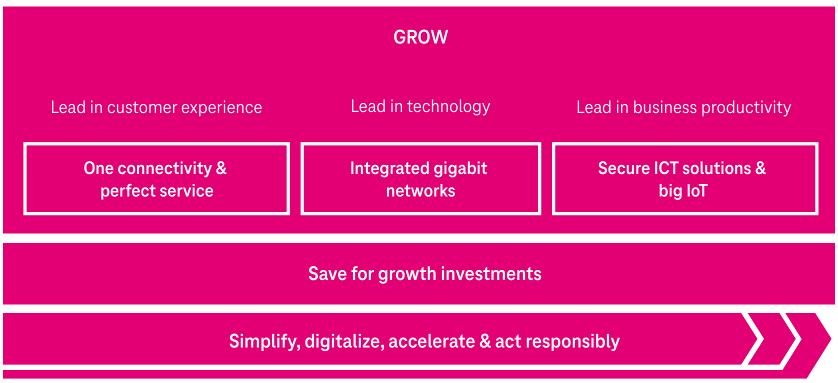
This strategy has proved very successful: In terms of market capitalization, we are Europe's highest-value telecommunications company (as of December 31, 2020). Not only is our Group stable, but it is growing, too – as confirmed by our key financial KPIs and customer development on both sides of the Atlantic. We raised our full-year guidance for 2020 in the course of the year, despite the coronavirus pandemic. Nevertheless, the pandemic has not left us unscathed. For example, temporary travel restrictions have resulted in lower roaming and visitor revenues. Our terminal equipment business also felt the squeeze, as did our corporate customer business. While it is impossible to quantify the long-term impact of the coronavirus pandemic, we see it as both a risk and an opportunity: One the one hand, we expect to see appreciable effects on the economy as a whole, while on the other the pandemic has given a boost to the digitalization trend. Additional trends are emerging that affect both us as a Group and society as a whole:

- The parallel build-out of broadband and mobile infrastructure (optical fiber and 5G) calls for high investments and innovative approaches to implementation.
- Competition in the telecommunications sector is intense and changing: Not only are telecommunications companies using the digital transformation to enhance their core business efficiency, but we are also seeing companies from other industries pushing onto the market with lean, software-based production models. Providers such as Google and Microsoft are expanding into the global connectivity field.
- As data availability continues to grow and artificial intelligence becomes more advanced, new usage scenarios are opening up both in internal production processes (such as data-driven network build-out) and in business-to-customer interaction (e.g., hyper-personalization). At the same time, we need to equip people with the relevant skills and expertise to keep pace with these developments, and define new standards for handling data responsibly in the digital society.
- The rising tide of digitalization and data availability goes hand in glove with the potential for abuse – reflected in trends such as the huge surge in cybercrime, which has rapidly escalated from targeted attacks to high-volume crime. These trends can both dramatically affect the stability of critical infrastructure and influence political relations. Political and economic relations are under increasing influence from the growing importance and economic power of a handful of global tech enterprises, known as hyperscalers that primarily operate from the United States (Microsoft, Google, Amazon) and China (Tencent, Alibaba).
- Sustained economic globalization, world population growth, and increasing use of digital technologies all put a strain on the available resources. It is thus imperative that we find a sustainable, more ecological way of doing business and act with a greater focus on social responsibility.

We are tackling these developments head on – and with measurable success: Unlike our European competitors, our share price recovered to pre-crisis levels following the general downturn at the height of the first coronavirus wave. This is thanks not least to our coherent Group strategy. We continue to systematically implement our Leading European Telco strategy. Despite over 50 % of our revenue coming from the United States, we are still pursuing our ambition to become the Leading European Telco. Because this is how we see ourselves: We are a European company with a strong U.S. arm. In parallel, we leverage our international footprint to generate synergies across the Group and to carry weight alongside the global tech giants. Our goal here is not to micromanage all local units, but to provide a strategic framework and to utilize local strengths (networks, competitive standing).

Our claim to leadership ranges over the dimensions of customer experience, technology, and business customer productivity. From this we derive three specific areas of operation with which we are creating the foundation for future organic growth. Because only if we grow can we sustainably secure our earnings performance and continue to meet the demands of our investors. Two areas of operation contribute to this growth target and provide a framework for our actions: "Save for growth investments," and "Simplify, digitalize, accelerate & act responsibly."

Corporate strategy: Leading European Telco



Strategic areas of operation

One connectivity & perfect service

We want to offer our customers a seamless and technology-neutral telecommunications experience. That's why we market fixed-network and mobile communications in **convergent products** (fixed-mobile convergence (FMC)). By the end of the reporting year, some 5.0 million customers in Germany had opted for MagentaEINS; that is over 0.36 million more than in the prior year. The national companies of our Europe operating segment won more than 0.9 million new customers for MagentaOne and similar FMC offerings in 2020. Because we want to continue on this path of growth, we work continuously to improve and expand our convergent portfolio. We took another step in this direction with our new MagentaEINS Plus offering, which bundles all connectivity services for home and on the move in a single contract – with flexible terms, unlimited data, and the option to add family, friends, or acquaintances to the contract via Community Cards.

While having the best networks is essential for us as Europe's Leading Telco, it is not the only prerequisite. We want to go beyond the pure technical line: the customer's network experience is decisive for us. For this reason we offer our customers additional services that provide genuine added value and turn our "Lead in technology" aspiration into a first-hand experience. We reached some key milestones in this regard in the reporting year. Our MagentaTV product has been repositioned to aggregate linear TV, including extensive features, with access to content from the biggest video-on-demand providers, and exclusive content. In 2020 we enhanced its appeal further: in Germany, for instance, with new partnerships with key content providers (including Disney+, RTL TVNOW) and the launch of the MagentaTV stick for a provider-independent TV experience, and in our European subsidiaries with a new user interface to add even more personalization to the user experience. The addition of around 0.25 million TV customers in Germany and 0.1 million in our European subsidiaries shows that we are on the right track. We also revamped our TVision television offering in the United States with new content packages, a new streaming device, and new price structures. Our digital voice assistant, Hallo Magenta, is enhancing the customer experience in interactions with our services while safeguarding data security and personal privacy in compliance with European data privacy standards. We work together with our customers to continually develop and test new services and further strengthen our entertainment portfolio. That includes MagentaGaming, for example, which we released as a beta version in Germany in 2019 and launched commercially just twelve months later.

Our aspiration to deliver perfect **customer service** is yet another powerful tool to help set us apart from the competition. For this reason, we launched several initiatives in the reporting year that aim to enhance the quality of our customer service. In Germany these include a Concierge Service (where a dedicated personal advisor looks after customers seeking to switch to Telekom from a competitor, move house, or build their own home) and the promise of assistance for customers struggling to set up and optimize their Wi-Fi at home. Awards such as the Connect hotline test's prize for best-in-test of the German fixed-network providers (issue 9/2020) validate our efforts. We will continue our efforts in 2021 to offer customers the best service; for example, by further improving our first-call resolution rate for customer queries. In the United States, too, we are reaping the rewards of measures such as the new Team of Experts approach: Several surveys on service quality place T-Mobile US ahead of its competitors (including being rated best for postpaid customer satisfaction for the sixth time in succession in the J.D. Power test), while the Net Promoter Score in Customer Service stands at 79 % – putting it at an all-time high. At our national companies in Europe, we are currently focusing on increasing the level of digitalization in customer interaction; for example, using our updated service app. Following successful international rollout, this app improves the customer experience (e.g., with setting up and managing their routers via the app, plus an option to chat with an employee or service bot) and enables us to monetize our offerings (e.g., with customer-specific approaches).

We measure **customer satisfaction** using the globally recognized TRI*M method. We use the results of this performance indicator to improve our customer contact processes, and our products and services. At the same time, we determine the loyalty of our customers towards Deutsche Telekom. The results are presented as a performance indicator, the TRI*M index, which ranges between minus 66 and plus 134 points. At the end of the reporting year, the indicator for the Group (excluding T-Mobile US) came in at 72.2 points versus an adjusted value of 67.9 points at the start of the year (determined on a comparable basis). Our goal for the coming years is to again achieve an improvement in customer satisfaction.

Integrated gigabit networks

Convergent products require **integrated networks**. That is why we are systematically building out and interlinking our fixed and mobile networks so that we can offer our customers the fastest possible connection at top quality, anytime, anyplace. We invested around EUR 17 billion (not including spectrum investment) primarily in building and operating networks in Europe and the United States, with around EUR 5.5 billion of this figure earmarked for Germany alone. This makes us the biggest investor among all of our German competitors. In pursuit of outstanding quality, we are also striking out in new directions, for example, with innovative technologies like fixed-network substitution using wireless technology, or the use of artificial intelligence to ensure infrastructure is built out in line with demand, as well as exploring partnerships and joint ventures. Integrated management improves the capacity utilization of our infrastructure and increases efficiency in operations and maintenance. SDG 9 STRUCTURE

Fiber optic-based **fixed networks** are the basis for an integrated network experience. In virtually all of our European national companies, we are leading the build-out of fiber-optic lines to over 9 million households. In Hungary, for example, we can now offer fiber-optic lines to 2.6 million households – that's over 50 %. In the Germany operating segment, we have now laid more than 590,000 kilometers of fiber-optic cable. Since the start of 2020, we have made fiber-optic lines available to around 600,000 more households. Looking ahead, we are set to substantially increase the pace of the fiber-optic build-out further.

In **mobile communications**, we set ourselves apart from our competitors with the outstanding quality of our network. We have regularly come out on top in independent network tests. Our German network once again won the "big three" network tests in 2020 (Connect, issue 1/2021; CHIP, issue 01/2021, 11th time in succession; and Computer Bild, issue 25/2020). The network experts from Umlaut tested four of our European national companies (Austria, the Netherlands, Poland, and Croatia) in the reporting year and rated them all "best in test overall." T-Mobile US took the #1 spot in the OpenSignal Upload Speed Experience test in 2020. We intend to achieve these results on a regular basis in future, and hence are further building out our LTE networks: In our European national companies, we already covered 97.6 % of the population with LTE as of December 31, 2020; in Germany, household coverage stood at 98.7 %.

With the **fifth-generation mobile communications standard (5G)**, we will create a highly reliable mobile network with extremely low latency and high data throughput. To this end, network functions will be decoupled from the access medium (e.g., optical fiber, copper, or air). By distributing computing power in the network (mobile edge computing) and creating dedicated network layers for individual applications (network slicing), 5G creates the basis for future technologies such as virtual reality, autonomous driving, and the Internet of Things. With our clear goal of also leading in 5G, we intend to work closely with policy-makers and industry to build the most powerful digital infrastructure across our footprint. And we are moving closer to achieving this goal: With the largest 5G campaign in Germany, two thirds of the population can now experience the new mobile communications standard – in both rural and urban areas. In the United States, too, we have the largest 5G network nationwide covering some 280 million people via the 600 MHz band and 106 million people with Ultra Capacity 5G in the 2.5 GHz band. This is thanks in large part to our superior spectrum position from the business combination with Sprint (effective from April 1, 2020). In Austria, not only do we have the largest 5G network nationwide but we were also the first telecommunications company to offer 5G there. Magenta Telekom is deploying innovative network technology to expedite the build-out of 5G in Austria and offers unlimited 5G internet at over 1,200 locations country-wide (reaching more than 40 % of Austrian households). At the Netherlands' first-ever 5G spectrum auction, which ended on July 21, 2020, T-Mobile Netherlands purchased total spectrum of 70 MHz for which it paid EUR 400 million. Going forward, we will continue to invest heavily in building out 5G infrastructure. For this, we need conditions to be in place that are both fair and reliable.

Secure ICT solutions & big IoT

In the reporting year, we once again maintained our market-leading position (in terms of revenue) as a provider of telecommunications services for business customers in Germany and based growth on the level reached in recent years. Secure, reliable global connectivity is essential to the advancing digitalization of critical processes in companies and industry associations. We remain a dependable partner to German industry thanks to our product portfolio of international communications solutions that combine the strengths of our national network infrastructure with our international networks. We also continued to post growth in IT revenue from business customers in our Germany operating segment (up 3.4 % compared with 2019).

We again demonstrated our strengths and expertise throughout the coronavirus pandemic. With our products and services, we made an important contribution to maintaining normal operations as far as possible for our society and economy: Over 50 % of businesses in Germany work on the Telekom network and during the first wave of coronavirus from March through June 2020 we sold 69,000 remote-working solutions to help maintain business as usual when working from home. During lockdown our networks were put to the test and they all coped well. Compared with pre-crisis levels, mobile voice traffic jumped by up to 70 % in the first week and in the fixed network by up to 100 % on specific days. Yet the coronavirus pandemic is not leaving our B2B business unscathed. Our core business is feeling the strain of lower roaming revenues, and IT business is impacted by IT budget cuts and project delays, for example. At the same time, as a catalyst for the digital transformation, the coronavirus crisis represents an opportunity. At Deutsche Telekom, we want to be the preferred partner for digitalization and to grow our business with business customers. With our IT solutions, we help our customers – from microenterprises, SMEs, major corporations through to public authorities – to profitably deploy the technologies of the future. The Internet of Things and cybersecurity are just two of the focus topics gaining relevance in this context. SDG 8 FINANCE

Our business with "traditional" IT outsourcing services for international corporate customers has been in decline for a number of years now, mainly due to persistent intense competition. It is for this reason our Systems Solutions operating segment is currently undergoing a profound transformation. For our corporate customers, we are pursuing a "Digital enabler" strategy. In concrete terms, this means we are bridging the gap between known platforms (Microsoft Office, SAP Hana, etc.) and the individual demands of complex organizations. To achieve this, we have expanded the software development, software integration, and digitalization process units in particular and will continue to further strengthen them. The focus here is on profitable growth. We are redoubling our efforts to implement existing transformation initiatives, such as reducing indirect costs, strengthening the offshoring rate, and transforming the revenue mix, despite some minor delays in the reporting year due to the coronavirus pandemic and other factors.

As part of our ongoing efforts to consistently implement the Group's strategy pillar "Lead in business productivity" and continue building on the positive trend, in 2020 we implemented several more structural measures:

- We plan to offer our business customers "connectivity from a single source" (one connectivity) and established a dedicated integrated unit for this purpose in the reporting year: TC Services and Classified ICT, portfolio units previously assigned to the Systems Solutions operating segment, were combined in the business customer unit of the Germany operating segment effective July 1, 2020. The transition to the new structure will affect T-Systems' telecommunications operations both on a national and international level. It not only establishes end-to-end responsibility – from production and product development to service delivery management and technical sales – within one unit, which reduces the number of interfaces, but also enables us to even better orient our services to the customer. We also expect greater scalability and improved competitiveness from the resulting economies of scale alongside the benefit of being able to zero in even more closely on our growth areas (e.g., software-defined network solutions (SD-x) and data-driven business models) on the basis of standardized production processes.
- At the same time, we want to ensure we stay flexible and agile in the fast-moving IoT and security growth markets. To this end, effective July 1, 2020 the Security and IoT portfolio units were spun off into independent legal entities (limited liability companies under German law (GmbHs)) under the Deutsche Telekom AG umbrella. The spin-off move gives them greater entrepreneurial freedom, more speed and innovation, and strengthens the mandate for IoT in the Group. We see the most growth potential for IoT business in the digitalization of the SME sector and in the global scaling of IoT platforms.

These structural changes mark an important milestone in the transformation of T-Systems, and will continue to be pursued systematically in 2021.

Supporting areas of operation

Save for growth investments

Future growth requires adequate investment. To this end, we are investing in our own innovativeness as well as integrating successful new developments from outside our Company. Thanks to our strict cost discipline, we generate the funds we need to finance this investment and safeguard our competitiveness. We will therefore systematically continue on this path of cost transformation. In the long term, we also want to be Europe's leading telecommunications provider in terms of efficiency.

We take a value-oriented approach to managing our **investment portfolio**. Business areas that cannot be adequately developed within the Group are disposed of. Consequently, we concluded an agreement concerning the sale of the 54 % stake in Telekom Romania Communications S.A., which operates the Romanian fixed-network business, to Orange Romania. The transaction, which comprises a purchase price of EUR 268 million, is subject to approval by the authorities as well as other closing conditions. The transaction is expected to be closed in the second half of 2021. On the other hand, we bolster our growth ambitions by means of equity investments and acquisitions. In this context, T-Mobile US and Sprint combined their two businesses effective April 1, 2020 to form the "all-new," larger T-Mobile US. The new T-Mobile US created by the business combination has market capitalization of around USD 167 billion (based on the share price of the new T-Mobile US on December 31, 2020). Moreover, we secured call options to increase our holding in T-Mobile US (from SoftBank shares) and appointed an experienced new management team. Not only is the combination of business activities under an all-new T-Mobile US consistent with our strategy of successfully developing our U.S. business (including market capitalization growth of over 400 % so far in the last five years), it will also bolster the customer-oriented Un-carrier strategy and allow us to roll out 5G technology across the United States faster and better than our competitors. The course is already set: In the reporting year we moved up to the #2 spot in terms of customer numbers in the U.S. mobile communications market, we won more than 5.5 million new customers in 2020 alone, and we continue to grow. Going forward our focus is on becoming #1 in the U.S. market and leveraging the planned synergies from the business combination worth around USD 43 billion (after integration costs). In the Netherlands, too, we have completed the integration of Tele2 Netherlands and continue to grow on this stronger basis. We successfully launched ourselves as an FMC provider and secured the spectrum necessary to maintain our leading position in terms of network coverage. We also acquired the Dutch MVNO and SIM provider Simpel as of December 1, 2020 along with its customer base of around 1 million customers nationwide. With a total of 6.8 million customers, we are now the Netherlands' largest provider of mobile communications.

Simplify, digitalize, accelerate & act responsibly

Simplicity in our offers and in our organization makes the digital transformation of our core business easier. In this way, we increase our **implementation speed** – both in the interaction with customers and in the implementation of new, strategic initiatives. This is why we want to become simpler, more digital, and ultimately more agile.

There are two main thrusts to our pursuit of **simplicity**. First, we want to offer our customers intuitive products and simple rate plans, like MagentaEINS Plus, MagentaTV, or the unlimited MagentaMobil XL plan. Going forward, we want to significantly further reduce product complexity. Second, we want our internal operation to be as efficient as possible, i.e., in terms of time and costs. Hence we will scrutinize our organization, processes, and decision-making procedures and further optimize them wherever possible.

The **digitalization** of our core business is helping us to improve customer experience and increase our efficiency. Our service apps are now firmly established in Germany and Europe as central, digital customer interfaces and we have worked to continually add more services. We interact with 62 % of customers in our European national companies digitally, via the service apps. The MeinMagenta app in Germany also has a penetration rate of over 56 % and receives positive ratings, with the iOS version rated 4.3/5 stars, for example. Thanks to our ongoing investments in digitalizing our processes, we were also able to respond rapidly to the unexpected challenges posed by the coronavirus pandemic, transitioning our 16,000 service center employees in Germany to home working within one weekend. 80,000 colleagues in Germany and up to 180,000 employees worldwide have represented Deutsche Telekom from their own homes. Throughout all of this, we maintained our productivity levels. Employee satisfaction increased considerably in parallel, reaching 80 % in the pulse survey taken in November 2020, thus it is around 8 percentage points higher than the level in the employee survey in November 2019. SDG 3 EMPLOYEES
Long term, our plan is to digitalize virtually all value creation stages in their entirety. To this end, we are implementing more agile IT solutions and systematically expanding our expertise in innovative technologies like artificial intelligence. Data-based analyses are already helping us to maintain our hardware more proactively, understand customer needs better, and manage our networks more efficiently.

Yet, to achieve simplicity and take the digital transformation forward, we need new organizational forms, expertise, and a cultural change – in short, we need to master a whole host of new skills if we are to handle current and future challenges. We tackled these developments head on with measures such as the introduction of the Youlearn initiative to promote a culture of self-paced learning in our everyday working life. What is more, we rolled out Percipio (an intelligent learning platform also dubbed the “Netflix of learning”) and integrated Coursera as a provider of digital further-training courses offered by top-ranking universities, thus providing our employees with a high-quality training service. The increase in our digital learning rate from 46 % to 63 % and over 170,000 registrations for Percipio since the third quarter of 2019 validate our efforts in this area. We do this because we firmly believe that providing a state-of-the art learning environment is central to our obligation as an employer to act **responsibly**. SDG 8 EMPLOYEES

In parallel, we fulfill our responsibility to society by systematically aligning our core business processes with the principle of sustainability. We have expanded our existing climate strategy to include a new Group program. Our aim with “We care for our Planet” is to make a meaningful contribution toward protecting the climate and conserving resources. With over 2.1 million devices either refurbished and reintroduced into circulation or sent by us directly for recycling, our customers actively help to conserve resources and protect the climate. In the fixed network alone, more than 800,000 routers and receivers distributed under our lease model were returned, professionally refurbished, and made ready for re-use. Moreover, in 2020 we introduced a sustainability standard for our packaging, removing single-use plastics in favor of recyclable materials and environmentally friendly colorings. All new Telekom-branded (or “T-branded”) devices and already up to 25 % of devices from third-party manufacturers fulfill these requirements. Our Group entities in Germany, Magyar Telekom in Hungary, OTE in Greece, T-Mobile Netherlands, T-Systems Iberia, T-Systems in India as well as all T-Systems and GBS entities in Russia met 100 % of their electricity requirements from renewable sources. By the end of 2021, we also plan to have fully converted our entire Deutsche Telekom network, across the entire gamut from mobile telecommunications to the high-speed DSL network, to renewable electricity. Above and beyond this, we are supporting a responsible approach to digitalization, e.g., with our campaigns for digital civil courage (#TAKEPART – No hate speech) and promoting digital democracy projects (dabei-geschichten.telekom.com). SDG 13 ENVIRONMENT SDG 16 RELATIONSHIPS

In summary, our Leading European Telco strategy is reflected in our goal to be

the leading European telecommunications provider.

- We want to be a **leader** in terms of customer experience, technology, and the implementation of advances in productivity for our business customers. Because only when we lead can we **grow** and meet the demands of our investors in the long term.
- This growth will be made possible by carefully managing our **financial resources** and **systematically transforming** the Company to be simple, digital, and agile in every sense.
- We play a responsible and active role in **society**. We are a partner, not just at a social level, but also at a political one, and we work in the interests of ensuring the open, forward-looking development of all countries in which we are active. SDG 8 RELATIONSHIPS

Management of the Group

We are committed to the concept of value-oriented corporate governance. We want to strike a balance between the contrasting expectations of our stakeholders so that sufficient funding is available for an attractive dividend, debt repayment, responsible staff restructuring, and new investment for a positive customer experience.

- **Shareholders** expect an appropriate, reliable return on their capital employed.
- **Providers of debt capital** expect an appropriate return and that Deutsche Telekom is able to repay its debts.
- **Employees** expect jobs that are secure, prospects for the future, and that any necessary staff restructuring will be done in a responsible manner.
- **“Entrepreneurs within the enterprise”** expect sufficient investment funding to be able to shape Deutsche Telekom’s future business and develop products, innovations, and services for the customer.
- **Society** expects us to do everything within our power to protect the environment, encourage a fair and democratic co-existence, and shape the digital transformation in a responsible manner. SDG 17 RELATIONSHIPS

Finance strategy

We announced our finance strategy for the years 2018 through 2021 at the Capital Markets Day in late May 2018. Our forecast for growth through to 2021 remains at the same high level we anticipated at our Capital Markets Day in 2015 for the period 2014 through 2018.

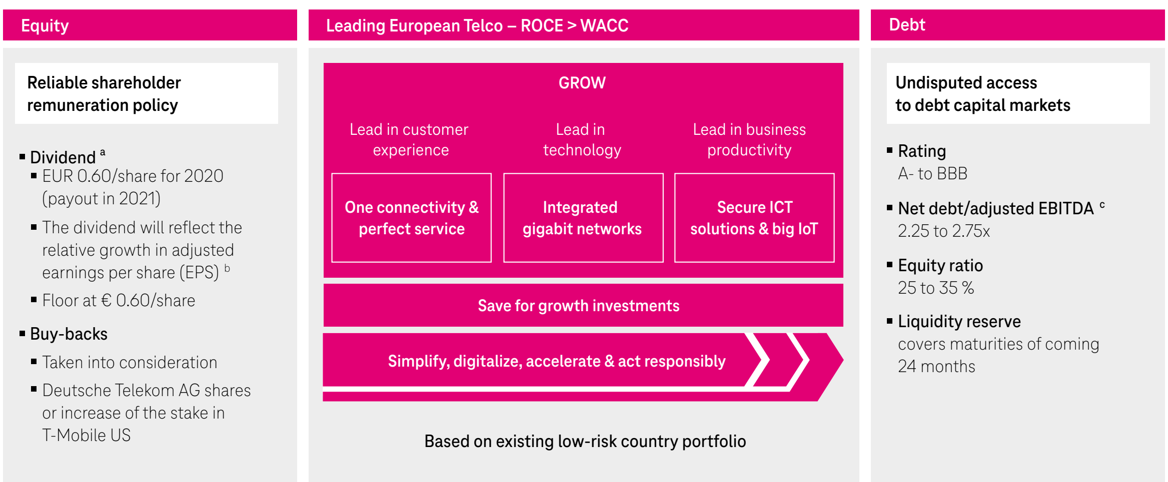
Part of our finance strategy was to achieve our target financial ratios – relative debt (ratio of net debt to adjusted EBITDA) and equity ratio – along with a liquidity reserve that covers our maturities of the coming 24 months at least. With these clear statements we intend to maintain our rating in a corridor from A- to BBB and safeguard undisputed access to the capital market.

There is a sustainable dividend policy for shareholders, which is subject to approval by the relevant bodies and the fulfillment of other legal requirements. The new dividend policy introduced in 2019 sets out a minimum dividend of EUR 0.60 per dividend-bearing share. The dividend is to continue to reflect the relative growth in adjusted earnings per share (EPS). For the 2020 financial year, we will propose a dividend of EUR 0.60 for each dividend-bearing share. We thus offer our shareholders both an attractive return and planning reliability.

We will also take share buy-backs into consideration, both of Deutsche Telekom AG shares and shares in T-Mobile US.

Total capital expenditure is also to remain high in the next few years. The scope for investment is to be used to further roll out our broadband infrastructure and to accelerate the transformation of the Company. In mobile communications, the infrastructure build-out will focus on the LTE and 5G standards and, in the fixed network, on optical fiber and vectoring. The finance strategy supports the transformation of our Group into the Leading European Telco. In order to generate a sustainable increase in value, we intend to earn at least our cost of capital. We plan to meet this target by optimizing the utilization of our non-current assets on the one hand, and pursuing strict cost discipline and sustainable profitable revenue growth on the other.

Our finance strategy through 2021



[a] Subject to approval by the relevant bodies and the fulfillment of other legal requirements.
[b] Adjusted earnings per share 2019 as starting point.
[c] Deviation from the target range for a short period as a result of the business combination of T-Mobile US and Sprint.

We will provide information about the further development of our finance strategy for the years following 2021 at our Capital Markets Day, which is planned for 2021.

Performance management system

In order to set and achieve our strategic goals more effectively, we pursue a Group-wide, value-oriented performance management approach. We use a specific set of performance indicators to reliably and transparently measure success. The following tables and information provide an overview of our key financial and non-financial performance indicators.

Financial performance indicators

		2020	2019	2018	2017	2016
ROCE	%	4.6	5.1	4.7	5.8	5.7
Net revenue	billions of €	101.0	80.5	75.7	74.9	73.1
Profit (loss) from operations (EBIT)	billions of €	12.8	9.5	8.0	9.4	9.2
EBITDA AL (adjusted for special factors)[a]	billions of €	35.0	24.7	23.1	n.a.	n.a.
Free cash flow AL (before dividend payments and spectrum investment)[a, b]	billions of €	6.3	7.0	6.1	n.a.	n.a.
Cash capex (before spectrum investment)	billions of €	(17.0)	(13.1)	(12.2)	(12.1)	(11.0)
Rating (Standard & Poor's, Fitch)		BBB, BBB+	BBB+	BBB+	BBB+	BBB+
Rating (Moody's)		Baa1	Baa1	Baa1	Baa1	Baa1

[a] Comparatives for 2018 were calculated on a pro forma basis for the key performance indicators redefined as of January 1, 2019 following the introduction of the IFRS 16 accounting standard.

[b] Before interest payments for zero-coupon bonds and before termination of forward-payer swaps at T-Mobile US.

Since the start of the 2019 financial year, we have taken the effects of the first-time application of IFRS 16 "Leases" into account when determining our financial performance indicators. The calculation of ROCE was adjusted in line with IFRS 16 with minimal impact on the overall amount. Following this change, we now measure our operating earnings performance on the basis of EBITDA AL and no longer on the basis of EBITDA. Free cash flow was replaced by free cash flow AL. For purposes of better comparability, comparative figures were calculated on a pro forma basis for the 2018 financial year; all other prior-year figures were not adjusted retrospectively.

Profitability

We have incorporated sustainable growth in enterprise value into our medium-term aims and implemented it as a separate KPI (key performance indicator) for the entire Group. Return on capital employed (**ROCE**) is a key performance indicator at Group level. ROCE is the ratio of operating result after depreciation, amortization and impairment losses plus imputed taxes (net operating profit after taxes, NOPAT) to the average value of the assets tied up in the course of the year (net operating assets, NOA).

Our goal is to achieve or exceed the return targets imposed on us by providers of debt capital and equity on the basis of capital market requirements. We measure return targets using the weighted average cost of capital (WACC).

NOPAT is an earnings indicator derived from the income statement, taking an imputed tax expense into consideration. It does not include cost of capital.

NOA includes all assets that make a direct contribution to revenue generation. These include all elements on the asset side of the consolidated statement of financial position that are essential to the rendering of services. Operating working capital is calculated from trade receivables, inventories, and trade and other payables. The figure for other provisions is deducted as no return target exists for this.

Revenue and earnings

Revenue corresponds to the value of our operating activities. Absolute revenue depends on how well we are able to sell our products and services on the market. The development of our revenue is an essential indicator for measuring the Company's success. New products and services as well as additional sales activities are only successful if they increase revenue.

EBITDA corresponds to **EBIT** (profit/loss from operations) before depreciation, amortization and impairment losses. EBIT and EBITDA measure the short-term operational performance and the success of individual business areas. In order to ensure maximum comparability with our previous KPIs following the application of IFRS 16 as of January 1, 2019, starting in the 2019 financial year we have measured our operating earnings performance on the basis of **EBITDA AL** – i.e., EBITDA adjusted for depreciation of right-of-use assets and for interest expenses on recognized lease liabilities. In addition to these absolute indicators, we also use the EBIT and EBITDA AL margins to show how these indicators develop in relation to revenue. This makes it possible to compare the earnings performance of profit-oriented units of different sizes. Taking unadjusted EBIT/EBITDA AL as performance indicators means special factors are also taken into account. This promotes a holistic view of our expenses. However, special factors have an impact on the presentation of operations, making it more difficult to compare performance indicators with corresponding figures for prior periods. For this reason, we additionally adjust our performance indicators to provide transparency. Without this adjustment, statements about the future development of earnings are only possible to a limited extent. The adjusted values are calculated on the basis of the unadjusted performance indicators.

For the reconciliation of EBITDA AL, EBIT, and net profit/loss to the respective figures adjusted for special factors, please refer to the section "Development of business in the Group."

Financial flexibility

Free cash flow AL (before dividend payments and spectrum investment) is calculated as net cash from operating activities less net cash outflows for investments in intangible assets (excluding goodwill) and property, plant and equipment, as well as the principal portion of repayment of lease liabilities – excluding finance leases at T-Mobile US. Free cash flow AL is a key yardstick for providers of debt capital and equity. It measures the potential for further developing our Company, for generating organic growth, and for the ability to pay dividends and repay debt.

Cash capex (before spectrum investment) relates to cash outflows for investments in intangible assets (excluding goodwill) and property, plant and equipment, which are relevant for cash outflows as a component of free cash flow.

A **rating** is an assessment or classification of the creditworthiness of debt securities and its issuer according to uniform criteria. Assessment of creditworthiness by rating agencies influences interest rates on debt securities and thus also our borrowing costs. As part of our finance policy, we have defined a target range for our ratings. We believe that with a rating between A- and BBB (Standard & Poor's, Fitch) or between A3 and Baa2 (Moody's) we essentially have the necessary entry to the capital markets to generate the required financing.

Non-financial performance indicators

		2020	2019	2018	2017	2016
Customer satisfaction (TRI*M index)		72.2	67.3	67.7	68.6	70.2
Employee satisfaction (commitment index)[a]		4.0	4.0	4.1	4.1	4.1
Fixed-network and mobile customers						
Mobile customers[b]	millions	241.8	184.0	178.4	168.4	165.0
Fixed-network lines	millions	27.4	27.5	27.9	27.9	28.5
Broadband customers[c, d]	millions	21.7	21.0	20.2	18.9	18.4
Systems Solutions						
Order entry[e]	millions of €	4,588	4,740	6,776	5,241	6,851

[a] Commitment index determined on the basis of the employee surveys carried out in 2019 and 2017.

[b] Including T-Mobile US wholesale customers.

[c] Excluding wholesale.

[d] Starting in the second quarter of 2018, we no longer report the number of broadband lines from a technical perspective. Instead, we report the number of broadband customers. The figures for 2016 and 2017 have been adjusted accordingly.

[e] Order entry for the 2019 financial year was adjusted retrospectively in connection with the realignment of the B2B telecommunications business.

We want our customers to be satisfied – or even delighted – as satisfied customers act as multipliers for our Company's success. As a responsible, service-oriented company, the needs and opinions of our customers are of great importance to us, and we want them to stay with our Company in the long term. For this reason we measure **customer retention/satisfaction** in our companies using the globally recognized TRI*M method. The results of systematic surveys are expressed by an indicator known as the **TRI*M index**. To underscore the major significance of customer retention/satisfaction for our operations, in 2010 we made this key indicator one of four parameters for the long-term variable remuneration (Variable II) for our Board of Management members and in 2015 included it as part of the Long-Term Incentive Plan (LTIP) for managers (excluding Board of Management members). We take the TRI*M indexes calculated for the operating entities (excluding T-Mobile US) as an approximation of the respective entities' percentage of total revenue to create an aggregate TRI*M Group value. Over a period of four years, the eligible managers can benefit from the development of customer retention/satisfaction across the Group.

For further information on customer satisfaction, please refer to the section "Group strategy."

Our employees want to contribute to the further development of the Company and identify with it. We want to establish an open dialog and a productive exchange with our employees: New ways of working and modern means of communication help us achieve this, as do regular surveys. The most important feedback instruments across the Group (excluding T-Mobile US) for assessing **employee satisfaction** include regular employee surveys and the pulse survey carried out twice a year. In our Company, we measure the employee satisfaction performance indicator using the **commitment index** – derived from the results of the last employee survey. SDG 8 EMPLOYEES

For further information about employee satisfaction, please refer to the section "Employees."

In view of the major significance of employee satisfaction for the success of the Company, Board of Management members are now also being managed and incentivized by means of the long-term variable performance-based remuneration (Variable II). Employee feedback as one of four parameters has been relevant for Variable II since 2010, and for the Long-Term Incentive Plan (LTIP) which was launched in 2015 for our managers (excluding Board of Management members). This allows Board members and eligible managers to benefit from the development of employee satisfaction across the Group.

As one of the leading providers of telecommunications and information technology worldwide, the development of our Group – and thus also our financial performance indicators – is closely linked to the development of **customer figures**. Acquiring and retaining customers are thus essential to the success of our Company. We have different ways of measuring the development of our customer figures according to the business activity in our operating segments: Depending on the activities of each segment, we measure the number of mobile customers and/or the number of broadband customers and fixed-network lines.

In our Systems Solutions operating segment, we use **order entry** as a non-financial performance indicator. We define and calculate order entry as the total of all amounts resulting from customer orders received in the financial year. Order entry in the form of long-term contracts is of great significance to the Group in order to estimate revenue potential. In other words, order entry is an indicator that provides a high degree of planning reliability.

The economic environment

Macroeconomic development

The outbreak of the coronavirus pandemic in spring 2020 plunged the global economy into a deep recession. As the virus began its spread worldwide, countries responded with copious containment measures, including restrictions on social contact and travel, business closures, and bans on mass events. States and central banks rolled out far-reaching monetary and fiscal policy measures to cushion the economic downturn.

As the crisis progressed, leading economic research institutes made substantial downward adjustments to their outlooks for world economic output. The International Monetary Fund (IMF) projects a 4.4 % decline in world economic output for 2020. Economic output in our core markets also shrank in the reporting year. After bottoming out in the second quarter of 2020, economic activity had moved into a period of recovery as containment measures were lifted and infection rates went down. However, the rate of recovery began to slow again in fall 2020 due to the renewed acceleration of the pandemic, resulting in tighter containment measures in many areas and changes in people's behavior. The IMF expects the global economy to only partially recover in 2021 given that economic activity will remain significantly below the level that had been projected before the emergence of the coronavirus crisis.

GDP in Germany decreased by 5.0 % year-on-year. The coronavirus crisis affected individual industry sectors to varying extents. The Bitkom-ifo-Digitalindex, calculated on the basis of the business situation and expectations, dropped sharply in the first months of 2020. After reaching its lowest level in April, the index returned to significant growth through December but remained well below its pre-pandemic level. The business climate in the ICT sector remained relatively buoyant compared with the economy as a whole.

Economic output in the United States declined by 3.5 % in the reporting year, with the U.S. economy hitting its lowest point in April 2020. This was followed by a period of recovery as social contact restrictions were lifted, although this recovery lost momentum in the second half of 2020 as infection rates began to rise again. In the countries of our Europe operating segment, those economies that are heavily reliant on the service sector were hit particularly hard by the coronavirus pandemic. Domestic consumption declined across all footprint countries; rising unemployment rates were kept in check primarily thanks to state aid programs in many places.

The following table shows the GDP growth rate trends and the unemployment/non-employment rates in our most important markets. The unemployment rate for Germany and the non-employment rates for the other countries are presented in conformance with ILO standards.

%	GDP for 2018 compared with 2017	GDP for 2019 compared with 2018	**GDP estimate for 2020 compared with 2019**	Unemployment/ non-employment rate in 2018	Unemployment/ non-employment rate in 2019	**Estimated unemployment/ non-employment rate in 2020**
Germany	1.3	0.6	(5.0)	5.2	5.0	5.9
United States	2.9	2.3	(3.5)	3.9	3.7	7.7
Greece	1.6	1.9	(9.0)	19.3	17.3	18.0
Romania	4.5	4.2	(5.2)	4.2	3.9	5.9
Hungary	5.4	4.6	(6.4)	3.7	3.4	4.4
Poland	5.4	4.5	(3.6)	3.9	3.3	4.0
Czech Republic	3.2	2.3	(6.9)	2.2	2.0	2.7
Croatia	2.8	2.9	(9.6)	8.5	6.6	7.7
Netherlands	2.4	1.7	(5.3)	3.8	3.4	4.4
Slovakia	3.8	2.3	(7.5)	6.5	5.8	6.9
Austria	2.6	1.4	(7.1)	4.9	4.5	5.5

Source: Eurostat, European Commission, national authorities. Last revised: December 2020.

Telecommunications market

Demand for high-speed broadband – over the fixed and mobile networks – remains high. According to estimates by Analysys Mason, data traffic over the fixed network grew by 26 % worldwide in 2020. Estimates by Dialog Consult put the average data volume per fixed-network line and month in Germany in the reporting year at 168 gigabytes (GB) – an increase of 25 % year-on-year. According to Analysys Mason, mobile data traffic grew worldwide by 55 % in 2020. In Germany, the average data volume per SIM card and month stood at 3.0 GB in the reporting year, up by 45 % year-on-year (according to estimates by Dialog Consult). For the telecommunications industry, these developments present both a challenge and the opportunity to monetize the strong growth in volume.

Worldwide, revenues on the market for information and communications technologies (ICT) decreased by 0.4 % in the reporting year to EUR 3.6 trillion as a result of the coronavirus pandemic. The German digital association for information technology, telecommunications and new media Bitkom and the European Information Technology Observatory (EITO) expect the telecommunications market segment (services and equipment) to record a decrease of 2.1 % worldwide to EUR 1.7 trillion and the information technology (IT) market segment to record a slight increase of 1.2 % for 2020.

In the European Union (EU), revenues in the telecommunications market segment decreased by 3.3 % in 2020. Revenues from telecommunications equipment declined by 6.2 %, while revenues from telecommunications services were down by 2.2 %. In the United States, revenues with telecommunications equipment declined by 2.4 % in the reporting year and revenues with telecommunications services were down slightly by 0.1 % in the same period.

The telecommunications industry continues to be characterized by intense competition. Consumers benefit from a greater range of products to choose from. Each of our markets is occupied by three or four mobile operators with their own network infrastructure. On top of this, we are seeing MVNOs becoming established in many markets using the network infrastructure of traditional mobile network operators. In the fixed network, too, established telecommunications companies are competing intensively with cable network operators, city network operators, and resellers, who predominantly make use of regulated wholesale products. Added to this are internet companies with over-the-top (OTT) communication services that further intensify the competitive pressure.

The rapid technological transformation in the telecommunications sector calls for high investments to build out next-generation network infrastructure. GSMA Intelligence estimates that mobile operators will invest some USD 1 trillion worldwide in the rollout of 5G networks (excluding spectrum) over the next few years. Telecommunications networks are continually being upgraded with optical fiber. Established telecommunications companies like Deutsche Telekom are investing a substantial portion of their revenues in building out network infrastructure and acquiring spectrum. To ensure that these efforts can continue, we expect political and regulatory conditions that allow network investors to plan ahead reliably and generate appropriate returns for their investments.

Germany

According to EITO, revenue from IT products and services, telecommunications, and consumer electronics decreased by 0.1 % to EUR 143.5 billion in Germany in the reporting year, largely driven by the impact of the coronavirus pandemic. The decline was felt mainly in telecommunications revenue (telecommunications services, terminal equipment, and infrastructure), which decreased by 0.6 % to EUR 56.8 billion. Revenue with information technology increased slightly by 0.3 % to EUR 86.7 billion.

The number of broadband lines in Germany grew by 2.4 % in 2020 to around 36.7 million at year-end, according to EITO. For 2021, the number of broadband lines is expected to grow by a further 2.5 % to 37.5 million. Companies with their own infrastructure benefited the most from this market growth, along with resellers and regional providers. High-bandwidth lines are increasingly marketed in cable and VDSL/vectoring networks. The offerings in this area are supported by innovative hybrid connection technologies. The availability of high bandwidths in Germany and the large choice of HD content and video-on-demand services are stimulating customer growth in IPTV business. Convergent offers comprising fixed-network and mobile communications (fixed-mobile convergence, FMC) offer customers many advantages and help increase customer retention. The trend for convergence products continued in the reporting year. We tapped into this trend with the addition of MagentaEINS Plus to our convergent offerings in September 2020. The original MagentaEINS was launched back in fall 2014 – Vodafone and O_2 have since followed suit with convergence products of their own.

In the German mobile market, service revenues increased by 0.4 % against 2019 to approximately EUR 20.0 billion. This revenue growth was driven largely by the continued rise in data usage, which was offset by regulatory effects as well as sustained price and competitive pressure. Mobile data usage continues to increase strongly on the back of growing use of products such as mobile video apps. The percentage of voice and data rate plans is rising steadily. Traditional voice and text messaging services are increasingly being replaced by free IP messaging services like WhatsApp and social networks like Facebook. Connected products such as smartphones and tablets, as well as other connected devices such as watches, shoes, bicycles, and much more, are growing ever more popular, pushing up demand for mobile broadband speeds and for large data volumes in the rate plan portfolios.

Digitalization is continuing apace, and as a result there is also growing demand by the industry for more connectivity to allow machines and production sites to be networked and to tap efficiencies in value chains. Extensive IT and cloud solutions, as well as intelligent approaches to M2M communication are needed in order to meet these demands.

United States

In the United States, the coronavirus pandemic dampened the economy and the mobile communications sector due in part to the temporary closure of shops and offices. In parallel, the increased use of video conferencing and streaming services caused a sharp rise in data traffic over the networks. Despite the higher loads, both the mobile networks and the mobile communications industry as a whole proved resilient during these times.

In the U.S. mobile communications market, the business combination of T-Mobile US and Sprint has created a market with three national mobile providers alongside various regional network operators. Additionally, an array of mobile virtual network operators (MVNOs) offer mobile services, using the networks of one or more of the three national carriers to transmit their voice and data traffic.

The market remains highly dynamic, largely due to the competition posed by cable operators. Comcast, Charter, and Altice use their own existing Wi-Fi networks to deliver mobile communications services, with Comcast and Charter falling back on Verizon's network and Altice previously/so far on Sprint's network (which now belongs to T-Mobile US) when out of their respective Wi-Fi footprints. Altice also has a roaming agreement with AT&T. These offerings from cable operators and MVNOs have slowly churned customers away from the traditional mobile providers, intensifying the competitive pressure and bolstering the ongoing efforts of cable operators to gain traction in the mobile market.

The entry of satellite TV operator DISH into the market is expected to add new competitive pressure: DISH holds licenses to vast swaths of airwaves and has announced plans for building its own 5G network in 2021. DISH benefited from the business combination of T-Mobile US and Sprint, consummated in 2020, which included the sale of Sprint's prepaid business to DISH effective July 1, 2020 as a major prerequisite for the U.S. authorities approving the merger.

In the United States, 5G commercialization continues to move at a swift pace. All three nationwide mobile providers have launched 5G services, as have a number of regional providers. 5G is being built out in the United States utilizing both sub-6 GHz spectrum and millimeter wave (mmWave). T-Mobile US's 5G network now covers 280 million people in the United States. All carriers will continue to expand their networks in the coming months according to different models which, for the time being, emphasize different spectrum bands.

For its part, the U.S. Federal Communications Commission (FCC) has taken various steps to encourage investment in mobile communications. For example, to help providers prepare for the deployment of 5G networks, the FCC has cleared regulatory hurdles, and preempted several state and local obstacles, in efforts to streamline the build-out. Additionally, in 2020 the FCC held several auctions for spectrum integral to the 5G build-out. The C-band auction for spectrum in the 3,700 to 4,200 MHz band began on December 8, 2020 and ended on January 15, 2021.

Europe

The traditional telecommunications markets in our segment were primarily impacted by the coronavirus pandemic in the reporting year. This resulted, among other effects, in a substantial year-on-year decline in mobile roaming revenues due to travel restrictions. Full and partial lockdowns in our footprint countries over the course of the year led to the temporary closure of shops and other measures. Public life moved online to a large extent, driving a corresponding increase in demand for broadband and TV services. According to Analysys Mason, fixed-network business (excluding systems solutions business) proved robust and was able to offset the decline in revenues from voice telephony. Despite posting losses in roaming business, revenue from mobile communications remained stable year-on-year. Overall, revenues were on a par with the prior-year level.

Following a sustained period of market consolidation in our European footprint driven by a number of mergers and takeovers in recent years, activities in this area continued in 2020 albeit to a much lesser extent. For instance, in Poland Iliad took over Play and in Greece United Group took over Forthnet. Furthermore, no new market entrants were identified, for instance, as participants in the 2020 5G auctions. Investments in the 5G network were stepped up in the reporting year. Auctions were held in various countries, including Hungary, Greece, Austria, the Czech Republic, and Slovakia.

The unabated strong trend towards convergent product packages combining fixed-network and mobile communications (FMC) gained further momentum. The experts at Analysys Mason expect FMC revenues to grow year-on-year, bolstered on the one hand by the takeover of selected Liberty Global cable operations by Vodafone, e.g., in Hungary and Romania in 2019, and on the other by attractive retail offers, such as Orange Love in Poland, but also MagentaOne and CosmoteOne in our subsidiaries. These integrated convenience packages are enjoying strong growth in our companies and, in some areas, already address the majority of consumers, which is having a positive impact on customer satisfaction and churn rates.

Subscription-based streaming services such as Netflix and Prime Video still only have limited potential for substituting traditional pay TV in the markets of our Europe operating segment. Analysys Mason puts the share at around just 8 %, partly due to the fixed international pricing of the majority of these services – prices that are not (or only marginally) localized to purchasing power – and partly because content is not or only to a limited extent dubbed into local languages and thus only appeals to small sections of the population. Despite this, the appeal of this business model is evidenced by the year-on-year trend: according to Analysys Mason, revenues with streaming services in Europe posted above-average growth – the customer base grew by almost 50 %.

For the business customer area, 2020 was a year of manifold opportunities and challenges alike. The latter include not least the record low hit by roaming revenues in the European telecommunications market as just one of the effects of the coronavirus pandemic. Nevertheless, the telecommunications industry is emerging as one of the winners of the worldwide coronavirus crisis, with most businesses posting stable to rising revenues across their mobile communications, fixed-network, and ICT/cloud divisions. So, too, were most of Deutsche Telekom's European subsidiaries able to leverage the opportunities arising from the crisis despite falling revenues from hard-hit industries, especially tourism, or from postponed tendering processes for corporate customer projects. Attractive mobile data bundles, home-working solutions, and collaboration tools were marketed with great success, particularly at our Polish and Austrian subsidiaries. Cisco Webex and Microsoft Teams were some of the most popular services from our ICT/cloud portfolio in the reporting year across all business customer segments and in the public sector.

Systems Solutions

In the information technology (IT) industry in our core market of Western Europe, the volume addressed by our Systems Solutions operating segment and the T-Systems brand decreased by 2.6 % in the reporting year to EUR 185 billion largely due to the coronavirus pandemic. The IT services market, in particular, posted revenue declines in 2020, with coronavirus the biggest contributor to this trend. The effects of the global pandemic have negatively affected IT customer spending. Challenging conditions across virtually all industries led to the deferral of many large-scale IT projects. However, this trend impacted the business areas of the market in very different ways.

In terms of IT services, demand has grown further for public cloud services and cybersecurity services, as has the importance of digitalization, the Internet of Things (including Industry 4.0), and communication between machines (M2M). The health sector also developed positively, with growth reaching double digits in some areas. By contrast, demand was down in the market segments for traditional infrastructure, project business, and SAP services. Business with outsourcing and managed services proved much more resilient. The market for cloud-based systems integration services grew by almost 1.5 % despite the coronavirus pandemic.

Competitive and price pressure persisted in all submarkets of our Systems Solutions operating segment. This was due on the one hand to competitors from traditional IT services business, such as IBM, Atos, and Capgemini, and on the other to cloud providers such as Amazon Web Services, Google, and Salesforce. Prices were eroded further by providers of services that are delivered primarily offshore (e.g., Tata Consultancy Services, Infosys, Wipro).

Group Development

The environment of our Group Development operating segment is largely dominated by the markets served by our companies T-Mobile Netherlands and Deutsche Funkturm (DFMG).

While the Dutch mobile communications market continues to be characterized by sustained high price pressure and intense competition, this is expected to ease moderately in the coming years. The Netherlands is ahead of much of Europe with its bundling of fixed-network and mobile products into convergent offers (FMC). The dominance of KPN and VodafoneZiggo in fixed-network business is keeping the pressure on mobile product pricing high due to the FMC trend. Moreover, the rapid technological transformation calls for high investments. Investments in building out 5G network infrastructure continued in 2020 following the Dutch 5G auction.

DFMG is the biggest provider of passive wireless infrastructure for mobile communications and broadcasting in Germany. Despite the coronavirus pandemic, the market again saw increased demand for cell sites in the 2020 financial year, due on the one hand to the fact that network operators plan to close gaps in coverage, and on the other to the fact that demand for mobile data services is growing, which calls for a further increase in the density of mobile networks.

Major regulatory decisions

Our business activities are largely subject to national, European, and U.S. regulation, which is associated with extensive powers to intervene in our product design and pricing, particularly in Europe. We were again subject to extensive regulation in our mobile and fixed-network businesses in 2020.

Regulation

Amendment of telecommunications laws in the European Union. The Federal Cabinet of Germany (Bundeskabinett) approved the draft for the amendment of the German Telecommunications Act (Telekommunikationsgesetz, TKG) on December 16, 2020. The amendment is necessary in order to transpose European requirements from the European Electronic Communications Code into national law. The biggest changes affect consumer protection regulations, the regulation of "very high capacity networks" (including FTTH), spectrum regulation, and the regulations on universal service. In view of the Code's implementation deadlines, the amended Act should have been published by the end of 2020 at the latest. The need for further readings in the legislative process delayed the publication of the Act. It is now expected in the first half of 2021. The Code is also being transposed into national law in the countries of our European subsidiaries. In some, this process was completed by the end of 2020, whereas in others implementation will take until 2021.

Roaming regulation. The European Commission launched a consultation procedure on the future regulation of international roaming in summer 2020. The current regulation applies price caps through 2022 on the roaming charges that European mobile network operators can bill peer operators for the use of roaming services. In addition to the future regulation of these charges, the Commission also consulted on whether and which rules will apply in the future to roaming for the Internet of Things (IoT) and to roaming access to value-added services and emergency call numbers.

European Commission sets termination rates from 2021. On December 18, 2020, the European Commission published a Delegated Act setting single maximum Union-wide mobile (MTR) and fixed-network (FTR) termination rates. The Commission proposes a phased reduction of MTRs to a uniform level of 0.2 eurocents/min. by 2024. FTRs are to be reduced sooner, to 0.07 eurocents/min. EU-wide by 2022. The Delegated Act is expected to enter into force in the first half of 2021; from the date of effect, member states will have a transition period of two months to apply the price caps contained in the Act.

Awarding of spectrum

T-Mobile US successfully bid on total spectrum of 691 MHz at the U.S. auction in March 2020 and received the 5G licenses it bought for USD 873 million in April 2020. A further CBRS auction in the United States for spectrum in the 3,550 to 3,650 MHz band ended on August 25, 2020. T-Mobile US secured eight licenses for which it paid a net sum of USD 6 million. The C-band auction for spectrum in the 3,700 to 4,200 MHz band began on December 8, 2020 and ended on January 15, 2021. The spectrum assignment phase, however, is still ongoing. T-Mobile US was one of 57 auction participants.

In Europe, Deutsche Telekom and its subsidiaries received the following spectrum up to the end of 2020: Magyar Telekom in Hungary was assigned spectrum in the 700; 2,100; 2,600; and 3,400 to 3,800 MHz bands (totaling 160 MHz) in April 2020, which it had previously acquired at auction for EUR 152 million (when translated into euros). In the Netherlands, an auction started on June 29, 2020 for spectrum in the 700; 1,500; and 2,100 MHz bands. The auction ended with the completion of the allotment phase on July 21, 2020. T-Mobile Netherlands successfully bid on a total spectrum of 70 MHz in all three bands for an aggregate amount of EUR 400 million. In Austria the auction for spectrum in the 700; 1,500; and 2,100 MHz bands ended on September 11, 2020. T-Mobile Austria acquired total spectrum of 100 MHz in all three bands for EUR 89 million. In Greece, spectrum was awarded in the 700; 2,100; 3,400 to 3,800 MHz; and 26,000 MHz bands in the fourth quarter of 2020. Given that the market's three only active network operators took part in the award proceedings and that no scarcity of spectrum arose in the 700; 2,100; and 26,000 MHz bands, it was possible to assign the volumes in question without the need for auction. The second auction phase ended on December 16, 2020 for 90 MHz of available spectrum in the 3,400 to 3,800 MHz band. OTE's subsidiary Cosmote received total spectrum worth EUR 110 million in the first phase followed by spectrum worth around EUR 14 million in the second phase. Slovakia successfully concluded its auction for the 700, 900, and 1,800 MHz bands in November 2020, with Slovak Telekom acquiring spectrum for a total sum of EUR 33 million. In the Czech Republic, the auction that had been rescheduled on account of coronavirus for the 700 MHz and 3,400 to 3,600 MHz bands was also held in November 2020. T-Mobile Czech Republic secured spectrum worth EUR 72 million (when translated into euros).

In Hungary, proceedings to re-award 900 and 1,800 MHz spectrum licenses that are due to expire in 2022 were held on January 28, 2021 and concluded the same day. Magyar Telekom acquired 2x 8 MHz and 2x 20 MHz in the respective bands for a total price of EUR 123 million (when translated into euros). While Poland has made no further announcements regarding a new start date for the postponed auction for 3,400 to 3,800 MHz, it is expected the auction will be held in 2021. Croatia plans to award the 700 MHz and 3,400 to 3,800 MHz bands and possibly further spectrum in the first half of 2021. Romania is set to auction spectrum in the 700; 800; 1,500; 2,600; and 3,400 to 3,800 MHz ranges in the second half of 2021. In Slovakia the 3,400 to 3,800 MHz band is expected to be allocated in 2021.

The following table provides an overview of the main ongoing and planned spectrum awards and auctions as well as license extensions. It also indicates spectrum to be awarded in the near future in various countries.

Main spectrum awards

	Expected start of award procedure	Expected end of award procedure	Frequency ranges (MHz)	Award process	Updated information
Croatia	Q1 2021	Q2 2021	700 / 3,400–3,800, additional bands possible	Auction, details tbd	Implementation in 2021 under preparation. Further bands expected in 2022.
Poland	Q1 2021	Q2 2021	3,400–3,800	Auction (SMRA[a]), details tbd	Following postponement due to coronavirus pandemic, relaunch expected in 2021.
Poland	Q3 2022	Q4 2022	700 / 2,100 / 26,000	Auction, details tbd	Plans for 2022; 26,000 MHz still unclear.
Romania	Q3 2021	Q4 2021	700 / 800 / 1,500 / 2,600 / 3,400–3,800	Auction, details tbd	Additional 2,100 MHz possible.
Slovakia	Q3 2021	Q4 2021	3,400–3,800	Auction (SMRA[a]), details tbd	
Czech Republic	Q3 2022	Q4 2022	900 / 1,800	Extension expected	Previous TMCZ licenses due to expire in 2024.
Hungary	2022 / 2023	2022 / 2023	1,500 / 2,300 / 26,000	Auction, details tbd	
United States		Completed	3,700–4,200	Auction (clock auction)	Completed: Jan. 15, 2021. The spectrum assignment phase, however, is still ongoing.
United States	Q3 2021	Q4 2021	2,500–2,700	Auction (SMRA[a])	Start/end: expected in the second half of 2021 at the earliest.

[a] Simultaneous electronic multi-round auction with ascending, parallel bids for all available frequency ranges.

Development of business in the Group

Statement of the Board of Management on business development in 2020

Bonn, February 16, 2021

Although the coronavirus pandemic and its impact have not left us unscathed, we had a successful financial year in 2020 with very strong results. The business combination of T-Mobile US and Sprint is a fantastic success. The inclusion of Sprint for the first time took us to a whole new dimension: we are now a corporation with revenue of more than EUR 100 billion. We continued our success story in Europe – with its integrated offerings, Deutsche Telekom is the market leader in the majority of countries. In Germany, we have received great recognition for our performance in terms of service, network build-out, and our integrated products. We are living up to our responsibility to society during the coronavirus pandemic, through stable networks, strong customer focus, and best service, and we remain a dependable partner to German industry with a product portfolio of international communications solutions.

Furthermore, we did not lose sight of our ambitious climate targets in the reporting year. Since early 2020, our customers in Germany have been surfing on Deutsche Telekom's green network, which is powered solely by electricity from renewable sources. Since the start of 2021, this applies to all our customer worldwide.

We achieved our most important corporate targets in 2020 and even exceeded some of them, despite the impact of the coronavirus pandemic. Net revenue increased by 25.4 % to EUR 101.0 billion. In organic terms, net revenue increased by 3.0 %, i.e., adjusted in particular for the acquisitions of Sprint, the sale of the prepaid business of Sprint to DISH, and currency translation effects. Given the general environment, the business performed well in the Germany, Europe, and Group Development operating segments. This is the result of the great popularity of our mobile and broadband offerings in particular. In the U.S. business, T-Mobile US recorded the highest customer growth in the company's history: on a like-for-like basis, the number of postpaid customers increased by 5.5 million. The systems solutions business, by contrast, was impacted by the coronavirus pandemic: in addition to the development in traditional IT business, which fell short of expectations during the year, the coronavirus crisis resulted in the recognition of an impairment loss on non-current assets in the third quarter of 2020.

Adjusted EBITDA AL grew by 41.6 % to EUR 35.0 billion; in organic terms, it grew by 7.9 %. The main reason for this increase is a sound operational development, driven by revenue growth and further enhanced cost efficiency. EBIT increased by EUR 3.3 billion to EUR 12.8 billion, despite negative special factors that affected it. These mainly related to acquisition and integration costs as well as restructuring costs to realize cost efficiencies from the business combination with Sprint. By contrast, the partial reversal of impairment losses on spectrum licenses at T-Mobile US had a positive impact. Depreciation and amortization were much higher than in the prior year due to the acquisition of Sprint.

The strong operational development is also reflected in net profit, which increased by EUR 0.3 billion to EUR 4.2 billion, despite the negative impact on our finance costs due to the financial liabilities acquired in connection with the acquisition of Sprint and the related restructuring of financing. Measurement effects in connection with the stock options to buy shares in T-Mobile US received from SoftBank had a positive effect. Adjusted net profit increased by EUR 0.8 billion to EUR 5.7 billion. Adjusted earnings per share increased to EUR 1.20 in the reporting year.

ROCE decreased year-on-year to 4.6 % due largely to the substantial increase in average net operating assets (NOA). This is attributable in particular to the spectrum licenses acquired as part of the Sprint transaction and to the modification of existing agreements with American Tower on the lease and use of cell sites in the United States.

Net debt increased from EUR 76.0 billion to EUR 120.2 billion. The vast majority of this increase is attributable to the business combination of T-Mobile US and Sprint, and the modification of leases signed with American Tower in the United States. Key investments in spectrum licenses also had an increasing effect.

The trends in the industry, in particular on the European telecommunications markets, remain challenging due to competitive pressure and strict regulatory requirements. In order to succeed in the future, we continue to invest heavily in the key to our success: our network infrastructure. In 2020, we made global investments (before spectrum) of EUR 17.0 billion, with a focus on the parallel build-out of broadband and mobile infrastructure (optical fiber and 5G). Including spectrum payments, this figure was EUR 18.7 billion in the reporting year. Despite this high level of investment, we are still a solid investment-grade company with access to the international capital markets. Our free cash flow AL (before dividend payments and spectrum investment) came in at EUR 6.3 billion.

There is a sustainable dividend policy for our shareholders, which is subject to approval by the relevant bodies and the fulfillment of other legal requirements. For the 2020 financial year, we will propose a dividend of EUR 0.60 for each dividend-bearing share. Starting from the 2021 financial year, the dividend is to continue to reflect relative growth in earnings per share with a lower limit fixed at EUR 0.60 per dividend-bearing share. This year, the dividend will once again be paid out without any deduction of capital gains tax, and we expect this to be also the case in the years to come.

The T-Share closed the year 2020 up 2.6 %. Deutsche Telekom AG's share price development outpaced that of the European telecommunications sector (Dow Jones STOXX® Europe 600 Telecommunications) in 2020, which lost 12.7 % by the end of the year.

Although the past financial year was a successful one, that does not mean that next year will be automatically develop in the same way. The challenges that lie ahead in 2021 are great: In the United States, an important spectrum auction ended on January 15, 2021, but the actual spectrum assignment phase is still ongoing. The competitive pressure in Europe remains high. The fiber-optic build-out will be a big topic for us in Germany over the next few years. And at the same time, T-Systems will need to continue developing the business unit in the right direction.

Thanks to our strong starting position, we are reasserting our commitment to the strategic goal of being the leading European telecommunications provider. We want to be a leader in terms of customer experience, technology, and the implementation of advances in productivity for our business customers. Because only when we lead can we grow and meet the demands of our customers and, consequently, our investors in the long term. This growth will be made possible by carefully managing our financial resources and systematically transforming the Company to be simple, digital, and agile in every sense. We play a responsible and active role in society with what we do. We help bridge distances – something that is more important than ever before at the moment. Because we bring people and companies together digitally. This is what we believe in and what we are working to achieve.

Business combination of T-Mobile US and Sprint

Sprint has been included in Deutsche Telekom's consolidated financial statements as a fully consolidated subsidiary since April 1, 2020. As a result of the change in the composition of the Group during the course of the year, the remeasured assets and liabilities were recognized as of this date, and all income and expenses generated from the date of first-time consolidation are included in Deutsche Telekom's consolidated income statement. This affects the comparability of the figures for the reporting year with the prior-year figures.

For further information on the business combination of T-Mobile US and Sprint, please refer to the section "Group organization."

Realignment of the B2B telecommunications business in the Germany operating segment

Our B2B telecommunications business was realigned with effect from July 1, 2020. A new B2B entity was created in the Germany operating segment, and the assets and liabilities previously assigned to the Systems Solutions, Europe, and Group Headquarters & Group Services segments have been transferred to the new entity. Prior-year comparatives in these segments (development of operations, customer development, headcount development, and order entry) were adjusted retrospectively.

For further information on the realignment of the B2B telecommunications business and on the different consummation dates required under company law, please refer to the section "Group organization."

Coronavirus pandemic

The coronavirus pandemic affected our business in several of our business areas, impacting on revenues and earnings. For example, temporary travel restrictions have resulted in lower roaming and visitor revenues. Our terminal equipment business also felt the squeeze, as did our corporate customer business. At the same time, we recorded an increase in the volume of voice calls, both in mobile communications and in the fixed network. While it is impossible to quantify the long-term impact of the coronavirus pandemic, we see it as both a risk and an opportunity: On the one hand, we expect to see appreciable effects on the economy as a whole, while on the other, the pandemic has given a boost to the digitalization trend.

Comparison of the Group's expectations with actual figures

In the 2019 Annual Report, we outlined expectations for the 2020 financial year for our financial and non-financial key performance indicators anchored in our management system. The following tables summarize the pro forma figures for 2019, the results expected for the reporting year, and the actual results achieved in 2020. The performance indicators that we also forecast in the 2019 Annual Report and their development are presented in the individual sections.

Comparison of the expected financial key performance indicators with actual figures

		Pro forma figures for 2019[a]	Expectations for 2020	Results in 2020
ROCE	%	5.1	n.a.[b]	4.6
Net revenue	billions of €	80.5	increase	101.0
Profit (loss) from operations (EBIT)	billions of €	9.5	increase	12.8
EBITDA AL (adjusted for special factors)[c]	billions of €	24.7	minimum 35	35.0
Free cash flow AL (before dividend payments and spectrum investment)[c, d]	billions of €	7.0	minimum 6.0	6.3
Cash capex (before spectrum investment)[c]	billions of €	(13.1)	(around 17)	(17.0)
Rating (Standard & Poor's, Fitch)		BBB+	from A- to BBB	BBB, BBB+
Rating (Moody's)		Baa1	from A3 to Baa2	Baa1

[a] The effects of the business combination with Sprint are not included in the pro forma figures for 2019.

[b] The expected ROCE published in the 2019 combined management report (2019 Annual Report) is no longer comparable due to the inclusion of Sprint since April 1, 2020. The figure forecast in 2019 no longer reflects the impact of the business combination with Sprint on NOA and NOPAT. Based on the pro forma figure for 2019 of 5.1 % we expected a "slight decrease" with the Group structure existing at that point in time.

[c] Contrary to the forecasts published in the 2019 combined management report (2019 Annual Report), we adjusted the guidance for 2020 for EBITDA AL (adjusted for special factors), free cash flow AL (before dividend payments and spectrum investment), and cash capex (before spectrum investment) during the course of the year (Interim Group Reports as of June 30, 2020 and September 30, 2020).

[d] Before interest payments for zero-coupon bonds and before termination of forward-payer swaps at T-Mobile US.

Comparison of the expected non-financial key performance indicators with actual figures

		Pro forma figures for 2019[a]	Expectations for 2020	Results in 2020
Customer satisfaction (TRI*M index)		67.3	slight increase	72.2
Employee satisfaction (commitment index)[b]		4.0	stable trend	4.0
Fixed-network and mobile customers				
Germany				
Mobile customers	millions	46.2	increase	48.5
Fixed-network lines	millions	17.8	slight decrease	17.6
Retail broadband lines	millions	13.7	slight increase	14.1
United States				
Postpaid customers	millions	47.0	increase	81.4
Prepaid customers	millions	20.9	slight increase	20.7
Europe				
Mobile customers	millions	46.2	stable trend	45.6
Fixed-network lines	millions	9.1	stable trend	9.1
Broadband customers	millions	6.7	increase	7.0
Systems Solutions				
Order entry[c]	billions of €	4.7	stable trend	4.6

[a] The effects of the business combination with Sprint are not included in the pro forma figures for 2019.

[b] Commitment index as per the 2019 employee survey.

[c] Pro forma figure for 2019 adjusted retrospectively during the year (Interim Group Report as of September 30, 2020) in connection with the realignment of the B2B telecommunications business.

We look back on a successful financial year. The business combination of T-Mobile US and Sprint in the United States is a major success. Our performance in 2019 was once again dominated by substantial growth in revenue and adjusted EBITDA AL. At EUR 101.0 billion, revenue increased by much more than expected. This is partly due to the fact that the effects of the transaction with Sprint had not been included in the guidance for 2020. But even assuming a comparable composition of the Group and excluding exchange rate effects, we recorded an increase of EUR 2.9 billion or 3.0 %. Adjusted EBITDA AL also followed this trend, increasing substantially year-on-year to EUR 35.0 billion. EBIT also echoed this clear growth trend, up by EUR 3.3 billion. At EUR 6.3 billion, we exceeded the guidance for free cash flow AL (before dividend and spectrum investment), which we had revised upwards in the course of the year to EUR 6.0 billion. At EUR 17.0 billion, cash capex (before spectrum investment) exactly matched our most recent guidance figure. ROCE (return on capital employed) decreased by 0.5 percentage points in the reporting period to 4.6 %. This was mainly down to the assets acquired from Sprint, in particular spectrum licenses.

We are also well on track with our non-financial key performance indicators. In addition to substitution effects, this is thanks to our good coronavirus crisis management: the focus on expanding digital sales channels was one factor contributing to a near normalization of customer development. As such, the customer numbers in our Germany and Europe operating segment developed in line with expectations. In the United States operating segment, we again recorded strong postpaid customer additions: including the customers acquired in connection with the Sprint transaction and the adjustment of the customer base carried out in the course of the year, the number of customers increased by 5.5 million. By contrast, the development in the number of prepaid customers fell short of our original expectation on account of the specific adjustments made to the customer base during the year in order to harmonize the customer definition in connection with the Sprint transaction. Order entry in our Systems Solutions operating segment initially fell short of our expectations earlier in the year. The effects of the coronavirus pandemic resulted in delays in current projects and the postponement of deal closures, especially with our automotive customers in the digital solutions area. The resulting mid-year lull in order entry, however, was almost completely offset by the year-end with a number of major deals signed in other areas.

At the end of the reporting year, customer satisfaction came in at 72.2 points compared with an adjusted baseline figure of 67.9 points at the start of the year. Following changes to the revenue shares contributed by each country and in order to create an equivalent basis for comparing the Group's expectations with actual figures, we recalculated the baseline figure for 2020 on the basis of the new structures these changes entailed. The new baseline thus diverges from the figure of 67.3 reported as of December 31, 2019. The Germany, Europe, and Systems Solutions operating segments contributed to the positive development with improvements in customer loyalty. Our goal for the coming years is to further improve customer satisfaction in all areas.

For further information on the trends in our main financial and non-financial key performance indicators, please refer to the relevant passages in this section as well as in the section "Development of business in the operating segments."

Results of operations of the Group

Net revenue

In 2020, we generated net revenue of EUR 101.0 billion, which was 25.4 % or EUR 20.5 billion up on the prior-year level. In organic terms, i.e., assuming a comparable composition of the Group in the prior year and excluding exchange rate effects, revenue developed positively, with growth of EUR 2.9 billion or 3.0 %. For a comparison on an organic basis, net revenue in the 2019 financial year was raised by EUR 19.2 billion to account for effects of changes in the composition of the Group – primarily from the acquisition of Sprint in the United States operating segment – and net exchange rate effects of EUR -1.6 billion were taken into account.

Our United States operating segment in particular contributed to the positive revenue trend with an increase of 51.4 %. Adjusted for the acquisition of Sprint and exchange rate effects, revenue was up 5.0 % against the prior-year level. Revenue in our home market of Germany was slightly up on the prior-year level, increasing by 0.2 %. This slight increase was mainly due to the positive trend in our fixed-network business on the back of revenue growth in the broadband business and in variable call charges. This offset the decline in revenue in the mobile business. The coronavirus pandemic had a negative impact on roaming, visitor, and terminal equipment revenues, and resulted in delays or postponements to current orders in B2B telecommunications business. In our Europe operating segment, revenue decreased by 2.2 %, mainly due to exchange rate effects. In organic terms, revenue remained stable at the prior-year level, despite the deterioration in economic conditions due to the coronavirus pandemic. The fixed-network business performed well, recording increases in broadband and TV revenues. Revenues from mobile business decreased slightly, primarily driven by declines in roaming and visitor revenues as a result of travel restrictions, some of which are still in place or have been reimposed, and in low-margin terminal equipment business. These negative effects have been partially offset by increases in higher-margin service revenues. Total revenue in our Systems Solutions operating segment decreased by 5.6 % year-on-year, reflecting the coronavirus-induced decline of the IT market in Western Europe. The upward revenue trend in our growth areas public cloud and security was not sufficient to offset the declines in traditional IT and project business. The development of our growth area digital solutions was particularly affected by the impact of the coronavirus pandemic on the automotive industry. Total revenue in our Group Development operating segment increased by 3.1 % year-on-year, thanks to the operational growth of our two subsidiaries, T-Mobile Netherlands and DFMG.

For further information on revenue development in our segments, please refer to the section "Development of business in the operating segments."

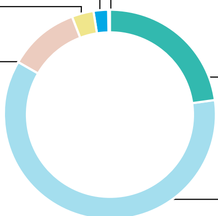
Contribution of the segments to net revenue

millions of €

	2020	2019	Change	Change %	2018
Net revenue	**100,999**	**80,531**	**20,468**	**25.4**	**75,656**
Germany	23,779	23,730	49	0.2	23,662
United States	61,208	40,420	20,788	51.4	36,522
Europe	11,335	11,587	(252)	(2.2)	11,312
Systems Solutions	4,178	4,424	(246)	(5.6)	4,474
Group Development	2,883	2,797	86	3.1	2,185
Group Headquarters & Group Services	2,556	2,627	(71)	(2.7)	2,735
Intersegment revenue	(4,941)	(5,055)	114	2.3	(5,234)

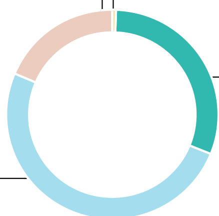
Contribution of the segments to net revenue[a]

%



Breakdown of revenue by region

%



[a] For further information, please refer to Note 36 "Segment reporting" in the notes to the consolidated financial statements.

At 60.6 %, our United States operating segment provided by far the largest contribution to net revenue of the Group and in particular thanks to the acquisition of Sprint was up 10.4 percentage points above the level in the prior year. In this connection, the proportion of net revenue generated internationally also increased significantly from 69.5 % to 75.5 %.

Adjusted EBITDA AL, EBITDA AL

Adjusted EBITDA AL increased year-on-year by EUR 10.3 billion or 41.6 % to EUR 35.0 billion in 2020. But even in organic terms, adjusted EBITDA AL increased by EUR 2.6 billion or 7.9 %. For a comparison on an organic basis, adjusted EBITDA AL in the 2019 financial year was raised by EUR 8.2 billion to account for effects of changes in the composition of the Group and net exchange rate effects of EUR -0.5 billion were taken into account.

All segments, with the exception of the Systems Solutions operating segment, made a positive contribution to this development: Adjusted EBITDA AL of our United States operating segment increased significantly, particularly on the back of higher service and terminal equipment revenues in connection with the acquisition of Sprint. In organic terms, adjusted EBITDA AL grew by 10.8 % year-on-year. These increases were offset by higher operating expenses, primarily in connection with the acquisition of Sprint. Our Germany operating segment contributed to this result thanks to a slightly positive revenue trend, and improved cost efficiency with 1.6 % higher adjusted EBITDA AL. Adjusted EBITDA AL in our Europe operating segment remained stable. In organic terms, it increased by as much as 2.1 %. The main factor in this trend was savings in indirect costs. In our Systems Solutions operating segment, adjusted EBITDA AL declined by 6.0 %; excluding negative exchange rate effects the decline would have been 1.8 %. The decline was mainly caused by the decrease in earnings in traditional IT and project business, partly due to the effects of the coronavirus pandemic. The increase of 6.6 % in adjusted EBITDA AL in our Group Development operating segment was driven by revenue growth, synergies from the acquisition of Tele2 Netherlands, and efficient management of costs at T-Mobile Netherlands. The GD Towers business also continued to post consistent growth on the back of rising volumes.

Contribution of the segments to adjusted Group EBITDA AL

	2020 millions of €	Proportion of adjusted Group EBITDA AL %	2019 millions of €	Proportion of adjusted Group EBITDA AL %	Change millions of €	Change %	2018 millions of €
EBITDA AL (adjusted for special factors) in the Group[a]	**35,017**	**100.0**	**24,731**	**100.0**	**10,286**	**41.6**	**23,074**
Germany	9,231	26.4	9,083	36.7	148	1.6	8,829
United States	20,997	60.0	11,134	45.0	9,863	88.6	10,084
Europe	3,910	11.2	3,910	15.8	0	0.0	3,703
Systems Solutions	235	0.7	250	1.0	(15)	(6.0)	209
Group Development	1,101	3.1	1,033	4.2	68	6.6	892
Group Headquarters & Group Services	(429)	(1.2)	(650)	(2.6)	221	34.0	(599)
Reconciliation	(28)	(0.1)	(29)	(0.1)	1	3.4	(44)

[a] Comparatives for 2018 were calculated on a pro forma basis for the key performance indicators redefined as of January 1, 2019 following the introduction of the IFRS 16 accounting standard.

EBITDA AL increased by EUR 10.0 billion or 43.4 % year-on-year to EUR 33.2 billion, with special factors changing from EUR -1.6 billion to EUR -1.8 billion. Net expenses incurred in connection with staff-related measures were recorded as special factors and decreased by EUR 0.4 billion year-on-year to EUR -1.3 billion. In addition, expenses of EUR 1.7 billion were recorded as special factors under gains/losses from deconsolidations, disposals, and acquisitions. These expenses were incurred in connection with the approval process for the business combination of T-Mobile US and Sprint, with acquisition and integration costs, with restructuring costs to realize cost efficiencies from the business combination, and with a reduction in the useful life of leased network technology for cell sites. EUR 0.2 billion related to the derecognition of a billing software for postpaid customers, which was still in development, in the United States operating segment. A transaction fee of EUR 0.3 billion received from SoftBank in return for support in the immediate sale by SoftBank of T-Mobile US shares had an offsetting effect. In the prior year, expenses of EUR 0.5 billion had been recorded as special factors in connection with gains/losses from deconsolidations, disposals, and acquisitions. Reversals of impairment losses recorded as special factors of EUR 1.6 billion resulted from the partial reversal of impairment losses on spectrum licenses at T-Mobile US. Furthermore, the agreed sale of the Romanian fixed-network business resulted in a reversal of impairment losses on property, plant and equipment of EUR 50 million recorded in the course of the year. Other special factors affecting EBITDA AL amounted to EUR -0.5 billion and mainly relate to expenses incurred in the United States operating segment in the first half of 2020 in connection with the coronavirus pandemic.

For further information on the development of (adjusted) EBITDA AL in the segments, please refer to the section "Development of business in the operating segments."

A reconciliation of the definition of EBITDA with the "after leases" indicator (EBITDA AL) can be found in the following table:

millions of €	2020	2019
EBITDA	38,633	27,120
Depreciation of right-of-use assets[a]	(4,530)	(3,181)
Interest expenses on recognized lease liabilities[a]	(925)	(796)
EBITDA AL	**33,178**	**23,143**
Special factors affecting EBITDA AL	(1,839)	(1,589)
EBITDA AL (adjusted for special factors)	**35,017**	**24,731**

[a] Excluding finance leases at T-Mobile US.

EBIT

Group EBIT increased from EUR 9.5 billion to EUR 12.8 billion, up EUR 3.3 billion or 35.4 % against the prior year. This increase is due in particular to the effects described under adjusted EBITDA AL and EBITDA AL. Depreciation and amortization stood at EUR 25.0 billion overall, up EUR 7.8 billion on the prior year. This increase is mainly attributable to Sprint, which has been included since April 1, 2020. Impairment losses on non-current assets reduced EBIT by EUR 0.8 billion. A total of EUR 0.5 billion of this related to the Systems Solutions operating segment and the Group Headquarters & Group Services segment, EUR 0.2 billion to the Europe operating segment, and EUR 0.1 billion to the United States operating segment.

For further information on depreciation, amortization and impairment losses, please refer to Note 27 "Depreciation, amortization and impairment losses" in the notes to the consolidated financial statements.

Profit before income taxes

Profit before income taxes increased by EUR 1.4 billion, mainly for the aforementioned reasons. Our loss from financial activities increased by EUR 1.9 billion to EUR 4.1 billion. This increase is primarily due to a EUR 1.9 billion increase in finance costs to EUR 4.2 billion, mainly due to the financial liabilities recognized and the restructuring begun in connection with the acquisition of Sprint, and the related increase in financing, including the handling charges incurred for a briefly utilized bridge loan facility. Other financial income/expense was unchanged at EUR 0.1 billion. This development was attributable to the year-on-year increase in gains from financial instruments, due, among other factors, to the subsequent measurement of the stock options to buy shares in T-Mobile US received from SoftBank in June 2020. Lower measurement effects from embedded derivatives at T-Mobile US compared with the prior year and higher interest expense from the measurement of provisions and liabilities had an offsetting effect.

Net profit, adjusted net profit

Net profit increased year-on-year by EUR 0.3 billion to EUR 4.2 billion. Tax expense came to EUR 1.9 billion compared with EUR 2.0 billion in the prior year. Profit attributable to non-controlling interests increased by EUR 1.2 billion to EUR 2.6 billion, mainly in our United States operating segment. This increase related to the positive development in operations and the decrease in T-Mobile US' capital share as a result of the Sprint transaction. Excluding special factors, which had a negative overall effect of EUR 1.6 billion on net profit, adjusted net profit amounted to EUR 5.7 billion, up against the level in the prior year of EUR 4.9 billion.

The following table presents a reconciliation of net profit to net profit adjusted for special factors:

millions of €

	2020	2019	Change	Change %	2018
Net profit (loss)	**4,158**	**3,867**	**291**	**7.5**	**2,166**
Special factors affecting EBITDA AL	(1,839)	(1,589)	(250)	(15.7)	(1,497)
Staff-related measures	(1,268)	(913)	(355)	(38.9)	(1,159)
Non-staff-related restructuring	(32)	(81)	49	60.5	(109)
Effects of deconsolidations, disposals and acquisitions	(1,655)	(462)	(1,193)	n.a.	(223)
Reversals of impairment losses	1,655	0	1,655	n.a.	0
Other	(539)	(132)	(407)	n.a.	(6)
Special factors affecting net profit	283	510	(227)	(44.5)	(882)
Impairment losses	(656)	(368)	(288)	(78.3)	(707)
Profit (loss) from financial activities	(25)	(4)	(21)	n.a.	(757)
Income taxes	730	461	269	58.4	401
Non-controlling interests	234	421	(187)	(44.4)	181
Special factors	**(1,557)**	**(1,081)**	**(476)**	**(44.0)**	**(2,379)**
Net profit (loss) (adjusted for special factors)	**5,715**	**4,948**	**767**	**15.5**	**4,545**

Earnings per share, adjusted earnings per share

Earnings per share is calculated as net profit divided by the adjusted weighted average number of ordinary shares outstanding, which totaled 4,743 million as of December 31, 2020. This resulted in adjusted earnings per share of EUR 0.88, compared with EUR 0.82 in the prior year. Adjusted earnings per share, adjusted for special factors affecting net profit, amounted to EUR 1.20 compared with EUR 1.04 as of December 31, 2019.

Special factors

The following table presents a reconciliation of EBITDA AL, EBIT, and net profit/loss to the respective figures adjusted for special factors.

millions of €	EBITDA AL 2020	EBIT 2020	EBITDA AL 2019	EBIT 2019	EBITDA AL 2018	EBIT 2018
EBITDA AL/EBIT	**33,178**	**12,804**	**23,143**	**9,457**	**21,577**	**8,001**
Germany	**(751)**	**(751)**	**(453)**	**(453)**	**(628)**	**(628)**
Staff-related measures	(675)	(675)	(418)	(418)	(590)	(590)
Non-staff-related restructuring	(18)	(18)	(38)	(38)	(46)	(46)
Effects of deconsolidations, disposals and acquisitions	(18)	(18)	0	0	0	0
Impairment losses	0	0	0	0	0	0
Other	(40)	(40)	4	4	8	8
United States	**(370)**	**(370)**	**(544)**	**(544)**	**(160)**	**(160)**
Staff-related measures	(32)	(32)	(17)	(17)	(15)	(15)
Non-staff-related restructuring	0	0	0	0	0	0
Effects of deconsolidations, disposals and acquisitions	(1,522)	(1,522)	(527)	(527)	(145)	(145)
Impairment losses	0	0	0	0	0	0
Reversals of impairment losses	1,604	1,604	0	0	0	0
Other	(420)	(420)	0	0	0	0
Europe	**(188)**	**(374)**	**(141)**	**(461)**	**(122)**	**(797)**
Staff-related measures	(181)	(181)	(111)	(111)	(90)	(90)
Non-staff-related restructuring	0	0	0	0	0	0
Effects of deconsolidations, disposals and acquisitions	(6)	(6)	(23)	(23)	(14)	(14)
Impairment losses	0	(186)	0	(320)	0	(674)
Reversals of impairment losses	50	50	0	0	0	0
Other	(51)	(51)	(8)	(8)	(19)	(19)
Systems Solutions	**(210)**	**(636)**	**(310)**	**(338)**	**(240)**	**(296)**
Staff-related measures	(168)	(168)	(154)	(154)	(174)	(174)
Non-staff-related restructuring	(3)	(3)	(4)	(4)	(4)	(4)
Effects of deconsolidations, disposals and acquisitions	0	0	(11)	(11)	0	0
Impairment losses	0	(426)	0	(27)	0	(56)
Other	(39)	(39)	(141)	(141)	(63)	(63)
Group Development	**(43)**	**(43)**	**97**	**97**	**(27)**	**(27)**
Staff-related measures	(11)	(11)	(19)	(19)	(6)	(6)
Non-staff-related restructuring	0	0	(1)	(1)	0	0
Effects of deconsolidations, disposals and acquisitions	(30)	(30)	111	111	(21)	(21)
Impairment losses	0	0	0	0	0	0
Other	(2)	(2)	4	4	(1)	(1)
Group Headquarters & Group Services	**(277)**	**(322)**	**(237)**	**(237)**	**(318)**	**(318)**
Staff-related measures	(201)	(201)	(195)	(195)	(284)	(284)
Non-staff-related restructuring	(11)	(11)	(38)	(38)	(59)	(59)
Effects of deconsolidations, disposals and acquisitions	(78)	(78)	(13)	(13)	(44)	(44)
Impairment losses	0	(44)	0	0	0	0
Other	14	14	9	9	69	69
Group	**(1,839)**	**(2,496)**	**(1,589)**	**(1,959)**	**(1,497)**	**(2,204)**
Staff-related measures	(1,268)	(1,268)	(913)	(913)	(1,159)	(1,159)
Non-staff-related restructuring	(32)	(32)	(81)	(81)	(109)	(109)
Effects of deconsolidations, disposals and acquisitions	(1,655)	(1,655)	(462)	(462)	(223)	(223)
Impairment losses	0	(656)	0	(370)	0	(707)
Reversals of impairment losses	1,655	1,655	0	0	0	0
Other	(539)	(539)	(132)	(132)	(6)	(6)

millions of €

	EBITDA AL 2020	EBIT 2020	EBITDA AL 2019	EBIT 2019	EBITDA AL 2018	EBIT 2018
EBITDA AL/EBIT (adjusted for special factors)	**35,017**	**15,300**	**24,731**	**11,416**	**23,074**	**10,204**
Profit (loss) from financial activities (adjusted for special factors)		(4,103)		(2,192)		(2,091)
Profit (loss) before income taxes (adjusted for special factors)		**11,197**		**9,223**		**8,114**
Income taxes (adjusted for special factors)		(2,659)		(2,454)		(2,225)
Profit (loss) (adjusted for special factors)		**8,538**		**6,770**		**5,889**
Profit (loss) (adjusted for special factors) attributable to						
Owners of the parent (net profit (loss)) (adjusted for special factors)		5,715		4,948		4,545
Non-controlling interests (adjusted for special factors)		2,823		1,822		1,344

Net assets of the Group

Condensed consolidated statement of financial position

millions of €

	Dec. 31, 2020	Share of total assets/ liabilities and shareholders' equity %	Change	Dec. 31, 2019	Share of total assets/ liabilities and shareholders' equity %	Dec. 31, 2018	Dec. 31, 2017	Dec. 31, 2016
Assets								
Cash and cash equivalents	12,939	4.8	7,546	5,393	3.2	3,679	3,312	7,747
Trade receivables	13,523	5.0	2,677	10,846	6.4	9,988	9,723	9,362
Intangible assets	118,066	43.7	49,864	68,202	40.0	64,950	62,865	60,599
Property, plant and equipment	60,975	22.6	11,427	49,548	29.0	50,631	46,878	46,758
Right-of-use assets	30,302	11.2	12,304	17,998	10.5	n.a.	n.a.	n.a.
Current and non-current financial assets	9,640	3.6	2,390	7,250	4.2	4,432	9,045	13,599
Deferred tax assets	7,972	3.0	5,268	2,704	1.6	2,949	4,013	5,210
Non-current assets and disposal groups held for sale	1,113	0.4	1,016	97	0.1	145	161	372
Other assets	10,387	3.8	1,753	8,634	5.1	8,601	5,337	4,838
Total assets	**264,917**	**98.1**	**94,245**	**170,672**	**100.0**	**145,375**	**141,334**	**148,485**
Liabilities and shareholders' equity								
Current and non-current financial liabilities	107,108	39.7	40,759	66,349	38.9	62,275	57,529	64,650
Current and non-current lease liabilities	32,715	12.1	12,880	19,835	11.6	n.a.	n.a.	n.a.
Trade and other payables	9,760	3.6	329	9,431	5.5	10,735	10,971	10,441
Provisions for pensions and other employee benefits	7,684	2.8	1,853	5,831	3.4	5,502	8,375	8,451
Current and non-current other provisions	9,033	3.3	2,370	6,663	3.9	6,435	6,527	6,388
Deferred tax liabilities	17,260	6.4	8,306	8,954	5.2	8,240	6,967	10,007
Liabilities directly associated with non-current assets and disposal groups held for sale	449	0.2	420	29	0.0	36	0	194
Other liabilities	8,358	3.1	1,009	7,349	4.3	8,715	8,495	9,509
Shareholders' equity	72,550	26.9	26,319	46,231	27.1	43,437	42,470	38,845
Total liabilities and shareholders' equity	**264,917**	**98.1**	**94,245**	**170,672**	**100.0**	**145,375**	**141,334**	**148,485**

The IFRS 16 "Leases" accounting standard has been applied since January 1, 2019. Prior-year comparatives were not adjusted. Financial liabilities included finance lease liabilities in accordance with IAS 17 for the last time as of December 31, 2018.

Total assets amounted to EUR 264.9 billion as of December 31, 2020, up by EUR 94.2 billion against December 31, 2019. This significant increase is mainly due to the change in the composition of the Group in connection with the acquisition of Sprint in the United States operating segment. The acquired and remeasured assets and liabilities of Sprint were included in all items of the statement of financial position upon consummation of the transaction on April 1, 2020.

For further information on the business combination of T-Mobile US and Sprint, please refer to the section “Summary of accounting policies – Changes in the composition of the Group and other transactions” in the notes to the consolidated financial statements.

Cash and cash equivalents increased by EUR 7.5 billion year-on-year.

For further information, please refer to Note 35 “Notes to the consolidated statement of cash flows” in the notes to the consolidated financial statements.

On the assets side, **trade receivables** amounted to EUR 13.5 billion, up by EUR 2.7 billion against the 2019 year-end. Receivables increased by EUR 2.9 billion as of April 1, 2020 in connection with the inclusion of Sprint. Exchange rate effects, primarily from the translation from U.S. dollars into euros, reduced the carrying amount. Excluding this effect, receivables in the United States operating segment increased, mainly due to higher receivables from wholesale partners – in particular as a consequence of the sale of Sprint’s prepaid business to DISH – and higher receivables under the Equipment Installment Plan – primarily as a result of the market launch of higher-priced devices in the fourth quarter of 2020. In the Germany operating segment, receivables increased as a result of the contractual termination of a revolving factoring agreement for receivables from consumers and business customers. By contrast, receivables in the Europe operating segment decreased, among other factors, on account of the agreed sale of Telekom Romania Communications, which operates the Romanian fixed network business. This entity’s receivables were reclassified as of December 31, 2020 to non-current assets and disposal groups held for sale.

The carrying amounts of **intangible assets** and **property, plant and equipment** increased by EUR 61.3 billion overall to EUR 179.0 billion. Effects from changes in the composition of the Group of EUR 73.0 billion in connection with the acquisitions of Sprint and Simpel contributed to this increase, which also includes preliminary goodwill arising from the transactions; EUR 8.7 billion from the Sprint transaction and EUR 0.2 billion from the Simpel transaction. Capital expenditure totaling EUR 22.6 billion, especially to upgrade and build out the network in our United States operating segment, and for the broadband/fiber-optic build-out, the IP transformation, and mobile infrastructure in the Germany and Europe operating segments, also increased the carrying amounts. This also includes, in the United States operating segment, FCC spectrum licenses of EUR 1.1 billion – primarily acquired at a spectrum auction that ended in March 2020 – and in the Group Development and Europe operating segments, spectrum licenses totaling EUR 0.6 billion – mainly in the Netherlands, Hungary, Greece, and Austria. Depreciation and amortization of EUR 20.0 billion, negative exchange rate effects of EUR 13.3 billion, primarily from the translation of U.S. dollars into euros, and disposals of EUR 1.8 billion decreased the carrying amount. The latter included EUR 0.2 billion in the United States for the derecognition of billing software for postpaid customers, which was still in development. In connection with the intention to sell Telekom Romania Communications and T-Mobile Infra, both companies were classified as held for sale as of December 31, 2020. As a result, the carrying amount declined by EUR 0.6 billion overall. Furthermore, the carrying amount of intangible assets and property, plant and equipment was increased by EUR 1.7 million in total as a result of the following reversals of impairment losses and was reduced by EUR 0.7 billion overall by the following impairment losses.

Impairment losses on spectrum licenses previously acquired by T-Mobile US were partially reversed, increasing the carrying amount by EUR 1.6 billion. In part, the reasons leading to the impairment loss recognized in 2012 no longer exist, thus giving rise to the reversal. An initial reversal of the impairment in the amount of EUR 1.7 billion had already been recognized in 2017. The measurement of Sprint’s licenses in connection with the purchase price allocation following the business combination of T-Mobile US and Sprint indicated a further increase in the licenses’ value.

In the Systems Solutions operating segment, the realignment of the B2B telecommunications business in combination with the effects of the coronavirus pandemic triggered ad hoc impairment testing of assets, which identified a reduction in the business outlook for IT operations. The result was the recognition of a non-cash impairment loss of EUR 0.5 billion on non-current assets of the Systems Solutions cash-generating unit. EUR 426 million of the impairment loss related to the Systems Solutions operating segment. Another EUR 44 million related to software recognized in the Group Headquarters & Group Services segment which is subject to use by the Systems Solutions operating segment and is allocated to the Systems Solutions cash-generating unit for the purposes of impairment testing.

An ad hoc impairment test was also conducted in the Europe operating segment on account of the agreed sale of the Romanian fixed-network business. In this context, the associated loss of the existing MVNO agreements results in the recognition of an impairment loss totaling EUR 160 million on non-current assets of the Romanian mobile business, which will remain within the Group. In the Romanian fixed-network business, the planned sale resulted in a reversal of impairment losses recognized in the past on property, plant and equipment of EUR 50 million.

Right-of-use assets with regard to leases increased by EUR 12.3 billion compared with December 31, 2019 to EUR 30.3 billion. In connection with the business combination with Sprint, right-of-use assets of EUR 6.3 billion were recognized. Another EUR 9.4 billion came from the agreement concerning the lease and use of cell sites concluded between T-Mobile US and American Tower in September 2020. This was a modification to existing leases with American Tower. The agreement gives T-Mobile US greater flexibility in the course of merging the mobile networks of T-Mobile US and Sprint and of the 5G network build-out. By contrast, depreciation of EUR 5.1 billion, negative exchange rate effects of EUR 2.1 billion, disposals of EUR 0.4 billion, and reclassifications to assets and disposal groups held for sale of EUR 0.1 billion decreased the carrying amount.

Current and non-current **financial assets** increased by EUR 2.4 billion to EUR 9.6 billion. The acquisition of Sprint resulted in an increase of EUR 0.4 billion. Derivatives without a hedging relationship increased by EUR 1.1 billion, mainly in connection with the subsequent measurement of the stock options to buy shares in T-Mobile US received from SoftBank in June 2020 and with new additions of embedded derivatives and embedded derivatives assumed in connection with the acquisition of Sprint at T-Mobile US, including their subsequent measurement. Measurement effects from the derecognition of a derivative in connection with the repayment of a term loan raised during the course of the year had an offsetting effect. Derivatives with a hedging relationship increased by EUR 0.6 billion, primarily due to the increase in positive fair values from interest rate swaps in fair value hedges. In addition, other financial assets increased by EUR 0.3 billion in connection with grants receivable from funding projects for the broadband build-out in Germany.

The increase in **non-current assets and disposal groups held for sale** by EUR 1.0 billion to EUR 1.1 billion was mainly the result of the reclassified assets of T-Mobile Infra, which is allocated to the Group Development operating segment, and Telekom Romania Communications, which operates the Romanian fixed-network business in the Europe operating segment. Both these companies were classified as held for sale as of December 31, 2020 on account of the intention to sell them.

The increase of EUR 1.8 billion in **other assets** to EUR 10.4 billion was also mainly due to the inclusion of Sprint.

On the liabilities and shareholders' equity side, current and non-current **financial liabilities** increased by EUR 40.8 billion compared with the end of 2019 to a total of EUR 107.1 billion. EUR 39.1 billion of this resulted from the transfer of liabilities from Sprint. Immediately after the transaction, liabilities of the former Sprint totaling USD 9.8 billion (EUR 8.9 billion) were repaid. Since then, a number of refinancing measures have been implemented in connection with the business combination, some of which have already been reversed. On April 1, 2020, for example, T-Mobile US raised a new term loan of USD 4 billion (EUR 3.7 billion), which was redeemed prematurely on October 9, 2020. Senior secured notes, issued on April 9, 2020 for a total of USD 19 billion (EUR 17.3 billion) were used to repay a briefly utilized bridge loan facility. In addition, T-Mobile US issued senior secured notes with a volume of USD 4.0 billion (EUR 3.6 billion) on June 24, 2020, USD 4 billion (EUR 3.4 billion) on October 6, 2020, and USD 4.75 billion (EUR 4.0 billion) on October 28, 2020. In the course of the third quarter of 2020, T-Mobile US repaid a number of bonds with a total value of EUR 3.6 billion, some of them prematurely. Furthermore, bonds with a total volume of EUR 1.8 billion when translated into euros were issued in the Group in various currencies in the course of the year. Euro and U.S. Dollar bonds with a total volume of EUR 6.3 billion when translated into euros were repaid. A Deutsche Bundespost treasury note (zero-coupon bond) issued in the past with a carrying amount of EUR 1.4 billion fell due on December 31, 2019 and was repaid on that date by a bank using its own funds. The payment by Deutsche Telekom AG to this bank was made on the following bank working day of January 2, 2020. Derivative financial liabilities decreased by EUR 0.8 billion in total, mainly due to the decline of EUR 1.0 billion from the premature termination of forward-payer swaps by T-Mobile US at the start of April 2020. The secured term loan was originated on April 1, 2020. Exchange rate effects, in particular from the translation of U.S. dollars into euros, lowered the financial liabilities by EUR 6.9 billion.

For further information on the development of financial liabilities, please refer to Note 13 "Financial liabilities and lease liabilities" in the notes to the consolidated financial statements.

Current and non-current **lease liabilities** increased by EUR 12.9 billion to EUR 32.7 billion compared with December 31, 2019. EUR 6.8 billion of this increase was attributable to the inclusion of Sprint. In connection with the modification of existing leases that T-Mobile US agreed with American Tower, lease liabilities increased by EUR 9.4 billion. Exchange rate effects, in particular from the translation of U.S. dollars into euros, lowered the carrying amount by EUR 2.3 billion.

Trade and other payables increased by EUR 0.3 billion to EUR 9.8 billion. The inclusion of Sprint increased the carrying amount by EUR 2.9 billion. This was offset in particular by lower liabilities to terminal equipment vendors and declines in liabilities in connection with the acquisition of assets in the United States operating segment. Liabilities also decreased in the other operating segments. Exchange rate effects, especially from the translation from U.S. dollars into euros, also decreased the carrying amount.

Provisions for pensions and other employee benefits increased by EUR 1.9 billion compared with December 31, 2019 to EUR 7.7 billion, mainly due to a decline in the prices of plan assets, interest rate adjustments, and the change in the composition of the Group in connection with the acquisition of Sprint.

Current and non-current **other provisions** increased by EUR 2.4 billion compared with December 31, 2019 to EUR 9.0 billion. EUR 1.9 billion of this related to the business combination of T-Mobile US and Sprint. Furthermore, the provisions recognized for the Civil Service Health Insurance Fund (Postbeamtenkrankenkasse – PBeaKK) increased by EUR 0.5 billion, which is attributable to the subsequent measurement of the present value determined using actuarial principles (interest effect) and other additions.

The increase in **liabilities directly associated with non-current assets and disposal groups held for sale** by EUR 0.4 billion to EUR 0.4 billion mainly related to the aforementioned reclassified liabilities of T-Mobile Infra and Telekom Romania Communications. Both these companies were classified as held for sale as of December 31, 2020 on account of the intention to sell them.

Other liabilities increased by EUR 1.0 billion compared with December 31, 2019 to EUR 8.4 billion, due in particular to higher current and non-current other liabilities. The inclusion of Sprint increased other liabilities by EUR 0.7 billion. In addition, other liabilities increased by EUR 0.2 billion due to existing build-out obligations in connection with grants receivable from funding projects for the broadband build-out in the Germany operating segment. The carrying amounts of contract liabilities increased in particular as a result of the inclusion of Sprint.

Shareholders' equity increased from EUR 46.2 billion as of December 31, 2019 to EUR 72.6 billion. The business combination of T-Mobile US and Sprint consummated on April 1, 2020 resulted in an increase in shareholders' equity of EUR 30.6 billion as of the date of first-time consolidation. Profit of EUR 6.7 billion and capital increases from share-based payments of EUR 0.5 billion also increased the carrying amount. Shareholders' equity was reduced in connection with dividend payments for the 2019 financial year to Deutsche Telekom AG shareholders in the amount of EUR 2.8 billion and to other shareholders of subsidiaries in the amount of EUR 0.2 billion. Other comprehensive income also reduced shareholders' equity by EUR 8.5 billion. The main factors in this negative other comprehensive income were the currency translation effects recognized directly in equity (EUR 6.6 billion), the remeasurement of defined benefit plans (EUR 1.4 billion), and losses from hedging instruments, mainly from forward-payer swaps concluded for borrowings at T-Mobile US, which were terminated prematurely in April 2020 and for which the cumulative changes in value must be reversed over the terms of the loans (EUR 1.0 billion). By contrast, income taxes relating to components of other comprehensive income of EUR 0.4 billion had a positive impact on other comprehensive income.

For further information, please refer to Note 19 "Shareholders' equity" in the notes to the consolidated financial statements.

For further information on the business combination of T-Mobile US and Sprint and the acquisition of Simpel, please refer to the section "Summary of accounting policies – Changes in the composition of the Group and other transactions" in the notes to the consolidated financial statements.

Financial position of the Group and profitability

Finance management

Our finance management ensures our Group's ongoing solvency and hence its financial equilibrium. The fundamentals of Deutsche Telekom's finance policy are established each year by the Board of Management and overseen by the Supervisory Board. Group Treasury is responsible for implementing the finance policy and for ongoing risk management. In order to ensure we have scope for financing, we continuously monitor the development of net debt, Deutsche Telekom AG's rating, financial flexibility, and free cash flow AL.

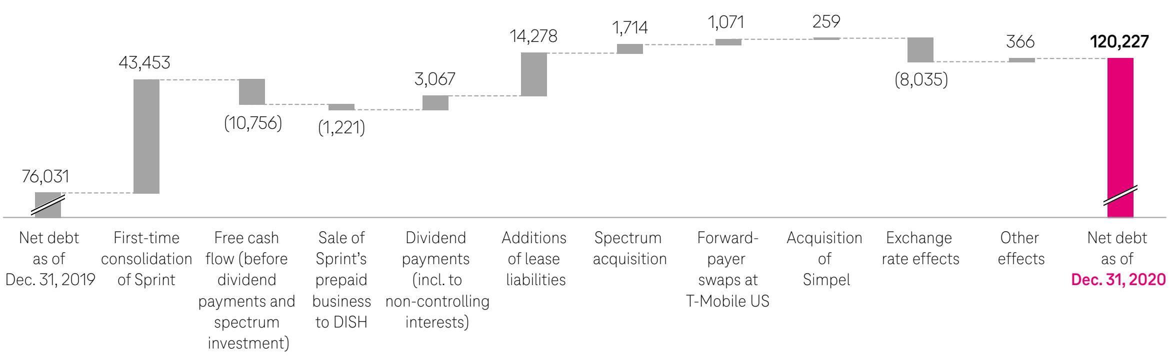
Calculation of net debt

millions of €

	Dec. 31, 2020	Dec. 31, 2019	Change	Change %
Bonds and other securitized liabilities	87,702	51,644	36,058	69.8
Liabilities to banks	5,257	6,516	(1,259)	(19.3)
Other financial liabilities	14,149	8,189	5,960	72.8
Lease liabilities	32,715	19,835	12,880	64.9
Financial liabilities and lease liabilities	**139,823**	**86,184**	**53,639**	**62.2**
Accrued interest	(1,035)	(748)	(287)	(38.4)
Other	(703)	(739)	36	4.9
Gross debt	**138,085**	**84,697**	**53,388**	**63.0**
Cash and cash equivalents	12,939	5,393	7,546	n.a.
Derivative financial assets	4,038	2,333	1,705	73.1
Other financial assets	881	940	(59)	(6.3)
Net debt	**120,227**	**76,031**	**44,196**	**58.1**

Changes in net debt

millions of €



Other effects of EUR 0.4 billion include, among other factors, recognition of liabilities for the acquisition of media broadcasting rights, financing options under which the payments for trade payables become due at a later point in time by involving banks in the process, and offsetting effects from the measurement of embedded derivatives at T-Mobile US.

Other financing options

Off-balance-sheet financial instruments mainly relate to the sale of receivables by means of factoring. Total receivables sold as of December 31, 2020 amounted to EUR 3.1 billion (December 31, 2019: EUR 4.2 billion). This mainly relates to factoring agreements in the United States and Germany operating segments. The year-on-year decline was mainly attributable to the contractual termination of a revolving factoring agreement in the Germany operating segment. The agreements are used in particular for active receivables management.

Furthermore, in the reporting year, we chose financing options totaling EUR 0.2 billion (2019: EUR 0.7 billion) which extended the period of payment for trade payables from operating and investing activities by involving banks in the process and which upon payment are shown under cash flows used in/from financing activities. As a result, we show these payables under financial liabilities in the statement of financial position.

The rating of Deutsche Telekom AG

	Standard & Poor's	Moody's	Fitch
Long-term rating / outlook			
Dec. 31, 2016	BBB+ / stable	Baa1 / stable	BBB+ / stable
Dec. 31, 2017	BBB+ / stable	Baa1 / stable	BBB+ / stable
Dec. 31, 2018	BBB+ / CreditWatch negative	Baa1 / negative	BBB+ / stable
Dec. 31, 2019	BBB+ / CreditWatch negative	Baa1 / negative	BBB+ / stable
Dec. 31, 2020	**BBB / stable**	**Baa1 / negative**	**BBB+ / stable**
Short-term rating	**A-2**	**P-2**	**F2**

As announced in 2018, rating agency Standard & Poor's downgraded Deutsche Telekom AG's rating from BBB+ to BBB with a stable outlook on completion of the business combination of T-Mobile US and Sprint. We are therefore still a solid investment-grade company with access to the international capital markets.

Financial flexibility

		2020	2019	2018	2017	2016
Relative debt[a]						
Net debt / EBITDA (adjusted for special factors)		**2.78x**	2.65x	2.4x	2.3x	2.3x
Equity ratio	%	**27.4**	27.1	29.9	30.0	26.2

[a] Relative debt is calculated on a quarterly basis and the calculation of the figure for 2020 includes as an input for the first quarter of 2020 historic pro forma figures for Sprint, which was included in the United States operating segment.

To ensure financial flexibility, we primarily use the KPI "relative debt." This is a core component of our finance strategy and an important performance indicator for investors, analysts, and rating agencies.

Calculation of free cash flow AL

millions of €

	2020	2019	2018
Net cash from operating activities	**23,743**	**23,074**	**17,948**
Interest payments for zero-coupon bonds	1,600	0	0
Termination of forward-payer swaps at T-Mobile US	2,158	0	0
Net cash from operating activities[a]	**27,501**	**23,074**	**17,948**
Cash capex	(18,694)	(14,357)	(12,492)
Spectrum investment	1,714	1,239	269
Cash capex (before spectrum investment)	**(16,980)**	**(13,118)**	**(12,223)**
Proceeds from the disposal of intangible assets (excluding goodwill) and property, plant and equipment	236	176	525
Free cash flow (before dividend payments and spectrum investment)[a]	**10,756**	**10,133**	**6,250**
Principal portion of repayment of lease liabilities[b]	(4,468)	(3,120)	(199)
Free cash flow AL (before dividend payments and spectrum investment)[a, c]	**6,288**	**7,013**	**6,051**

[a] Before interest payments for zero-coupon bonds and before termination of forward-payer swaps at T-Mobile US.

[b] Excluding finance leases at T-Mobile US.

[c] Comparatives for 2018 were calculated on a pro forma basis for the key performance indicators redefined as of January 1, 2019 following the introduction of the IFRS 16 accounting standard.

Free cash flow AL (before dividend payments and spectrum investment) decreased by EUR 0.7 billion year-on-year to EUR 6.3 billion. The following effects impacted on this development:

Excluding interest payments for zero-coupon bonds and the premature termination of forward-payer swaps concluded for borrowings at T-Mobile US, **net cash from operating activities** increased by EUR 4.4 billion. The sustained strong performance of the operating segments, especially the United States, including Sprint, had an increasing effect on net cash from operating activities. Higher (net) interest payments, which were up by EUR 2.1 billion in total, mainly as a result of the financial liabilities recognized and the restructuring begun in connection with the acquisition of Sprint, and the related increase in financing, including the handling charges incurred for a briefly utilized bridge loan facility, had a negative effect. Income tax payments decreased by EUR 0.1 billion compared with the prior year. Factoring agreements of EUR 0.8 billion had a negative impact on net cash from operating activities in the reporting year, mainly as a result of the contractual termination of a revolving factoring agreement in the Germany operating segment. In the prior year, factoring agreements had had negative effects of EUR 0.3 billion.

Cash capex (before spectrum investment) increased by EUR 3.9 billion to EUR 17.0 billion, largely on account of the inclusion of Sprint and the ongoing 5G network build-out in the United States. Cash capex in the Germany operating segment decreased slightly. Capital expenditure in the Germany operating segment totaled around EUR 4.2 billion in 2020, in particular for the build-out of the 5G and fiber-optic networks. In the Europe operating segment, cash capex stood at EUR 1.8 billion, which was slightly up on the prior year. Here, we also continue to invest in the provision of broadband and fiber-optic technology and in 5G as part of our integrated network strategy.

The increase in repayments of lease liabilities was due in particular to payments for leases in the United States operating segment, partly as a result of the inclusion of Sprint, and partly as a result of payments for new leases concluded in 2020 for network technology and cell sites in connection with the 5G network build-out.

For further information on the statement of cash flows, please refer to Note 35 "Notes to the consolidated statement of cash flows" in the notes to the consolidated financial statements.

Profitability

millions of €

		2020	2019	2018
ROCE	%	**4.6**	**5.1**	**4.7**
Profit (loss) from operations (EBIT)		12,804	9,457	8,001
Share of profit (loss) of associates and joint ventures accounted for using the equity method		(12)	87	(529)
Interest component of unrecognized rental and lease obligations[a]		n.a.	n.a.	630
Other NOP adjustments		n.a.	n.a.	1
Net operating profit (NOP)		**12,792**	**9,544**	**8,103**
Tax (imputed tax rate 2020: 27.8 %; 2019: 27.8 %; 2018: 27.8 %)		(3,556)	(2,653)	(2,253)
Net operating profit after taxes (NOPAT)		**9,236**	**6,891**	**5,850**
Cash and cash equivalents		12,939	5,393	3,679
Operating working capital		6,458	2,983	(511)
Intangible assets		118,066	68,202	64,950
Property, plant and equipment		60,975	49,548	50,631
Right-of-use assets[a]		30,302	17,998	n.a.
Non-current assets and disposal groups held for sale and liabilities[b]		664	68	145
Investments accounted for using the equity method		543	489	576
Other assets		n.a.	n.a.	331
Present value of unrecognized rental and lease obligations		n.a.	n.a.	15,760
Other provisions		(9,033)	(6,663)	(6,435)
Other NOA adjustments		n.a.	n.a.	0
Net operating assets (NOA)		**220,914**	**138,018**	**129,126**
Average net operating assets (Ø NOA)		**201,545**	**135,618**	**124,024**

[a] The calculation method used to determine this financial performance indicator was adjusted in 2019 as a result of the new IFRS 16 accounting standard.
[b] Excluding the carrying amounts of companies accounted for using the equity method.

ROCE decreased by 0.5 percentage points in the reporting period to 4.6 %. This was due to stronger percentage growth in average operating assets (NOA) than in net operating profit after taxes (NOPAT). Both NOPAT and average NOA were affected by the business combination of T-Mobile US and Sprint. Thus, the positive development of NOPAT in 2020 was driven primarily by a substantial increase in EBIT at T-Mobile US. Overall, NOPAT amounted to EUR 9.2 billion in 2020, up from EUR 6.9 billion in 2019. At the same time, average NOA increased, due in particular to the spectrum licenses; property, plant and equipment; and right-of-use assets acquired as part of the Sprint transaction and the modification of the agreement concerning the lease and use of cell sites between T-Mobile US and American Tower. The average amount of net operating assets (NOA) increased to EUR 201.5 billion in 2020 from EUR 135.6 billion in the prior year. In addition to the inclusion of Sprint, the development of NOA also reflects our consistently high investment volume.

For further information on the definition of ROCE and the methods used to calculate this key performance indicator, please refer to the section "Management of the Group."

Reconciliation for the change in disclosure of key figures for the prior years in the 2020 financial year

millions of €

	Total revenue	Profit (loss) from operations (EBIT)	EBITDA AL (adjusted for special factors)	Depreciation and amortization	Impairment losses	Segment assets[a]	Segment liabilities[a]
FY 2019/December 31, 2019 **Presentation as of December 31, 2019 – as reported**							
Germany	21,886	4,063	8,720	(4,251)	(4)	41,253	30,968
United States	40,420	5,488	11,134	(7,777)	0	84,413	54,087
Europe	12,168	1,182	4,005	(2,790)	(341)	27,699	10,843
Systems Solutions	6,805	(218)	519	(503)	(29)	6,615	4,800
Group Development	2,797	615	1,033	(812)	0	8,395	10,571
Group Headquarters & Group Services	2,620	(1,648)	(651)	(1,158)	(2)	54,162	65,066
Total	**86,696**	**9,482**	**24,760**	**(17,291)**	**(376)**	**222,537**	**176,335**
Reconciliation	(6,166)	(25)	(29)	25	(21)	(51,865)	(51,894)
Group	**80,531**	**9,457**	**24,731**	**(17,266)**	**(397)**	**170,672**	**124,441**
FY 2019/December 31, 2019 **+/- Realignment of the B2B telecommunications business as of July 1, 2020**							
Germany	1,844	265	362	(85)	0	3,021	1,254
United States	0	0	0	0	0	0	0
Europe	(581)	(74)	(94)	17	0	(821)	(316)
Systems Solutions	(2,381)	(207)	(269)	53	0	(2,099)	(833)
Group Development	0	0	0	0	0	0	0
Group Headquarters & Group Services	8	17	0	16	0	177	178
Total	**(1,111)**	**1**	**0**	**1**	**0**	**279**	**283**
Reconciliation	1,111	(1)	0	(1)	0	(279)	(283)
Group	**0**	**0**	**0**	**0**	**0**	**0**	**0**
FY 2019/December 31, 2019 **= Presentation as of December 31, 2020**							
Germany	23,730	4,327	9,083	(4,337)	(4)	44,274	32,222
United States	40,420	5,488	11,134	(7,777)	0	84,413	54,087
Europe	11,587	1,109	3,910	(2,773)	(341)	26,878	10,527
Systems Solutions	4,424	(425)	250	(450)	(29)	4,517	3,967
Group Development	2,797	615	1,033	(812)	0	8,395	10,571
Group Headquarters & Group Services	2,627	(1,631)	(650)	(1,141)	(2)	54,339	65,244
Total	**85,585**	**9,483**	**24,760**	**(17,290)**	**(376)**	**222,816**	**176,618**
Reconciliation	(5,055)	(26)	(29)	24	(21)	(52,144)	(52,177)
Group	**80,531**	**9,457**	**24,731**	**(17,266)**	**(397)**	**170,672**	**124,441**

[a] Figures relate to the reporting date December 31, 2019.

Development of business in the operating segments

For further information, please refer to the IR back-up at: www.telekom.com/en/investor-relations.

Our B2B telecommunications business was realigned with effect from July 1, 2020. A new B2B unit was created in the Germany operating segment, and the assets and liabilities previously assigned to the Systems Solutions, Europe, and Group Headquarters & Group Services segments have been transferred to the new unit. Prior-year comparatives in these segments (development of operations, customer development, headcount development, and order entry) were adjusted retrospectively.

For further information on the realignment of the B2B telecommunications business and on the different consummation dates required under company law, please refer to the section "Group organization."

Germany
Customer development

thousands	Dec. 31, 2020	Dec. 31, 2019	Change	Change %	Dec. 31, 2018
Mobile customers	48,526	46,189	2,337	5.1	44,202
Contract customers	26,037	25,291	746	2.9	25,435
Prepaid customers	22,490	20,898	1,592	7.6	18,767
Fixed-network lines	17,590	17,824	(234)	(1.3)	18,625
Retail broadband lines	14,118	13,730	388	2.8	13,561
Of which: optical fiber	9,515	8,529	986	11.6	7,236
Television (IPTV, satellite)	3,864	3,618	246	6.8	3,353
Unbundled local loop lines (ULLs)	4,101	4,638	(537)	(11.6)	5,236
Wholesale broadband lines	7,733	7,372	361	4.9	6,722
Of which: optical fiber	6,433	5,863	570	9.7	4,970

Total
In Germany we continue to be market leader both in terms of fixed-network and mobile revenues. This success is attributable to our high-performance networks. We offer best customer experience with award-winning network quality – in the fixed network as in mobile communications – and with a broad product portfolio and excellent service. We want to offer our customers a seamless and technology-neutral telecommunications experience. To this end we market not only fixed-network and mobile products, but also convergence products such as our brand-new MagentaEINS Plus rate plan, introduced in September 2020. This new offering bundles our connectivity services for home and on the move in a single contract. Our MagentaEINS convergence product remains very popular among customers, with some 5.1 million customers having opted for MagentaEINS by the end of 2020. That corresponds to an increase of 7.5 % against year-end 2019.

We continued to see strong demand for our fiber-optic-based lines. As of the end of December 2020, the total number of lines had increased to over 15.9 million. In other words, we connected a further 1.6 million lines to our fiber-optic network in Germany in 2020. With the progress made in fiber-optic rollout and vectoring technology, we also successfully drove forward the marketing of higher bandwidths.

Mobile communications
We won a total of 2.3 million mobile customers in 2020. Of these, 649 thousand were high-value contract customers under our Telekom and congstar brands. Sustained high demand for mobile rate plans with included data volumes alongside our multiple award-winning network quality continues to drive this trend. The number of mobile contract customers with resellers (service providers) increased, primarily due to the volatile developments at some of our service providers. We have added 1.6 million prepaid customers since the start of the year, largely on the back of our automotive offerings targeted specifically at business customers.

For further information on our awarding-winning network quality, please refer to the section "Highlights in the 2020 financial year."

The StreamOn option, with which customers can stream certain music, gaming, or video services without reducing their included data allowance, remains very popular. At the end of 2020, almost 4 million customers were using this option, up by around 30 % year-on-year.

Fixed network
Due to the persistently challenging development in the fixed-network market, primarily owing to aggressive pricing offers of competitors, we are pursuing new paths in marketing. Our focus is on convergence offerings and further development of such products: We offer MagentaTV with exclusive access to a wide range of additional content in the Megathek library and via popular streaming services, and with TV lines and fiber-optic-based lines and, since September 2020, our MagentaEINS Plus rate plan. Our brand-new convergence product offers customers Germany-wide unlimited data plus added benefits for the community and no minimum contract term.

The number of broadband lines increased by 388 thousand to over 14.1 million in 2020. After completing the IP migration, broadband customer additions were up significantly compared with 170 thousand additions in 2019. We added 246 thousand TV customers in 2020, increasing the customer base by 6.8 % compared with the end of the prior year. In traditional fixed-network business, the number of lines declined by 234 thousand. This marked a considerable reduction in line losses compared with the prior-year period, which had been affected in particular by the migration of consumers to IP. As expected, the number of fixed-network lines therefore declined slightly to around 17.6 million lines.

Wholesale

As of December 31, 2020, fiber-optic-based lines accounted for 54.4 % of all lines – 5.5 percentage points higher than at the end of 2019. This growth was driven largely by high demand for our contingent model. The number of unbundled local loop lines decreased by 537 thousand compared with the end of the prior year, partly as a result of the shift to higher-value fiber-optic-based lines and partly from consumers switching to cable providers. In addition, our wholesale customers are migrating their retail customers to their own fiber-optic-based lines. The total number of wholesale lines at the end of 2020 was around 11.8 million.

Development of operations

millions of €		2020	2019	Change	Change %	2018
Total revenue		**23,779**	**23,730**	**49**	**0.2**	**23,662**
Consumers		11,723	11,602	121	1.0	11,523
Business Customers		8,861	8,954	(93)	(1.0)	9,032
Wholesale		2,983	2,944	39	1.3	2,874
Other		212	230	(18)	(7.8)	233
Profit (loss) from operations **(EBIT)**		**4,085**	**4,327**	**(242)**	**(5.6)**	**4,181**
EBIT margin	%	17.2	18.2			17.7
Depreciation, amortization and impairment losses		(4,440)	(4,341)	(99)	(2.3)	(4,116)
EBITDA		8,525	8,668	(143)	(1.6)	8,296
Special factors affecting EBITDA		(751)	(453)	(298)	(65.8)	(628)
EBITDA (adjusted for special factors)		9,276	9,121	155	1.7	8,924
EBITDA AL[a]		8,480	8,630	(150)	(1.7)	8,202
Special factors affecting EBITDA AL[a]		(751)	(453)	(298)	(65.8)	(628)
EBITDA AL (adjusted for special factors)[a]		**9,231**	**9,083**	**148**	**1.6**	**8,829**
EBITDA AL margin (adjusted for special factors)[a]	%	38.8	38.3			37.3
Cash capex[b]		**(4,172)**	**(4,414)**	**242**	**5.5**	**n.a.**

[a] Comparatives for 2018 were calculated on a pro forma basis for the key performance indicators redefined as of January 1, 2019 following the introduction of the IFRS 16 accounting standard.

[b] Retrospective changes in connection with realignment of the B2B telecommunications business have not been applied to cash capex for the 2018 financial year.

Total revenue

In 2020 we generated total revenue of EUR 23.8 billion, which was up slightly by 0.2 % year-on-year. Growth in fixed-network business, driven largely by broadband revenue growth of 5.7 % and a 2.3 % rise in revenue from variable call charges, offset declining revenues in mobile communications business. Overall, revenue was affected by the effects of the coronavirus pandemic, such as temporary travel restrictions, lockdowns, and the deteriorated economic situation. This had a negative impact on roaming, visitor, and terminal equipment revenues, and resulted in delays or postponements to current orders in B2B telecommunications business.

Revenue from **Consumers** grew by 1.0 % year-on-year. Volume-driven declines in revenue from voice components continue to strongly impact on traditional fixed-network business. By contrast, revenue from broadband business grew by 4.8 % while revenue from fixed-network terminal equipment increased by 5.6 % on the back of strong terminal equipment leasing business. Mobile business declined by 1.1 % primarily due to lower revenues from mobile terminal equipment business. In addition, negative trends in roaming and visitor revenues in consequence of the coronavirus pandemic had an impact.

Revenue from **Business Customers** declined by 1.0 %. IT revenues increased by 3.4 % and mobile revenues declined by 0.9 % compared with the prior-year period. Business customer operations were also affected by the aforementioned negative impact of the coronavirus crisis, particularly in mobile business. The B2B telecommunications business, which was integrated into the Germany operating segment effective July 1, 2020, reported a decline in revenue at the end of 2020 of 3.2 % year-on-year. This is attributable to the deteriorated economic situation in consequence of the coronavirus pandemic and to market-related factors such as price erosion and competitive pressure in solutions business.

For further information on the realignment of the B2B telecommunications business, please refer to the section "Group organization."

Wholesale revenue was up at the end of 2020 by 1.3 % year-on-year. The positive trend in the number of fiber-optic-based lines, driven mainly by the contingency model, continued in 2020 with an increase of 9.7 % compared with the end of 2019 and partially offset the decrease in revenues from declining volumes of unbundled local loop lines. The coronavirus pandemic had positive effects on voice revenues in the second and fourth quarter of 2020.

Adjusted EBITDA AL, EBITDA AL

EBITDA AL adjusted for special factors increased by EUR 148 million or 1.6 % year-on-year to EUR 9.2 billion. Our adjusted EBITDA AL margin increased to 38.8 %, up from 38.3 % in the prior year. The main reasons for this increase are a sound operational development, driven by high-value revenue growth and enhanced cost efficiency. Lower personnel costs resulting, among other factors, from the smaller headcount and the ongoing implementation of efficiency enhancement and digitalization measures reduced costs. Higher expenses recognized as special factors for socially responsible instruments in connection with the staff restructuring, in particular the dedicated retirement program, had an offsetting effect. EBITDA AL decreased in 2020 by 1.7 % year-on-year to EUR 8.5 billion.

EBIT

Profit from operations was down 5.6 % year-on-year to around EUR 4.1 billion, partly as a result of the slightly lower EBITDA level together with higher depreciation, amortization and impairment losses year-on-year, mainly on account of higher depreciation of property, plant and equipment.

Cash capex

Cash capex decreased by EUR 242 million or 5.5 % compared with the prior-year period. This is mainly due to the fact that cash outflows in connection with the acquisition of 5G mobile spectrum licenses in the 2019 financial year were shown in cash capex and, since 2020, have been presented in net cash from/used in financing activities on account of the payment plan agreed with the Federal Republic of Germany. Cash capex also declined as a result of the changed accounting treatment of grants receivable from funding projects for the broadband build-out as of the start of the third quarter of 2019. Capital expenditure totaled around EUR 4.2 billion in 2020, with much of this figure going towards the build-out of our 5G and fiber-optic networks. The number of households connected by pure fiber-optic lines increased to over 2 million at the end of 2020. In mobile communications, our customers benefit from greater LTE network coverage. As of December 31, 2020, we supplied 98.7 % of households in Germany with LTE. More than two thirds of the German population can already use 5G.

United States

Customer development

thousands	Dec. 31, 2020	Dec. 31, 2019	Change	Change %	Dec. 31, 2018
Branded customers[a, b]	102,064	67,895	34,169	50.3	63,656
Postpaid customers[c]	81,350	47,034	34,316	73.0	42,519
Postpaid phone customers	66,618	40,346	26,272	65.1	37,224
Other postpaid customers	14,732	6,689	8,043	n.a.	5,295
Prepaid customers[b, c, d]	20,714	20,860	(146)	(0.7)	21,137

Adjustments of the customer base

thousands	Total adjustments of customer base in 2020	Adjustment of customer definition for Sprint's prepaid business as of July 1, 2020[d]	Adjustment of customer definition at Sprint as of Apr. 1, 2020[c]	Sprint additions April 1, 2020
Branded customers[a]	28,354	(9,393)	(4,853)	42,600
Postpaid customers[c]	28,830	0	(5,514)	34,344
Postpaid phone customers	24,055	0	(1,861)	25,916
Other postpaid customers	4,775	0	(3,653)	8,428
Prepaid customers[c, d]	(476)	(9,393)	661	8,256

[a] Starting in the first quarter of 2020, T-Mobile US discontinued reporting of wholesale customers due to the expansion of machine-to-machine (M2M) and Internet of Things (IoT) products and instead will continue to focus on postpaid and prepaid customer reporting.

[b] On July 18, 2019, we entered into an agreement whereby certain T-Mobile US prepaid products will now be offered and distributed by a current MVNO partner. As a result, we included a base adjustment to reduce prepaid customers by 616 thousand in the third quarter of 2019.

[c] Includes customers acquired in connection with the Sprint Merger and certain customer base adjustments.

[d] In connection with obtaining regulatory approval for the Sprint Merger, on July 1, 2020, substantially all prepaid customers acquired were subsequently acquired by DISH. Upon closing of the transaction with DISH, we entered into a Mobile Virtual Network Operator (MVNO) agreement to provide network services to customers of their prepaid business for a period of up to seven years. As a result, we included a base adjustment to reduce prepaid customers by 9.4 million in the third quarter of 2020. The prepaid customers included in our total customers as of June 30, 2020 include the customers subsequently acquired by DISH and are expected to be different than the customers included under the MVNO agreement, and classified as wholesale customers, due to differences in customer reporting policies.

Branded customers

At December 31, 2020, the United States operating segment (T-Mobile US) had 102.1 million customers, compared to 67.9 million customers at December 31, 2019. Net customer additions were 5.8 million in 2020, compared to 4.9 million net customer additions in 2019, due to the factors described below.

Postpaid net customer additions were 5.5 million in 2020 – the most in company history – compared to 4.5 million postpaid net customer additions in 2019. The increase resulted from higher postpaid other net customer additions primarily due to higher gross additions from connected devices primarily due to educational institution additions and lower churn, partially offset by lower switching activity in the industry from reduced store traffic due to retail store closures arising from the coronavirus pandemic. This increase was partially offset by lower postpaid phone net customer additions primarily due to higher churn from customers acquired in the Sprint Merger and lower switching activity in the industry from reduced store traffic due to retail store closures arising from the coronavirus pandemic.

Prepaid net customer additions were 331 thousand in 2020, compared to 339 thousand prepaid net customer additions in 2019. The decrease was primarily due to lower prepaid gross customer additions, partially offset by lower churn due to lower switching activity in the industry from reduced store traffic due to retail store closures arising from the coronavirus pandemic.

Development of operations

millions of €		2020	2019	Change	Change %	2018
Total revenue		**61,208**	**40,420**	**20,788**	**51.4**	**36,522**
Profit (loss) from operations **(EBIT)**		**9,187**	**5,488**	**3,699**	**67.4**	**4,634**
EBIT margin	%	15.0	13.6			12.7
Depreciation, amortization and impairment losses		(15,665)	(7,777)	(7,888)	n.a.	(5,294)
EBITDA		24,852	13,265	11,587	87.4	9,928
Special factors affecting EBITDA		(270)	(544)	274	50.4	(160)
EBITDA (adjusted for special factors)		25,122	13,809	11,313	81.9	10,088
EBITDA AL[a]		20,628	10,590	10,038	94.8	9,924
Special factors affecting EBITDA AL[a]		(370)	(544)	174	32.0	(160)
EBITDA AL (adjusted for special factors)[a]		**20,997**	**11,134**	**9,863**	**88.6**	**10,084**
EBITDA AL margin (adjusted for special factors)[a]	%	34.3	27.5			27.6
Cash capex		**(10,394)**	**(6,369)**	**(4,025)**	**(63.2)**	**(4,661)**

[a] Comparatives for 2018 were calculated on a pro forma basis for the key performance indicators redefined as of January 1, 2019 following the introduction of the IFRS 16 accounting standard.

Total revenue

Total revenue for the United States operating segment of EUR 61.2 billion in 2020, increased by 51.4 %, compared to EUR 40.4 billion in 2019. In U.S. dollars, T-Mobile US' total revenues increased by 55.0 % year-over year primarily due to increased service revenues as well as increased equipment revenues. The components of these changes are described below.

Service revenues primarily due to higher average postpaid customers driven by customers acquired in the Sprint Merger, the success of new customer segments and rate plans as well as continued growth in existing and new markets, growth in other connected devices (tablets and wearable products), and growth in educational institution customers. The increase in service revenues was also driven by higher postpaid phone ARPU as a result of customers acquired in the Merger and higher roaming and other service revenues primarily from the inclusion of wireline operations acquired in the Sprint Merger.

Equipment revenues increased in 2020 primarily due to an increase in device sales revenue, excluding purchased leased devices. In addition, equipment revenues increased due to the Sprint Merger including increases in lease revenues due to a higher number of customer devices under lease, an increase in revenues primarily related to the liquidation of returned devices, and an increase in sales of leased devices, primarily due to an increase in purchased leased devices.

Other revenues were essentially flat in 2020.

Adjusted EBITDA AL, EBITDA AL

In euros, adjusted EBITDA AL increased by 88.6 % to EUR 21.0 billion in 2020, compared to EUR 11.1 billion in 2019. The adjusted EBITDA AL margin increased to 34.3 % in 2020, compared to 27.5 % in 2019. In U.S. dollars, adjusted EBITDA AL increased by 92.8 % during the same period. Adjusted EBITDA AL increased primarily due to higher service revenues and equipment revenues as discussed above. These increases were partially offset by increases in expenses primarily due to the Sprint Merger including those associated with backhaul agreements, other tower expenses, employee-related and benefit-related costs primarily due to increased headcount, external labor and professional services, lease costs, and advertising. Additional increases in expenses primarily due to the Sprint Merger include those associated with leased device cost of equipment sales, primarily due to an increase in purchased leased devices, costs related to the liquidation of returned devices, repair and maintenance costs, regulatory and roaming costs, and legal related expenses for risk provisioning and commitments. In addition to these costs primarily due to the Sprint Merger, were increases in expenses primarily due to the continued build-out of our nationwide 5G network, costs associated with our restructuring activities, device cost of equipment sales, excluding purchased leased devices, bad debt primarily due to the estimated macro-economic impacts of the coronavirus pandemic, commission expense primarily due to higher gross customer additions, and inventory repair expense as a result of an increase in the high-end device mix to fulfill insurance claims. The impact from commission costs capitalization and amortization, including a net benefit from costs capitalized as result of the Sprint Merger, reduced adjusted EBITDA AL by USD 45 million in 2020 compared to 2019.

EBITDA AL in 2020, included special factors of EUR -0.4 billion compared to special factors of EUR -0.5 billion in 2019. The change in special factors was primarily due to an increase of EUR 1.2 billion in Merger-related costs including transaction costs, including legal and professional services related to the completion of the Merger; EUR 1.0 billion of restructuring costs, including severance, store rationalization and network decommissioning; and integration costs to achieve synergies in network, retail, IT, and back office operations. Also, EUR 0.4 billion in third-party commissions and cleaning-related expenses associated with the coronavirus pandemic and EUR 0.2 billion postpaid billing system disposal. These increases in special factor expenses were offset by the EUR 1.6 billion spectrum impairment reversal and the EUR 0.3 billion transaction fee received from SoftBank. Overall, EBITDA AL increased by 94.8 % to EUR 20.6 billion in 2020, compared to EUR 10.6 billion in 2019, due to the factors described above, including special factors.

EBIT

EBIT increased by 67.4 % to EUR 9.2 billion in 2020, compared to EUR 5.5 billion in 2019. In U.S. dollars, EBIT increased by 72.6 % during the same period primarily due to higher EBITDA AL. In U.S. dollars, depreciation and amortization increased by 106.5 % primarily due to higher depreciation expense from assets acquired in the Sprint Merger, excluding leased devices, and network expansion from the continued build-out of our nationwide 5G network. In addition depreciation and amortization increased due to higher depreciation expense on leased devices resulting from a higher total number of customer devices under lease, primarily from customers acquired in the Sprint Merger, and higher amortization from intangible assets acquired in the Sprint Merger.

Cash capex

Cash capex increased by 63.2 % to EUR 10.4 billion in 2020, compared to EUR 6.4 billion in 2019. In U.S. dollars, cash capex increased by 67.3 % primarily driven by network integration related to the Sprint Merger, the continued build-out of our nationwide 5G network and an increase in spectrum purchases.

Europe
Customer development

thousands

		Dec. 31, 2020	Dec. 31, 2019	Change	Change %	Dec. 31, 2018
Europe, total	Mobile customers	45,619	46,165	(546)	(1.2)	50,542
	Contract customers[a]	26,918	26,245	673	2.6	26,665
	Prepaid customers[a]	18,701	19,920	(1,219)	(6.1)	23,877
	Fixed-network lines[b]	9,084	9,105	(21)	(0.2)	9,039
	Of which: IP-based[b]	8,439	8,311	128	1.5	7,391
	Broadband customers	6,953	6,672	281	4.2	6,405
	Television (IPTV, satellite, cable)	5,057	4,945	112	2.3	4,835
	Unbundled local loop lines (ULLs)/ wholesale PSTN	2,246	2,294	(48)	(2.1)	2,275
	Wholesale broadband lines[c]	684	533	151	28.3	411
Greece	Mobile customers	6,914	7,365	(451)	(6.1)	7,893
	Fixed-network lines	2,589	2,638	(49)	(1.9)	2,566
	Broadband customers	2,185	2,033	152	7.5	1,893
Romania	Mobile customers	4,683	4,916	(233)	(4.7)	5,360
	Fixed-network lines	1,444	1,560	(116)	(7.4)	1,741
	Broadband customers	912	1,014	(102)	(10.1)	1,101
Hungary	Mobile customers	5,427	5,369	58	1.1	5,330
	Fixed-network lines	1,759	1,703	56	3.3	1,663
	Broadband customers	1,323	1,231	92	7.5	1,148
Poland	Mobile customers	11,198	10,954	244	2.2	10,787
	Fixed-network lines	31	18	13	72.2	18
	Broadband customers	39	18	21	n.a.	18
Czech Republic	Mobile customers	6,178	6,265	(87)	(1.4)	6,188
	Fixed-network lines[b]	606	533	73	13.7	394
	Broadband customers	368	320	48	15.0	251
Croatia	Mobile customers	2,253	2,274	(21)	(0.9)	2,273
	Fixed-network lines	885	908	(23)	(2.5)	931
	Broadband customers	625	621	4	0.6	618
Slovakia	Mobile customers	2,441	2,428	13	0.5	2,369
	Fixed-network lines	865	860	5	0.6	853
	Broadband customers	607	576	31	5.4	543
Austria	Mobile customers	5,074	5,019	55	1.1	7,194
	Fixed-network lines	569	549	20	3.6	538
	Broadband customers	635	612	23	3.8	594
Other[d]	Mobile customers	1,451	1,576	(125)	(7.9)	3,149
	Fixed-network lines	335	335	0	0.0	333
	Broadband customers	259	249	10	4.0	238

[a] M2M cards (machine-to-machine) were reclassified Group-wide as of January 1, 2020 and assigned exclusively to the prepaid customer segment. The portion of M2M cards which had previously been recognized in the contract customer segment was reclassified accordingly. The comparatives for 2019 have been adjusted retrospectively.

[b] The prior-year comparatives for IP-based fixed-network lines in the Czech Republic were adjusted as part of the standardization of the underlying customer definition.

[c] The prior-year comparatives for wholesale broadband lines in Croatia and Greece were adjusted as part of the standardization of the underlying customer definition.

[d] "Other": national companies of North Macedonia, Montenegro, and the lines of the GTS Central Europe group in Romania. We sold the national company in Albania as of May 7, 2019.

Total
After customer development was hampered by the corona-induced shop closures during the first lockdown, our crisis management paid off over the remainder of the year. The focus on expanding digital sales channels, such as our service app and service center services, almost brought customer development back to normal. It did not slump again, not even when lockdown measures were reimposed at the end of 2020 during the second coronavirus wave. Our MagentaOne convergent product portfolio, in particular, generated double-digit growth of 19.5 % in FMC customers thanks to ongoing demand. We are continuously building out our fixed-network infrastructure with state-of-the-art fiber-optic-based lines (FTTH, FTTB, and FTTC), with Greece, Hungary, and Slovakia in particular seeing the greatest rollout progress in the reporting year. Since the start of the year, the number of broadband customers has increased by 4.2 %.

In mobile business, we recorded growth in high-value contract customers, which only partially offset the decline in the prepaid customer base. In 5G, we reached the first milestone a year ago with the market launch in Austria. Following Hungary and Poland, our national companies in the Czech Republic, Slovakia, Croatia, and Greece also launched 5G commercially in the fourth quarter of 2020.

Mobile communications

In the Europe operating segment, we had 45.6 million mobile customers as of December 31, 2020, a slight decline of 1.2 % compared with the end of 2019. The number of high-value contract customers increased by 2.6 %. The contract customer bases grew or remained stable in almost all of our national companies, with particularly strong growth recorded in Romania, Austria, Poland, and Hungary. Overall, contract customers account for 59 % of the total customer base. Our innovative services and rate plans are now joined in all countries by a new product portfolio, which we revamped in line with the “more for more” principle. Customers in these countries can now select high-value add-on services – e.g., more data – for a small additional monthly fee. The new portfolio also satisfies the growing demand for data volume driven by video streaming and gaming services. In addition, thanks to our integrated network strategy our customers benefited from greater coverage with fast mobile broadband. As of December 31, 2020, we covered 97.6 % of the population in the countries of our operating segment with LTE, reaching around 108 million people in total.

By contrast, the prepaid customer base declined slightly, in line with expectations, in particular in Romania and Greece. This was due in part to the negative impact of the coronavirus pandemic. But also, our market approach is focused on contract rate plans and we offer our prepaid customers attractive high-value contract rate plans. Already, more than one third of new contract customer adds are former prepaid customers who have taken advantage of these offerings. Furthermore, inactive SIM cards are deactivated from the customer base at regular intervals.

Fixed network

Broadband business continued to grow despite the coronavirus pandemic, with the customer base increasing by 4.2 % compared with the end of the prior year to a total of 7.0 million. The customer bases of almost all of our national companies, especially in Greece, Hungary, the Czech Republic, and Slovakia saw substantial growth. Romania was the exception. By continuing to invest in innovative fiber-optic-based technologies, we are systematically building out our fixed-network infrastructure. Thus, we increased household coverage with optical fiber at our four largest national companies to 4.1 million households as of December 31, 2020. The number of IP-based lines increased to account for 92.5 % of all fixed-network lines by the end of December 2020. The total number of fixed-network lines in our Europe operating segment was on a par with the prior-year level at 9.1 million.

The TV and entertainment business had a total of 5.1 million customers as of December 31, 2020, up 2.3 % compared with the prior year. With both telecommunications providers and OTT players offering TV services, the TV market is already saturated in many countries of our segment.

FMC – fixed-mobile convergence

Our portfolio of convergent products, MagentaOne, was highly popular with consumers across all of our national companies. At the end of 2020, we had 5.7 million FMC customers; this corresponds to growth of 19.5 % compared with the prior year. Our national companies in Greece, Hungary, and Austria in particular contributed to this double-digit growth. We have also seen substantially accelerated growth in the marketing of our MagentaOne Business product to business customers.

Development of operations

millions of €

		2020	2019	Change	Change %	2018
Total revenue		**11,335**	**11,587**	**(252)**	**(2.2)**	**11,312**
Greece		2,940	2,943	(3)	(0.1)	2,888
Romania		951	980	(29)	(3.0)	933
Hungary		1,734	1,872	(138)	(7.4)	1,889
Poland		1,453	1,486	(33)	(2.2)	1,526
Czech Republic		1,072	1,088	(16)	(1.5)	1,047
Croatia		917	960	(43)	(4.5)	966
Slovakia		773	785	(12)	(1.5)	761
Austria		1,302	1,276	26	2.0	1,055
Other[a]		283	298	(15)	(5.0)	343
Profit (loss) from operations **(EBIT)**		**1,278**	**1,109**	**169**	**15.2**	**650**
EBIT margin	%	11.3	9.6			5.7
Depreciation, amortization and impairment losses		(2,875)	(3,114)	239	7.7	(2,998)
EBITDA		4,153	4,223	(70)	(1.7)	3,648
Special factors affecting EBITDA		(188)	(141)	(47)	(33.3)	(122)
EBITDA (adjusted for special factors)		4,341	4,364	(23)	(0.5)	3,771
EBITDA AL[b]		3,722	3,769	(47)	(1.2)	3,581
Special factors affecting EBITDA AL[b]		(188)	(141)	(47)	(33.3)	(122)
EBITDA AL (adjusted for special factors)[b]		**3,910**	**3,910**	**0**	**0.0**	**3,703**
Greece		1,199	1,212	(13)	(1.1)	1,173
Romania		153	141	12	8.5	135
Hungary		520	551	(31)	(5.6)	540
Poland		378	383	(5)	(1.3)	382
Czech Republic		430	448	(18)	(4.0)	432
Croatia		337	360	(23)	(6.4)	374
Slovakia		335	327	8	2.4	320
Austria		496	467	29	6.2	336
Other[a]		63	20	43	n.a.	11
EBITDA AL margin (adjusted for special factors)[b]	%	34.5	33.7			32.7
Cash capex[c]		**(2,216)**	**(1,816)**	**(400)**	**(22.0)**	**n.a.**

The contributions of the national companies correspond to their respective unconsolidated financial statements and do not take consolidation effects at operating segment level into account.

a “Other”: national companies of North Macedonia, Montenegro, and the GTS Central Europe group in Romania, as well as the Europe Headquarters. We sold the national company in Albania as of May 7, 2019.

b Comparatives for 2018 were calculated on a pro forma basis for the key performance indicators redefined in 2019 following the introduction of the IFRS 16 accounting standard.

c Retrospective changes arising in connection with the realignment of the B2B telecommunications business have not been applied to cash capex for the 2018 financial year.

Total revenue

Our Europe operating segment generated total revenue of EUR 11.3 billion as of December 31, 2020, a year-on-year decrease of 2.2 %. In organic terms, i.e., assuming constant exchange rates and adjusted for the sale of Telekom Albania, revenue remained on a par with the prior-year level, despite the deterioration in economic conditions due to the coronavirus pandemic. Overall we therefore fell slightly short of our expectations on account of the coronavirus pandemic.

Fixed-network business proved to be solid over the year as a whole. We thus recorded an increase in revenue from broadband business in organic terms, in part as a result of the ongoing build-out of our networks. In many places, we have been rated the telecommunications company with the best network (e.g., Connect readers’ choice 2020, Ookla tests in Greece and Croatia), which is paying off, especially in these times of lockdowns, with the associated demand for broadband connections. Thanks to the wide range of services we offer, the TV business also recorded slight growth rates. The systems solutions business grew year-on-year, especially in Greece and Poland; the wholesale business also recorded positive growth rates, driven in part by higher revenue in Romania. We recorded a slight organic decline in mobile revenues compared with the prior year, primarily driven by declines in roaming and visitor revenues as a result of travel restrictions, some of which are still in place or have been reimposed, and by a conscious reduction in low-margin terminal equipment business. These negative effects have been partially offset by increases in higher-margin service revenues (excluding roaming and visitor revenues).

For more information on our award-winning network quality, please refer to the section “Highlights in the 2020 financial year.”

Looking at the development by country, our national companies in Austria, Poland, and the Czech Republic recorded the best organic development of revenue in the 2020 financial year. This offset the decline in revenue in Romania, Croatia, and Slovakia in particular. In Romania, the downward trend was mainly due to declining revenues from mobile communications and systems solutions business, which were partially offset by higher wholesale revenues.

Revenue from **Consumers** declined by 1.5 % compared with the prior-year period. Lower revenue from mobile terminal equipment business and from roaming was only partially offset by gains in higher-margin service revenues (excluding roaming). In the fixed network, revenue from broadband/TV business increased thanks to our innovative TV and entertainment offerings as well as the continuous rollout of fiber-optic technology. This offset the decline in revenue from voice telephony. In addition, the higher number of FMC customers had a positive impact on revenue.

The coronavirus pandemic posed huge challenges for the European companies in 2020. This is clearly reflected in our **Business Customers** operations. Revenue decreased 2.6 % year-on-year, with declines in mobile communications, fixed-network, and ICT business. As a result of coronavirus-related travel restrictions, our European subsidiaries were unable to realize the majority of the planned roaming revenues (especially in tourism countries such as Croatia). As of the end of 2020, these losses were not offset by revenue from the Europe-wide increase in demand for mobile data and broadband lines. In the first and third quarters of 2020, our ICT business recorded above-average new business with our cloud solutions (e.g., in Greece). However, by the end of 2020, the second lockdown had caused further postponements of customer orders from our corporate customers and from the public sector, which resulted in a slight decline in revenues from ICT business (in particular in our most important ICT market, Hungary).

Adjusted EBITDA AL, EBITDA AL

Our Europe operating segment generated adjusted EBITDA AL of EUR 3.9 billion in the 2020 financial year, which was on a par with the prior-year level, despite the impact of the coronavirus pandemic. In organic terms, i.e., assuming constant exchange rates and adjusted for the sale of Telekom Albania, adjusted EBITDA AL increased by 2.1 %, thus continuing to make a positive contribution to earnings. Savings in indirect costs (primarily due to lower personnel, marketing, and travel costs) were the main factor contributing to this development.

Looking at the development by country, the increase in adjusted organic EBITDA AL was largely attributable to the positive trends at our national companies in Austria, Romania, Hungary, Slovakia, and Poland. Contrasting developments were reported primarily at the national company in Croatia, where decreases in mobile revenues, especially from roaming and visitors, terminal equipment business, as well as decreases in voice telephony in fixed-network business, were only partially offset by positive revenue effects from systems solutions as well as broadband and TV business.

EBITDA AL decreased by 1.8 % year-on-year to EUR 3.7 billion. Expenses arising from special factors were up EUR 47 million year-on-year, mainly on account of the higher expenses for staff restructuring measures. The agreed sale of the Romanian fixed-network business prompted a reversal of impairment losses in the course of the year that had been recognized on property, plant and equipment in the past. This had a positive effect on EBITDA AL in the amount of EUR 50 million. In organic terms, EBITDA AL recorded modest growth of 0.7 %.

Development of operations in selected countries

Greece. In Greece, revenue remained on a par with the prior-year level at EUR 2.9 billion. The fixed-network business recorded a further increase: the broadband business posted particularly strong growth as a result of the intensive rollout of fiber-optic lines and vectoring. The systems solutions business also recorded significant growth, firmly driven by higher contract volumes in the public sector. The wholesale business recorded modest growth. In addition to good operational development, mobile business was heavily impacted by the coronavirus-related decline in roaming and visitor revenues as a result of reduced travel activities. These declines were only partially offset by the increase in the number of mobile devices sold. Business with the convergent product portfolio enjoyed a positive trend, generating revenue growth, thanks in particular to higher customer numbers.

In the 2020 financial year, adjusted EBITDA AL in Greece stood at EUR 1.2 billion, which was a slight decrease against the prior year of 1.1 %: the slightly lower net margin, driven largely by higher direct costs, was only partially offset by savings in indirect costs, in particular personnel costs.

Hungary. Revenue in Hungary totaled EUR 1.7 billion in the 2020 financial year, a decrease of 7.4 % against the prior year. This decline was due to negative exchange rate effects. In organic terms, revenue was on a par with the prior year. Mobile business grew, driven by higher service revenues (excluding from roaming and visitors), due in part to much higher data usage. This offset the decrease in roaming and visitor revenues resulting from the negative impact of the coronavirus pandemic. Higher revenues from the sale of mobile devices also contributed to this increase. In fixed-network business, systems solutions saw a decline due to a lower order volume in the public sector. By contrast, both broadband and TV revenues increased substantially, driven in particular by a larger customer base. Our MagentaOne convergence products also continued to perform well, with substantial customer additions and a corresponding increase in revenue.

Adjusted EBITDA AL stood at EUR 520 million, down 5.6 % year-on-year. In organic terms, adjusted EBITDA AL increased by 2.0 % compared with the prior year. This growth is attributable in particular to savings in indirect costs, including lower personnel costs and marketing expenses. Lower direct costs also had a positive impact on organic adjusted EBITDA AL.

Poland. Our revenue in Poland decreased by 2.2 % in the 2020 financial year to EUR 1.5 billion. This decline was due to negative exchange rate effects. In organic terms, revenue increased by 1.1 %. This growth is based on higher fixed-network revenue, especially in systems solutions business. The fixed-network core business also generated substantial revenue growth thanks to a larger customer base. Overall, this growth offset the negative effects from the decline in wholesale business. Higher service revenues in the mobile business (excluding roaming and visitors) were almost sufficient to offset the declines, particularly in terminal equipment sales and roaming and visitor revenues. The increase in high-value service revenues was attributable to both volume-driven increases in revenues from voice telephony and a higher-value customer base.

Adjusted EBITDA AL stood at EUR 378 million, down 1.3 % year-on-year. In organic terms, adjusted EBITDA AL increased by 2.0 %, mainly on the back of a higher net margin.

Czech Republic. In the 2020 financial year, revenue in the Czech Republic stood at EUR 1.1 billion, down 1.5 % on the prior-year level. This decline was due to negative exchange rate effects. In organic terms, revenue increased by 1.6 %. The fixed-network business was a strong driver of growth, recording substantial year-on-year increases in broadband and TV business in particular. The continuous investments in new fiber-optic networks paid off with a higher number of customers. Mobile revenues were down slightly on the prior-year level. In operational terms, service revenues (excluding roaming and visitors) increased year-on-year. The customer response to our “more for more” offers and the associated increase in revenue per customer contributed to this positive trend. However, the negative effects of the coronavirus pandemic on roaming and visitor revenues neutralized these gains.

Adjusted EBITDA AL decreased by 4.0 % year-on-year to EUR 430 million. In organic terms, earnings declined slightly by 1.2 % against the previous year: the positive organic revenue trend was offset by overall increases in direct and indirect costs.

Austria. Revenue in Austria totaled EUR 1.3 billion in the reporting year. This increase of 2.0 % was mainly attributable to higher mobile terminal equipment sales. Business with higher-margin service revenues also contributed positively to revenue. These two effects more than offset the declines in roaming and visitor revenues resulting from the coronavirus pandemic. The Magenta product portfolio has been very well received by our customers. This can be seen in particular in the development of the fixed-network business: broadband in particular generated positive growth rates, as a result of a larger customer base and other factors.

Adjusted EBITDA AL increased substantially by 6.2 % year-on-year to EUR 496 million. In addition to the positive revenue effects, stability in the development of costs also contributed to this growth.

EBIT

Our Europe operating segment recorded an increase in EBIT of EUR 169 million in the reporting year. In connection with the agreed sale of the Romanian fixed-network business, an ad hoc impairment loss of EUR 160 million was recognized in 2020 on non-current assets of the Romanian mobile business, which is to remain in the Group. This impairment was the result of the discontinuance of the previously existing MVNO agreements. Impairment losses totaling EUR 0.3 billion were recognized in Romania in the prior year. Depreciation and amortization were down slightly on the prior year.

Cash capex

In the reporting year, the Europe operating segment reported cash capex of EUR 2.2 billion, up 22.0 % year-on-year. This increase is largely due to a rise in cash outflows for the acquisition of spectrum licenses, primarily in Hungary and Greece. Even adjusted for spectrum acquisitions, our level of investment was up year-on-year. We continue to invest in the provision of broadband and fiber-optic technology and in 5G as part of our integrated network strategy.

Systems Solutions

Order entry

millions of €	2020	2019	Change	Change %	2018[a]
Order entry	4,588	4,740	(152)	(3.2)	n.a.

[a] Retrospective changes arising in connection with the realignment of the B2B telecommunications business have not been applied to order entry for the 2018 financial year.

Development of business

The 2020 financial year was dominated by the ongoing strategic development of our systems solutions business with a focus on growth and future viability, as well as our extensive transformation program, and the effects of the coronavirus pandemic.

Under the transformation program we realigned our organization and workflows, adjusted capacities, and developed a new strategy for our portfolio. Stand-alone portfolio units assume responsibility not only for our growth areas but also for our traditional IT business. Consistent with our efforts to implement the Group’s strategy pillar “Lead in business productivity,” on July 1, 2020, we combined our B2B telecommunications operations in our Germany operating segment.

Furthermore, the effects of the coronavirus pandemic on the global economy continue to impact on the financial position of our business customers. This led to delays in current projects and the postponement of deal closures, especially with our automotive customers in the digital solutions area. The resulting mid-year lull in order entry was almost completely offset by the year-end with a number of major deals signed in other areas. As a result, order entry in our Systems Solutions operating segment decreased year-on-year by 3.2 % in 2020, which was in line with our expectations.

Development of operations

millions of €		2020	2019	Change	Change %	2018
Total revenue		**4,178**	**4,424**	**(246)**	**(5.6)**	**4,474**
Of which: external revenue		3,242	3,423	(181)	(5.3)	3,435
Profit (loss) from operations **(EBIT)**		**(650)**	**(425)**	**(225)**	**(52.9)**	**(453)**
Special factors affecting EBIT		(636)	(338)	(298)	(88.2)	(296)
EBIT (adjusted for special factors)		(14)	(87)	73	83.9	(157)
EBIT margin (adjusted for special factors)	%	(0.3)	(2.0)			(3.5)
Depreciation, amortization and impairment losses		(790)	(479)	(311)	(64.9)	(409)
EBITDA		140	54	86	n.a.	(44)
Special factors affecting EBITDA		(210)	(310)	100	32.3	(240)
EBITDA (adjusted for special factors)		350	364	(14)	(3.8)	196
EBITDA AL[a]		25	(60)	85	n.a.	(31)
Special factors affecting EBITDA AL[a]		(210)	(310)	100	32.3	(240)
EBITDA AL (adjusted for special factors)[a]		**235**	**250**	**(15)**	**(6.0)**	**209**
EBITDA AL margin (adjusted for special factors)[a]	%	5.6	5.7			4.7
Cash capex[b]		**(255)**	**(356)**	**101**	**28.4**	**n.a.**

[a] Comparatives for 2018 were calculated on a pro forma basis for the key performance indicators redefined as of January 1, 2019 following the introduction of the IFRS 16 accounting standard.

[b] Retrospective changes in connection with realignment of the B2B telecommunications business have not been applied to cash capex for the 2018 financial year.

Total revenue

Total revenue in our Systems Solutions operating segment in the 2020 financial year decreased by 5.6 % year-on-year to EUR 4.2 billion, reflecting the coronavirus-induced decline of the IT market in Western Europe. The upward revenue trend in our growth areas public cloud and security was not sufficient to fully offset the declines in traditional IT and project business. The development of the digital solutions business was particularly affected by the impact of the coronavirus pandemic on the automotive industry.

Adjusted EBITDA AL, EBITDA AL

In the 2020 financial year, adjusted EBITDA AL at our Systems Solutions operating segment decreased by 6.0 % year-on-year to EUR 235 million. The decrease in earnings in traditional IT business and in project business, partly due to the effects of the coronavirus pandemic, were largely offset by efficiency enhancement effects from our transformation program and strong growth in our growth areas (especially public cloud and security). EBITDA AL increased by EUR 85 million compared with the prior year to EUR 25 million, thanks to the streamlining of the portfolio in 2019. As a result, special factors were down EUR 100 million on the prior year, at EUR -200 million.

Adjusted EBIT, EBIT

Adjusted EBIT in our Systems Solutions operating segment in the 2020 financial year improved by EUR 73 million year-on-year, coming in at EUR -14 million, mainly as a result of declines in depreciation and amortization. The realignment of the B2B telecommunications business in combination with the effects of the coronavirus pandemic triggered ad hoc impairment testing, which identified a reduction in the business outlook for IT operations. This resulted in the recognition of a non-cash impairment loss of around EUR 0.4 billion on non-current assets in the systems solutions business, which reduced EBIT to EUR -0.7 billion.

Cash capex

Cash capex in the Systems Solutions operating segment stood at EUR 255 million in 2020, compared with EUR 356 million in the prior year. This was due to a reduced need for investments in traditional IT business and in the area of digital solutions, which was impacted by the effects of the coronavirus pandemic on the automotive industry. Going forwards, we will continue to focus our investments on developing our growth business.

Group Development

Customer development

thousands		Dec. 31, 2020	Dec. 31, 2019	Change	Change %	Dec. 31, 2018
T-Mobile Netherlands	Mobile customers	6,803	5,610	1,193	21.3	4,021
	Fixed-network lines	682	619	63	10.2	241
	Broadband customers	668	605	63	10.4	241

The number of mobile customers and fixed-network lines in the Netherlands continued to increase steadily on the back of the positive development of operational business. The acquisition of the Dutch MVNO and SIM provider Simpel as of December 1, 2020 increased the mobile customer base by around 1.0 million. In mobile communications, our portfolio of rate plans with large data volumes through to unlimited data continued to win us new customers despite the deteriorated economic situation in consequence of the coronavirus pandemic, as well as intense competition. The number of customers in the fixed-network consumer portfolio also continued to grow.

Development of operations

millions of €		2020	2019	Change	Change %	2018
Total revenue		**2,883**	**2,797**	**86**	**3.1**	**2,185**
Of which: T-Mobile Netherlands		1,946	1,910	36	1.9	1,322
Of which: GD Towers		989	945	44	4.7	862
Profit (loss) from operations **(EBIT)**		**562**	**615**	**(53)**	**(8.6)**	**560**
Depreciation, amortization and impairment losses		(780)	(812)	32	3.9	(334)
EBITDA		1,343	1,427	(84)	(5.9)	893
Special factors affecting EBITDA		(43)	97	(140)	n.a.	(27)
EBITDA (adjusted for special factors)		1,386	1,330	56	4.2	921
Of which: T-Mobile Netherlands		639	591	48	8.1	425
Of which: GD Towers		786	771	15	1.9	529
EBITDA AL[a]		1,058	1,130	(72)	(6.4)	865
Special factors affecting EBITDA AL[a]		(43)	97	(140)	n.a.	(27)
EBITDA AL (adjusted for special factors)[a]		**1,101**	**1,033**	**68**	**6.6**	**892**
Of which: T-Mobile Netherlands		554	502	52	10.4	413
Of which: GD Towers		587	563	24	4.3	509
EBITDA AL margin (adjusted for special factors)[a]	%	38.2	36.9			40.8
Cash capex		**(699)**	**(452)**	**(247)**	**(54.6)**	**(271)**

[a] Comparatives for 2018 were calculated on a pro forma basis for the key performance indicators redefined as of January 1, 2019 following the introduction of the IFRS 16 accounting standard.

Total revenue

Total revenue in our Group Development operating segment increased in 2020 by 3.1 % year-on-year to EUR 2.9 billion, thanks to the operational growth of our two subsidiaries, T-Mobile Netherlands and DFMG. In the Netherlands, customer growth in the mobile and fixed-network business, higher terminal equipment sales, and the acquisition of Simpel effective December 1, 2020 contributed to the revenue growth. The GD Towers unit also recorded a year-on-year increase in revenue, driven by volume-based growth at DFMG.

Adjusted EBITDA AL, EBITDA AL

Adjusted EBITDA AL increased year-on-year from EUR 1.0 billion to EUR 1.1 billion. This growth was attributable to the aforementioned positive revenue trend at T-Mobile Netherlands, synergies from the takeover of Tele2 Netherlands, and efficient cost management in the company. The GD Towers business continued to post consistent growth on the back of rising volumes. By contrast, EBITDA decreased by 6.4 % to EUR 1.1 billion. This was primarily due to negative special factors of EUR 43 million arising in part from consulting services in connection with the business combination of T-Mobile US and Sprint and the integration of Tele2 Netherlands at T-Mobile Netherlands. The prior-year figure included positive net special factors of EUR 97 million, mainly resulting from the allocation of our share of 11 % in Ströer SE & Co. KGaA to Deutsche Telekom Trust e.V.

EBIT

EBIT decreased by 8.6 % year-on-year to EUR 562 million, mainly as a result of the special factors described under adjusted EBITDA AL. Depreciation, amortization and impairment losses were down on the prior-year period.

Cash capex

Cash capex increased by EUR 247 million year-on-year to EUR 699 million, mainly due to the acquisition of mobile licenses by T-Mobile Netherlands. It also grew as a result of additional investments for the 5G build-out and those required to integrate Tele2 Netherlands and higher capital expenditure at DFMG in connection with building out mobile infrastructure in Germany.

Group Headquarters & Group Services

Development of operations

millions of €	2020	2019	Change	Change %	2018
Total revenue	**2,556**	**2,627**	**(71)**	**(2.7)**	**2,735**
Profit (loss) from operations **(EBIT)**	**(1,655)**	**(1,631)**	**(24)**	**(1.5)**	**(1,646)**
Depreciation, amortization and impairment losses	(1,304)	(1,143)	(161)	(14.1)	(812)
EBITDA	(350)	(488)	138	28.3	(833)
Special factors affecting EBITDA	(277)	(237)	(40)	(16.9)	(318)
EBITDA (adjusted for special factors)	(73)	(251)	178	70.9	(515)
EBITDA AL[a]	(707)	(887)	180	20.3	(917)
Special factors affecting EBITDA AL[a]	(277)	(237)	(40)	(16.9)	(318)
EBITDA AL (adjusted for special factors)[a]	**(429)**	**(650)**	**221**	**34.0**	**(599)**
Cash capex[b]	**(990)**	**(1,010)**	**20**	**2.0**	**n.a.**

[a] Comparatives for 2018 were calculated on a pro forma basis for the key performance indicators redefined as of January 1, 2019 following the introduction of the IFRS 16 accounting standard.

[b] Retrospective changes in connection with realignment of the B2B telecommunications business have not been applied to cash capex for the 2018 financial year.

Total revenue

Total revenue in our Group Headquarters & Group Services segment decreased in 2020 by 2.7 % year-on-year as a result of lower revenue from land and buildings, largely due to the ongoing optimization of space. Lower intragroup revenues at Deutsche Telekom IT on account of a reduced revenue-relevant cost basis also had an effect.

Adjusted EBITDA AL, EBITDA AL

Adjusted EBITDA AL at Group Headquarters & Group Services increased by EUR 221 million year-on-year to EUR -429 million. This increase was mainly due to lower operating expenses at our Group Services, higher income from real estate sales, and the reduced headcount at Vivento as a result of the continued staff restructuring. Furthermore, lower IT-related costs at Deutsche Telekom IT had a positive impact. By contrast, lower revenue from land and buildings had a negative impact on adjusted EBITDA AL.

Overall, EBITDA AL was negatively impacted in the reporting year by special factors amounting to EUR 277 million, especially for staff-related measures. This contrasts with special factors of EUR 237 million in the prior-year period, also in particular for staff-related measures.

EBIT

The moderate year-on-year decline in EBIT of EUR 24 million to EUR -1.7 billion was largely a result of two contrasting effects: the increase in depreciation, amortization and impairment losses on the one hand, and the positive development of EBITDA AL on the other. The increase in depreciation, amortization and impairment losses is mainly attributable to the increased volume of output in connection with the introduction of agile processes and shorter project runtimes at Deutsche Telekom IT. Depreciation and amortization also rose following the decision to capitalize newly commissioned domestic intragroup development services at Deutsche Telekom IT since January 2016 instead of charging them internally. An impairment loss was also recognized in the amount of EUR 44 million on software used by the Systems Solutions operating segment. This was a consequence of the ad hoc impairment testing carried out in the Systems Solutions cash-generating unit. By contrast, depreciation, amortization and impairment losses from land and buildings decreased as a result of our continued optimization of the real estate portfolio.

Cash capex

Cash capex decreased by EUR 20 million year-on-year, primarily owing to decreased investment in real estate-related construction and project services and lower cash capex for vehicles.

Development of business at Deutsche Telekom AG

Deutsche Telekom AG prepares its annual financial statements in accordance with the principles of German GAAP, as specified in the German Commercial Code (Handelsgesetzbuch – HGB) and the German Stock Corporation Act (Aktiengesetz – AktG).

As the Headquarters of the Deutsche Telekom Group, we perform strategic and cross-segment management functions and provide services for other Group companies. The profits and losses of our subsidiaries and Group financing measures have a material effect on our financial position and results of operations. Total revenue in the United States operating segment increased by 51.4 %. This increase was mainly attributable to higher service and terminal equipment revenues, due in particular to postpaid customer additions in connection with the business combination with Sprint, growing success of new customer segments as well as continued growth in existing and new markets. Total revenue in our Germany operating segment was almost flat on the prior-year level with an increase of 0.2 %. Higher revenue in the fixed-network business compensated for revenue declines in the mobile communications business. The coronavirus pandemic had a negative impact on roaming, visitor, and terminal equipment revenues. It also resulted in delays or postponements to current orders in B2B telecommunications business. Revenue in our Europe operating segment decreased by 2.2 %. In organic terms, revenue remained stable at the prior-year level, despite the deterioration in economic conditions due to the coronavirus pandemic. The fixed-network business showed a very solid performance. Revenue from our mobile communications business recorded a slight decline, in particular in roaming, visitor, and terminal equipment revenues. These negative effects were partially offset by higher service revenues (excluding roaming). Total revenue in our Systems Solutions operating segment decreased by 5.6 %, reflecting the coronavirus-induced decline of the IT market in Western Europe. The upward revenue trend in our growth areas public cloud and security was not sufficient to fully offset the declines in traditional IT and project business. Total revenue in our Group Development operating segment increased by 3.1 % year-on-year, thanks to operational growth at T-Mobile Netherlands B.V., The Hague, and at DFMG Deutsche Funkturm GmbH, Münster.

Deutsche Telekom AG reported income after taxes for the 2020 financial year of EUR 2.5 billion. Alongside the operating business, the development of business in the reporting year was affected by a large number of other factors, including capital repayments based on fair values, write-downs resulting from the impairment of the indirectly held investments in BT Group plc, London, and the write-ups on Hellenic Telecommunications Organization S.A., Athens. The latter were required under German GAAP due to improved earnings prospects. Furthermore, in connection with the realignment of the B2B telecommunications business, the Deutsche Telekom Global Carrier (DTGC) business area was transferred to Telekom Deutschland GmbH, Bonn, with retroactive economic effect as of January 1, 2020, as part of a spin-off with realization of hidden reserves.

Results of operations of Deutsche Telekom AG

Statement of income of Deutsche Telekom AG under German GAAP (total cost method)

millions of €

	2020	2019	Change	Change %	2018
Net revenue	**2,740**	**3,423**	**(683)**	**(20.0)**	**3,546**
Other own capitalized costs	9	7	2	28.6	7
Total operating performance	**2,749**	**3,430**	**(681)**	**(19.9)**	**3,553**
Other operating income	4,725	2,387	2,338	97.9	2,672
Goods and services purchased	(471)	(1,037)	566	54.6	(1,024)
Personnel costs	(2,291)	(2,326)	35	1.5	(2,537)
Depreciation, amortization and write-downs	(211)	(254)	43	16.9	(289)
Other operating expenses	(2,834)	(3,081)	247	8.0	(4,521)
Operating results	**1,667**	**(881)**	**2,548**	**n.a.**	**(2,146)**
Net financial income (expense)	1,245	3,131	(1,886)	(60.2)	6,488
Income taxes	(380)	(484)	104	21.5	(143)
Income after income taxes	**2,532**	**1,766**	**766**	**43.4**	**4,199**
Other taxes	(17)	(17)	0	0.0	(13)
Income after taxes	**2,515**	**1,749**	**766**	**43.8**	**4,186**

The positive operating results improved by approximately EUR 2.5 billion year-on-year. This increase was mainly due to an increase in other operating income of EUR 2.3 billion, a decline in goods and services purchased of EUR 0.6 billion, and a decrease in other operating expenses of EUR 0.2 billion compared with the prior year. A decrease of EUR 0.7 billion in revenue had an offsetting effect.

The year-on-year decrease in revenue of EUR 0.7 billion is largely attributable to the spin-off of the DTGC business area and mainly relates to fixed-network revenue.

The increase of EUR 2.3 billion in other operating income was mainly attributable to income of EUR 1.5 billion from a capital repayment based on fair values by T-Mobile Global Zwischenholding GmbH, Bonn, income of EUR 0.8 billion from the realization of hidden reserves in connection with the spin-off of the DTGC business area, and an increase of EUR 0.3 billion in income from derivatives primarily in connection with U.S. dollar contracts. A decrease of EUR 0.1 billion in income from cost transfers and reimbursements as well as a decline of EUR 0.1 billion in foreign currency translation gains, in particular, had a negative effect in the reporting year.

The write-ups on Hellenic Telecommunications Organization S.A. (OTE), Athens, in the amount of EUR 0.9 billion and on Deutsche Telekom Asset Management GmbH & Co. KG, Monheim, in the amount of EUR 0.1 billion, which were required under German GAAP due to improved earnings prospects, also had a positive effect in the reporting year. In the prior year, other operating income had included write-ups on Hellenic Telecommunications Organization S.A. (OTE), Athens, in the amount of EUR 0.9 billion, and on Ströer SE & Co. KGaA, Cologne, in the amount of EUR 0.1 billion.

The year-on-year decrease of EUR 0.6 billion in goods and services purchased is due primarily to the transfer of International Carrier Services in connection with the spin-off of the DTGC business area and relates to network access charges.

The decrease of EUR 0.2 billion in other operating expenses compared with the previous year was mainly attributable to a decrease of EUR 0.2 billion in expenses from derivatives in connection with U.S. dollar contracts.

Net financial income decreased by EUR 1.9 billion to EUR 1.2 billion. This was primarily due to a write-down in the amount of EUR 1.4 billion on CTA Holding GmbH, Bonn, as a result of the impairment of this company's indirectly held investment in the British BT Group plc, London, United Kingdom. Furthermore, net financial income was impacted by an increase of EUR 0.3 billion in net interest expense and a decline of EUR 0.2 billion in income related to subsidiaries, associated, and related companies.

Income related to subsidiaries, associated, and related companies, which declined by EUR 0.2 billion compared with the prior year, was positively affected in the reporting year in particular by profits transferred by Telekom Deutschland GmbH, Bonn, of EUR 3.6 billion (2019: EUR 3.7 billion), T-Mobile Global Zwischenholding GmbH, Bonn, of EUR 0.6 billion (2019: transfer of losses of EUR 17 thousand), DFMG Holding GmbH, Bonn, of EUR 0.2 billion (2019: EUR 0.3 billion), and GMG Generalmietgesellschaft mbH, Cologne, of EUR 0.2 billion (2019: EUR 0.2 billion). The transfer of the losses from Deutsche Telekom IT GmbH, Bonn, of EUR 0.8 billion (2019: EUR 0.7 billion), and from T-Systems International GmbH, Frankfurt/Main, of EUR 0.7 billion (2019: EUR 0.2 billion), had an offsetting effect.

Income related to subsidiaries, associated and related companies was impacted in particular by the operating business of the consolidated subsidiaries. The figure for the reporting year also included effects from a capital repayment based on fair values by T-Mobile Global Holding GmbH, Bonn, to T-Mobile Global Zwischenholding GmbH, Bonn, as well as from the write-downs by Telekom Deutschland GmbH, Bonn, and T-Systems International GmbH, Frankfurt/Main, on their shares in CTA Holding GmbH, Bonn.

The increase in the net interest expense of EUR 0.3 billion compared with the prior year was primarily the result of lower income from plan assets for pension obligations in the amount of EUR 0.2 billion and lower income from long-term loans to Group companies in the amount of EUR 0.1 billion.

Income after income taxes was particularly impacted by the aforementioned effects and increased by EUR 0.8 billion year-on-year in 2020.

Other tax expense of EUR 17 million combined with the aforementioned factors resulted in income after taxes of EUR 2,515 million in the 2020 financial year. Taking into account EUR 2,614 million in unappropriated net income carried forward, unappropriated net income totaled EUR 5,129 million.

Financial position of Deutsche Telekom AG

Balance sheet of Deutsche Telekom AG under German GAAP

millions of €

	Dec. 31, 2020	Dec. 31, 2020 %	Dec. 31, 2019	Change	Dec. 31, 2018
Assets					
Intangible assets	216	0.2	217	(1)	186
Property, plant and equipment	2,388	2.0	2,313	75	2,376
Financial assets	101,411	86.8	111,020	(9,609)	94,431
Noncurrent assets	**104,015**	**89.0**	**113,550**	**(9,535)**	**96,993**
Inventories	0	0.0	0	0	1
Receivables	8,180	7.0	6,695	1,485	22,325
Other assets	964	0.8	1,313	(349)	1,630
Cash and cash equivalents	3,201	2.7	2,076	1,125	680
Current assets	**12,345**	**10.6**	**10,084**	**2,261**	**24,636**
Prepaid expenses and deferred charges	437	0.4	463	(26)	522
Difference between plan assets and corresponding liabilities	9	0.0	13	(4)	7
Total assets	**116,806**	**100.0**	**124,110**	**(7,304)**	**122,158**
Shareholders' equity and liabilities					
Capital stock and reserves	53,028	45.4	53,021	7	53,015
Unappropriated net income	5,129	4.4	5,460	(331)	7,031
Shareholders' equity	**58,157**	**49.8**	**58,481**	**(324)**	**60,046**
Accruals for pensions and similar obligations	3,960	3.4	3,780	180	3,747
Tax accruals	412	0.4	411	1	238
Other accruals	2,591	2.2	2,602	(11)	2,377
Accruals	**6,963**	**6.0**	**6,793**	**170**	**6,362**
Debt	10,952	9.4	10,928	24	6,705
Remaining liabilities	40,594	34.8	47,776	(7,182)	48,904
Liabilities	**51,546**	**44.1**	**58,704**	**(7,158)**	**55,609**
Deferred income	140	0.1	132	8	141
Total shareholders' equity and liabilities	**116,806**	**100.0**	**124,110**	**(7,304)**	**122,158**

In addition to shareholders' equity, our financial position is mainly determined by financial assets as well as by receivables from and payables to Group companies. Loans recognized under financial assets as well as receivables from and payables to affiliated companies primarily resulted from financing relationships between Deutsche Telekom AG and its subsidiaries.

The balance sheet total decreased by EUR 7.3 billion year-on-year to EUR 116.8 billion.

The development of total assets was attributable in particular to the decrease of EUR 9.6 billion in financial assets and the decrease of EUR 0.3 billion in other assets. By contrast, receivables increased by EUR 1.5 billion and cash and cash equivalents by EUR 1.1 billion.

The decline in financial assets of EUR 9.6 billion year-on-year resulted in particular from repayments of loans to affiliated companies, mainly by T-Mobile USA, Inc., Bellevue, in the amount of EUR 8.5 billion, T-Mobile Polska S.A., Warsaw, in the amount of EUR 0.7 billion, and Telekom Deutschland GmbH, Bonn, in the amount of EUR 0.4 billion. Shares in affiliated companies, which rose by a total of EUR 0.2 billion, had an offsetting effect. This was due in particular to the increase in the carrying amount of the investment in Telekom Deutschland GmbH, Bonn, in connection with the spin-off of the DTGC business area at the fair value of the new shareholding of EUR 1.1 billion. In addition, write-ups led to an increase in the shares in Hellenic Telecommunications Organization S.A. (OTE), Athens, in the amount of EUR 0.9 billion and in Deutsche Telekom Asset Management GmbH & Co. KG, Monheim, in the amount of EUR 0.1 billion. The shares in affiliated companies were reduced by the write-down of EUR 1.4 billion on CTA Holding GmbH, Bonn, and the capital repayment of EUR 0.6 billion by T-Mobile Global Zwischenholding GmbH, Bonn.

The year-on-year increase in receivables of EUR 1.5 billion resulted in particular from a EUR 1.0 billion increase in financial receivables from affiliated companies, mainly from loans granted to Deutsche Telekom Europe B.V., Maastricht, in the amount of EUR 1.0 billion, and a EUR 0.7 billion increase in receivables from cash management.

The decrease in other assets of EUR 0.3 billion is attributable in particular to a EUR 0.2 billion decline in income tax receivables and a EUR 0.1 billion decline in receivables from cost reimbursements.

The development of total shareholders' equity and liabilities was mainly influenced by the decrease of EUR 7.2 billion in remaining liabilities and of EUR 0.3 billion in shareholders' equity. By contrast, accruals increased by EUR 0.2 billion.

The EUR 0.3 billion decline in shareholders' equity was primarily attributable to the dividend payment of EUR 2.8 billion for the previous year. Income after taxes for the 2020 financial year of EUR 2.5 billion had an offsetting effect on shareholders' equity.

The increase in accruals is largely attributable to a EUR 0.2 billion increase in pension obligations, in particular in connection with changes in discount rates.

Debt remained unchanged year-on-year at EUR 11.0 billion. In the reporting year, new bonds were issued in the amount of EUR 1.6 billion and repayments of treasury bills were made in the amount of EUR 0.4 billion. Liabilities to banks decreased by EUR 1.2 billion, mainly due to repayments of principal in the amount of EUR 1.6 billion. These were offset by loans of EUR 0.4 billion.

Remaining liabilities decreased by a total of EUR 7.2 billion year-on-year, due mainly to the decrease in financial liabilities to affiliated companies, particularly as a result of loan repayments of EUR 5.4 billion to Deutsche Telekom International Finance B.V., Maastricht. The borrowing of EUR 1.2 billion from T-Mobile Austria Holding GmbH, Vienna, had an offsetting effect. In addition, liabilities from cash management decreased due in particular to the capital repayment by T-Mobile Global Zwischenholding GmbH, Bonn, in the amount of EUR 2.1 billion, as well as to other liabilities by a total of EUR 0.7 billion.

Statement of cash flows of Deutsche Telekom AG under German GAAP

millions of €

	2020	2019	Change	2018
Income after taxes	**2,515**	**1,749**	**766**	**4,186**
Net cash (used for) provided by operating activities	(1,808)	17,760	(19,568)	4,409
Net cash provided by (used for) investing activities	11,587	(14,536)	26,123	1,940
Net cash (used for) provided by financing activities	(8,654)	(1,828)	(6,826)	(5,826)
Net change in cash and cash equivalents	**1,125**	**1,396**	**(271)**	**523**
Cash and cash equivalents, at the beginning of the year	2,076	680	1,396	157
Cash and cash equivalents, at the end of the year	**3,201**	**2,076**	**1,125**	**680**

Net cash used for/provided by operating activities changed year-on-year by EUR 19.6 billion, resulting in net cash used for operating activities of EUR 1.8 billion. The change resulted mainly from the intragroup restructuring of receivables from cash management to noncurrent loans, which had led to a high level of net cash provided by operating activities in the previous year. In the reporting year, the decrease in liabilities from cash management, which was due in particular to a capital repayment by T-Mobile Global Zwischenholding GmbH, Bonn, had a negative effect on net cash used for/provided by operating activities.

Net cash provided by investing activities in the reporting year was primarily attributable to repayments of medium- and long-term investments by subsidiaries of EUR 9.6 billion, mainly by T-Mobile USA, Inc., Bellevue, as well as a capital repayment by T-Mobile Global Zwischenholding GmbH, Bonn, in the amount of EUR 2.1 billion. Cash outflows for short-term loans amounting to EUR 1.0 billion and cash outflows to acquire properties in the amount of EUR 0.3 billion had an offsetting effect. Net cash provided by investing activities also included interest received of EUR 1.2 billion. In the previous year, net cash used for investing activities had been mainly impacted by cash outflows of EUR 17.9 billion to subsidiaries for medium- and long-term investments. In particular, repayments of medium- and long-term investments by subsidiaries in the amount of EUR 1.8 billion and interest received in the amount of EUR 1.5 billion had an offsetting effect.

Net cash used for financing activities changed by EUR 6.8 billion year-on-year to EUR 8.7 billion. Net cash used for financing activities in the reporting year resulted primarily from net repayments of current financial liabilities of EUR 2.9 billion, especially to Deutsche Telekom International Finance B.V., Maastricht, the payment of the dividend for the 2019 financial year of EUR 2.8 billion, and interest paid of EUR 3.0 billion. The year-on-year change mainly related to EUR 5.8 billion lower net borrowings of noncurrent financial liabilities and bullet payments of interest of EUR 1.6 billion in connection with the redemption of long-term zero-coupon bonds in the reporting year.

In all, this resulted in an increase in cash and cash equivalents of EUR 1.1 billion in the reporting year.

Risk management in hedge accounting

We use derivatives to hedge interest rate and currency exposures; i.e., exclusively for hedging purposes, not for speculative gains. In the process, we monitor the effectiveness of the hedges on a regular basis.

Corporate responsibility and non-financial statement

The outbreak of the coronavirus pandemic in 2020 clearly underscored the huge opportunities that digitalization offers in tackling societal challenges. Online shopping and contactless payments reduce the risk of infection, doctors offer consultations online, contact tracing apps help contain the pandemic – and, the world over, people are chatting with each other via live video. What is more, during the first lockdown people began working from home. Even in times of crisis, we remain committed to keeping everyone connected. SDG 10 STRUCTURE Our multi-billion investments in the network infrastructure have paid off throughout the pandemic: our networks were running stably even under substantially higher loads. SDG 9 STRUCTURE We fulfilled our responsibility as an employer by introducing comprehensive rules and supportive measures to help employees work from home SDG 8 EMPLOYEES, while safeguarding service for our customers in parallel. Our home office configurator helps small and medium-sized businesses, for example, to develop customized solutions for staff working from home. Likewise, our Digital Schutzpaket Business (digital business protection package) keeps sensitive customer data safe. We are also furthering the digitalization trend in schools: not only with fiber-optic connections, but also by providing support to schools in lodging applications for funding. SDG 4 RELATIONSHIPS In 2020, T-Mobile US helped set up homeschooling infrastructure for more than 500,000 students in the United States. In its home country, T-Mobile Austria provided 10,000 students with free data packages for online study. We also helped ease the impact of coronavirus on society with a range of further activities. The measures in question include providing additional data volume free of charge, gifting smartphones to retirement and care homes SDG 10 RELATIONSHIPS, and establishing a hotline to support Nebenan.de, a neighborhood help portal. During the crisis, we have proved we are a reliable partner. That is why F.A.Z.-Institut, a company specializing in management, media, and marketing information, honored us with a “heroes of the crisis” award in 2020.

But digitalization can help us tackle other challenges, such as protecting our climate. A key prerequisite for this is that increasing use of the internet does not lead to higher CO_2 emissions. In the reporting year, we reached a milestone on the path toward achieving our ambitious climate goals: since the start of 2020, our customers in Germany have been surfing on Deutsche Telekom’s green network, which is powered solely by electricity from renewable sources. We also continued to pursue our other sustainability goals. As part of our “We care for our Planet” program, we initiated various measures to reduce CO_2 emissions and conserve resources. SDG 15 ENVIRONMENT On top of that, we positioned ourselves with a broad-based campaign against online hate speech and for more digital civil courage.

Creating transparency

We have been transparently reporting on our corporate responsibility (CR) activities for more than 20 years: on our website, in the “We Care” magazine, in our CR report, and in our Annual Report. Since the 2016 financial year, we have also explained how our core business contributes to achieving the UN Sustainable Development Goals (SDGs), which have been set as part of the 2030 Agenda.

For further information, please refer to the section “Sustainable Development Goals.”

Since the 2017 reporting year, we have published this non-financial statement (NFS) as part of the management report in accordance with the CSR Directive Implementation Act. In selecting the content for the NFS 2020, we took both the statutory requirements and the results of our materiality analysis into account. SDG 17 RELATIONSHIPS The concepts in this NFS are described on the basis of our long-standing CR reporting and in line with the GRI standards. We will publish our 2020 CR report at the end of March 2021. This will also satisfy the additional transparency expectations of our stakeholders.

The Supervisory Board of Deutsche Telekom AG is responsible for the review of the content of the NFS. In the reporting year, it did this with the support of PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (independent auditor) in the form of a limited assurance engagement. This audit was based on the International Standard on Assurance Engagements ISAE 3000 (revised). Unless otherwise stated, all disclosures in this NFS apply in equal measure to the Group and the parent company. To avoid repetition within the management report, we refer to further information provided in other sections wherever relevant. References to disclosures not contained in the combined management report are provided as background information; these disclosures are not part of the NFS and thus are not covered by the review.

The independent judging panel for the Building Public Trust Awards 2020, comprising experts from academia, industry, and rating agencies, selected us to receive the award for best climate impact reporting among DAX 30-listed companies. PricewaterhouseCoopers has been awarding the Building Public Trust Award since 2016.

Explanation of the business model

We are one of the leading telecommunications companies worldwide. We offer our consumers fixed-network/broadband, mobile, internet, and internet-based TV products and services, as well as ICT solutions for our business and corporate customers.

For further information on our business model, please refer to the sections “Group organization” and “Group strategy.”

Strategic and organizational approach to sustainability

We see ourselves as a responsible company and have made that a core element of our Group strategy. We are committed to implementing sustainability along our entire value chain – and to playing an important role in meeting today’s environmental, economic, and social challenges. We are expressly committed to the principles of the United Nations Global Compact, the German Sustainability Code, and the Code of Responsible Conduct for Business. Furthermore, we support the SDGs of the United Nations (UN), in particular contributing to the following goals: 3 Good health and well-being, 4 Quality education, 5 Gender equality, 8 Decent work and economic growth, 9 Industry, innovation and infrastructure, 11 Sustainable cities and communities, 12 Responsible consumption and production, and 13 Climate action.

Our CR strategy includes three fields of action: “Connected life and work – enabling a sustainable lifestyle in the digital world,” “Connecting the unconnected,” and “Low-carbon society.” In addition, the following topics are of particular importance within our sustainability management system: data security and data privacy, digitalization, sustainable supply chains, circular economy and resource decoupling, as well as being a responsible employer.

Our Board of Management bears overall responsibility for our CR goals, discussing and making decisions on key CR-related issues. The Group Corporate Responsibility (GCR) unit develops Group-wide policies and guidelines. Its aim is to further develop our corporate culture, particularly in terms of sustainable innovation and social responsibility. The CR managers from the different business units and national companies are responsible for implementing our CR strategy and work together in the international CR Manager Network. GCR is also advised by the CR Board, which is composed of the heads of the Group’s key areas. Our values and basic principles are anchored in our Guiding Principles, the Code of Conduct, the Code of Human Rights & Social Principles, and other subject-specific policies. The cornerstones of our sustainability management activities are formally set out in our CR Policy, which is binding for all Group units. As part of our CR controlling activities, we record environmental, social, and governance (ESG) data and performance indicators. We use this data primarily to calculate our Group-wide ESG KPIs (key performance indicators), which we use to measure and control our CR performance. In some cases, the KPIs and other metrics can also be linked to the SDGs to show the progress we are making in the SDG focus areas.

The Socially Responsible Investment ESG KPI indicates the percentage of Deutsche Telekom AG shares held by investors who show a predominant or at least partial concern for environmental, social, and governance criteria in their investment strategy. And our commitment to greater sustainability is paying off: As of September 30, 2020, around 13 % of all T-Shares were held by investors who show at least a partial concern for environmental, social, and governance criteria, and 9 % were held by investors who manage their funds primarily in accordance with aspects of socially responsible investment (SRI). In the reporting year, our share was added to a further sustainability index: the Euronext Vigeo World 120 from Vigeo Eiris. SDG 8 FINANCE

Listing of the T-Share in sustainability indexes/ratings

Rating agency	Indexes/ratings/ranking	2020	2019	2018	2017	2016
S&P SAM	DJSI World	✔	✔	✔	✔	✔
	DJSI Europe	✔	✔	✔	✔	✔
	S&P Global 1200 ESG	✔	✔	–	–	–
	S&P Europe 350 ESG	✔	✔	–	–	–
	S&P Europe Developed LargeMidCap ESG	✔	✔	–	–	–
CDP	STOXX Global Climate Change Leaders	✔	✔	✔	✔	✔
	Supplier Engagement A-List	✔	✔	✔	✖	✔
MSCI	ESG Universal Indexes	✔	✔	✔	✔	–
ISS-oekom	"Prime" (Sector Leader)	✔	✔	✔	✔	✔
Bloomberg	Gender Equality Index	✔	✔	✔	✖	✖
Sustainalytics	STOXX Global ESG Leaders	✔	✔	✔	✔	✔
	EURO STOXX 50 ESG	✔	✔	–	–	–
	iSTOXX 50 SD KPI	✔	✔	✔	✔	✔
	UN Global Compact 100	✔	✔	✔	✔	✔
FTSE Financial Times Stock Exchange	FTSE4Good	✔	✔	✔	✔	✔
Vigeo Eiris	Euronext Vigeo World 120	✔	✖	✖	✖	✖
	Euronext Vigeo Europe 120	✔	✔	✖	✖	✖
	Euronext Vigeo Eurozone 120	✔	✔	✖	✖	✖

✔ Listed successfully ✖ Not listed – Index did not exist in the relevant year

We are making our contributions towards solving social challenges measurable. To this end, we have developed a process and methodology to evaluate the external impact of selected products, solutions, and measures. This helps us to keep our key sustainability activities results-oriented and to make our contribution to achieving the SDGs visible. SDG 8 FINANCE

Detailed information will be published in our 2020 CR report.

Process for determining significant topics

We use a comprehensive materiality process to determine the topics that are relevant both for the direction of our sustainability strategy and for our reporting. For instance, we perform a document analysis in order to analyze aspects such as existing legislation and the expectations of our stakeholders, e.g., the capital markets. In the reporting year, we validated the results of this analysis by conducting interviews with independent experts on topics such as the future of work, sustainable business models, and values and responsible corporate governance. The results of the materiality analysis from the previous year were confirmed. Consequently, there is no need to include further matters in the NFS for 2020.

Detailed information on our approach will be published in our 2020 CR report.

As part of our comprehensive risk and opportunity management system, we determine existing and potential risks and opportunities arising from environmental, economic, or social aspects, and from how our Company is managed. Topics such as climate protection, suppliers, data privacy and data security, health, and the environment involve potential risks, which we have outlined in the section "Risk and opportunity management." We maintain this practice to provide the transparency our stakeholders expect, even if the risk assessment has found that these topics have a "low" risk significance and therefore do not need to be rated as "very likely severe" in the meaning of the CSR Directive Implementation Act. The present NFS focuses on these risks and opportunities in relation to the relevant aspects.

For further information, please refer to the section "Risk and opportunity management."

Aspect 1: Environmental concerns

One field of action in our CR strategy is "Low-carbon society." It not only expresses our commitment to minimize the impact our business activities may exert on the climate, but also to tap into the opportunities for sustainable development offered by digitalization. When used properly, it can also make a valuable contribution to saving energy and thus slowing down climate change.

For further information, please refer to the section "Deployment of ICT products to the benefit of society."

In order to handle the rising tide of regulatory requirements, especially from the EU, we established an internal, cross-divisional green deal task force in 2020. The purpose of the task force is to ensure that necessary measures and processes can be implemented without delay and to create the necessary transparency.

Our holistic environmental management system is based on the international ISO 14001 standard. A Group-wide environmental guideline brings together the main voluntary commitments to which the Group as a whole is subject. You can access this policy on our Group website.

Climate protection and resource conservation SDG 13 ENVIRONMENT

Our investments in the network build-out make us one of the biggest investors in the industry. Rising demand for faster data services with full-coverage availability must not lead to an increase in CO_2 emissions and thus accelerate global warming. That is why, by increasing energy efficiency – for instance at our data centers for network operations – we ensure that our energy consumption grows to a much lesser extent than the volumes of data we transmit. We also use renewable energy sources to decouple energy consumption from CO_2 emissions.

For about the last two decades, climate protection has been steadily increasing in importance at Deutsche Telekom. Our Group-wide climate protection strategy covers the following aspects: “Emissions from the value chain,” “Renewable energy sources,” “Energy efficiency,” and “Enablement: positive climate-protection effects on our customers.” In 2019, the Group Board of Management adopted new, ambitious climate goals:

a. By the end of 2021, we intend to source 100 % of the electricity used by the Group from renewables (Scope 2).
b. By 2030, we plan to reduce our CO_2 emissions (Scope 1 and 2) by 90 % (compared to 2017). We want to achieve this not only by switching to renewably sourced electricity, but especially by implementing energy efficiency measures.
c. Over 80 % of our CO_2 footprint arises from the production and use of our products. We plan to achieve a 25 % reduction per customer in these emissions by 2030 (versus 2017) (Scope 3, categories: purchased goods and services, capital goods, use of sold and leased assets). We maintain a close dialog with the suppliers in order to reduce the emissions generated during production and to ensure the products manufactured consume less energy during the utilization phase.

Since 2019, we have been a member of the international industry initiative GSMA. Within this initiative, we undertook to reduce our CO_2 emissions (Scope 1, 2) to “net zero” by 2050 at the latest and thus make our business operations completely climate neutral. This undertaking within the framework of the GSMA industry initiative has since been expanded to include Scope 3 emissions, the goal being to eliminate the industry’s direct and indirect emissions altogether by 2050 at the latest. But in our view this target is not ambitious enough. That is why we intend to assess in 2021 whether we can reach climate neutrality faster.

We developed our new climate goals in line with the current scientific and political conditions. The Science Based Targets initiative (SBTi) has confirmed to us that our climate protection targets contribute to compliance with the Paris Climate Agreement. The SBTi also gave a positive assessment of the targets of our subsidiaries in the United States and Hungary. In order to achieve these targets, T-Mobile US has concluded long-term agreements with wind and solar park operators, which will give the park operators the necessary investment certainty. Consequently, there are now five wind parks and three solar parks in the United States that are either already connected to the network or are set to be connected in the course of 2021. In Germany, too, a wind park is set to be added to the network in 2021 as part of a long-term power purchase agreement. SDG 7 ENVIRONMENT

We have reached our climate goal, adopted in 2013, to reduce the Group’s CO_2 emissions by 20 % (compared to 2008, excluding T-Mobile US). To differing extents, 40 business units in 29 countries contributed toward achieving this goal. The measures taken were varied, e.g., direct procurement of green electricity, enhancing energy efficiency, and acquiring guarantees of origin.

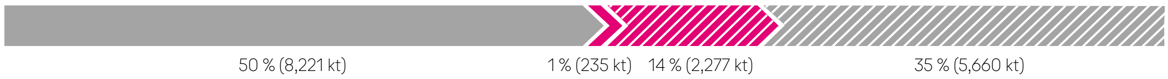
We calculate our CO_2 emissions across the Group in line with the market-based method of the Greenhouse Gas (GHG) protocol. The standard distinguishes between three CO_2 emissions categories (Scope 1, 2, and 3). We report on these each year as part of the CDP and in our CR and Annual Reports. The successful business combination of T-Mobile US and Sprint to form the larger T-Mobile US in 2020 also had a clear impact on our environmental data, with absolute energy consumption rising together with the resulting emissions.

> Detailed information on year-on-year data trends will be published in our 2020 CR report.

The following graphic visualizes the emissions of the different scopes resulting from our business activities, shown as CO_2-equivalents emissions (CO_2e emissions).

CO_2e emissions (Scope 1–3)

Deutsche Telekom Group in 2020 in % and kilotons (kt) of CO_2e



Scope 3 emissions from upstream activities:
Transport services, products and services purchased, capital goods, production waste, energy and fuel upstream chains, business travel, and journey to work

Scope 1 emissions from Deutsche Telekom's own activities:
Operation of Deutsche Telekom's systems, buildings, and vehicles

Scope 2 emissions from energy procured:
Generation of electricity and district heating procured by Deutsche Telekom

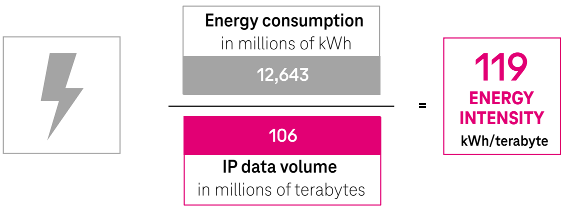
Scope 3 emissions from downstream activities:
Transport of products sold to the customer, use of products sold or leased, and disposal and recycling of products sold

The PUE (power usage effectiveness) metric serves as one indicator for enhancing the energy efficiency in our data centers. We determine this metric using the method recommended by The Green Grid Association, which takes the total energy consumed by data centers into account, not only that used to operate the servers. In 2020, the global PUE metric for our T-Systems data centers was 1.61. Our high-availability, state-of-the-art data centers operated by T-Systems in Germany are designed with even greater efficiency in mind, and as such are capable of achieving a PUE of 1.3. From 2008 to 2020, we reduced the average PUE metric for data centers in Germany from 1.85 to 1.50.

We determine the effectiveness of our climate protection measures using key performance indicators (KPIs). The KPIs Energy Intensity and Carbon Intensity for Deutsche Telekom (fixed-network and mobile entities) are shown in the following graphics. Both KPIs reflect our energy consumption and our CO_2 emissions in relation to the volume of data transmitted, thus demonstrating how our network's energy and emissions efficiency has developed in practice. The result for the Energy Intensity KPI is 119 and 23 for the Carbon Intensity KPI. For the Group as a whole in Germany, the Energy Intensity KPI stands at 60 and the Carbon Intensity KPI at 3.

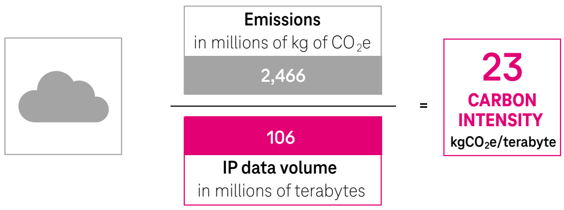
Energy Intensity ESG KPI

Deutsche Telekom Group in 2020



Carbon Intensity ESG KPI

Deutsche Telekom Group in 2020



Other metrics of importance to us are the Renewable Energy KPI and the Enablement Factor ESG KPI. The Renewable Energy KPI shows how much of our Company's overall electricity consumption is obtained from renewable sources. In 2020, this amounted to 58 % Group-wide and 100 % in Germany. When calculating this KPI, we look at direct purchases, guarantees of origin, renewable energy certificates, the renewable energy we produce ourselves, and the proportion of renewable energy used across the countries. We use the Enablement Factor ESG KPI to calculate the positive CO_2 effects facilitated for our customers through using selected products.

For further information, please refer to the section "Deployment of ICT products to the benefit of society."

In order to effectively curb climate change, many relevant players must work together, which is why we participate in national and international associations and organizations, such as the Global e-Sustainability Initiative. We are also working systematically on improving climate protection throughout our supply chain. Since 2016, the CDP supplier engagement rating has assessed how well companies have integrated the topic of climate protection into their supply chains. In 2020, we were awarded an A rating by CDP and included on its Supplier Engagement Leader Board. Almost 70 % of our procurement volume is covered by the participation of our suppliers in CDP's 2020 supply chain program. SDG 17 ENVIRONMENT

Last but not least, handling valuable resources efficiently also plays a vital role in a holistic approach to ecological responsibility. In 2020, our existing "Stop wasting – start caring!" initiative was integrated into "We care for our Planet," an end-to-end environmental program approved by the Board of Management in 2019. Whether in our Telekom shops, with our products and networks, or in terms of mobility – we have adopted an array of measures to conserve resources. SDG 15 ENVIRONMENT For instance, energy-saving initiatives and improvements to our buildings helped us to cut our power consumption by around 137 GWh in 2020 – enough to satisfy the annual electricity needs of over 34,000 private households. What is more, all of Deutsche Telekom's own products have had sustainable packaging since the end of 2020. We developed corresponding sustainability criteria precisely for this purpose. In addition, over 25 % of the packaging of new products we source from our suppliers already meets these criteria. SDG 12 ENVIRONMENT We were also able to save 263 metric tons of CO_2 through our subsidiary Comfortcharge's operation of rapid-charging stations for electric vehicles. That is the equivalent of the CO_2 emissions produced by a passenger car on a journey of 815,000 kilometers. One of the Group's goals is to increase the proportion of electric vehicles in its fleet. Currently, around 10 % of the new vehicles ordered are electric. Various measures have been agreed to significantly increase that share in the coming years. Above and beyond that, the focus in 2020 was on expanding our "We care for our Planet" program and providing it with an international network. KPIs were developed for each component of the initiative, which will feed into our ESG KPIs. These KPIs help us measure our progress and also enhance public transparency of what we do.

For further information on the progress of our environmental program and on our KPIs, please refer to the 2020 CR report.

Conserving resources is also a goal of the Green Pioneers initiative launched by our employees. Thus far, 250 employees from around 45 locations in Germany have joined the initiative. Our Green Pioneers play a proactive role within the workforce, promoting awareness of resource efficiency at the workplace and providing impetus for our core business – and they do so voluntarily, on top of their professional duties. In 2020, some Green Pioneers held courses on environmental issues for their colleagues, with more than 700 employees in total taking part. Other Green Pioneers organized activities on sustainable mobility in the reporting year, such as "Cycling to work" and "Cycling at lunchtime." These two cycling campaigns alone helped save more than 50,000 kg of CO_2 by the end of September 2020. Similar grassroots initiatives by our employees have been launched at our national companies, like T-Mobile Polska in Poland and OTE/Cosmote in Greece. Projects to conserve resources, e.g., campaigns to collect and recycle mobile phones and to avoid plastic waste, have also been implemented at our national companies. SDG 15 EMPLOYEES

Aspect 2: Employee concerns

With their commitment, expertise, and high performance, our almost 230,000 employees ensure that – even during the ongoing coronavirus pandemic – we are always there for our customers, our network remains stable, and the Company can grow and pave the way for the digital society. They are crucial to our business success. Six Guiding Principles, representing our values, form the cornerstones for collaboration within our Company. We have defined our strategic HR priorities in line with the motto: "Supporting people. Driving performance." We attach great importance to employee involvement and fair behavior toward colleagues, promote diversity, and engage in systematic health management. SDG 8 EMPLOYEES

For our Guiding Principles and further information about our HR work, please refer to the section "Employees."

Collaboration with employees' representatives and trade unions SDG 17 EMPLOYEES

Digitalization is fundamentally changing the way we work together. Employees are expected to demonstrate greater flexibility, social skills, and autonomy, to continue learning throughout their lives, and to work with greater independence. We have made it our goal to support our employees in this transformation – and to help them not only manage change, but also take an active role in shaping it.

Codetermination rights play a key role in the digital transformation. Together with employees' representatives and trade unions, we want to create the working world of the future – with an eye to the needs of our workforce and the success of our Company. 86 collective agreements were concluded with the trade union in the course of 2020. In the midst of the coronavirus pandemic, we negotiated a new collective agreement in record time at the end of March 2020. Among other things, the agreement extended protection against dismissal and contained provisions on short-time work. In the case of employees affected by short-time work, such as those working in the Telekom shops, we increased the short-time work allowance to 85 % of the gross salary. The Germany-wide agreement covers 60,000 employees, trainees, and students on dual study programs.

Our dealings with the employee representatives and trade unions also concentrated on harmonizing remuneration systems across Germany. To this end, grading policies and processes were standardized. As the underlying laws and contracts vary from country to country, codetermination matters are managed locally with trade unions and employees' representatives. Group management is generally involved in issues of particular importance.

The works councils, central works councils, and Group Works Council represent the interests of Group employees in Germany. Our partner representing the employees' interests on a European level is the European Works Council (EWC). We also have executive staff representation committees and representatives of disabled employees at unit, company, and Group level. The EWC has been one of our established key dialog partners for many years, representing the interests of Group employees in countries within the European Union and the European Economic Area. The EWC has 32 seats, 31 of which are currently occupied (as of December 31, 2020). Collective bargaining plays an important role and has a long tradition at our Company, a fact made clear by the percentage of employees covered by collective agreements. As of December 31, 2020, 72 % of employees in Germany were covered by collective agreements. We record the Group-wide coverage rate every two years. As of December 31, 2020, it stood at just under 46 %.

We carefully monitored trade union matters in the United States over the course of 2020. The responsibility for national human resources management matters in the United States lies with T-Mobile US' management. This responsibility is assumed with a great deal of commitment and accompanied by excellent customer satisfaction results. Across the globe, Deutsche Telekom respects the rights to freedom of association and collective bargaining in accordance with national law. This naturally also applies to the United States, with each employee at T-Mobile US entitled to form or join a trade union. At the same time, employees are also free to choose not to do so. T-Mobile US will not exert any influence in this respect, neither favoring nor discriminating against employees because of a decision they have made.

Collaboration with employees' representatives is founded on our commitment to trusting cooperation – anchored in our Group-wide Employee Relations Policy, which sets out twelve core elements describing what we stand for as an employer around the world. The policy also describes our aspiration with regard to the following HR topics: virtual working, employee development, responsible handling of changes, health and sustainability, fair pay, work-life balance, leadership, diversity, the prohibition of discrimination, and how we communicate and work together with employees' representatives. Our Code of Human Rights & Social Principles policy statement also includes a voluntary commitment to safeguarding the freedom of association and the right to collective bargaining (in compliance with national law in each case).

Our employee survey, carried out every two years, is a key indicator of the relationship between our Company and its workforce. We supplement it with pulse surveys, which give us a snapshot of the mood across the Group twice a year.

For further information, please refer to the section "Employees."

Diversity and equal opportunity SDG 10 EMPLOYEES

People from some 150 countries work successfully together at Deutsche Telekom. They all bring their diverse skills and cultural characteristics to the workplace. Respecting the individuality of our employees and harnessing their diversity for our joint success is just as important for our Group as developing a shared corporate culture. That is why the Human Resources and Legal Affairs Board of Management department includes a Diversity team. Our Group-wide Diversity Policy, six Guiding Principles, the Employee Relations Policy, and the Code of Human Rights & Social Principles policy statement form the foundation of our commitment to diversity. We are also a founding member of the Diversity Charter corporate initiative. Developments in the proportion of women in leadership positions and serving on the supervisory boards are reported to and discussed by the Board of Management on an annual basis.

We offer our employees a wide variety of options to grow professionally and achieve their potential – regardless of their gender, age, sexual orientation, state of health, ethnic background, religion, or culture. These include mentoring programs, flexible working models, childcare services, advice for those caring for loved ones, and an action plan for inclusion. In various training courses, we shine a light on unconscious bias in order to raise employees' awareness of hidden prejudices. Last but not least, we support the many employee networks at Deutsche Telekom, e.g., in Germany Magenta Pride, Women@telekom, the Fathers' Network, or the Network for International Employees.

In Germany, for example, our collective agreements on remuneration and other matters reached with the trade unions ensure transparent, gender-neutral compensation. We meet the requirements set out in the Act to Promote Transparency of Pay Structures by publishing a remuneration report every five years – most recently in the 2017 financial year.

For further information, please refer to the section "Employees."

Occupational health and safety SDG 3 EMPLOYEES

The coronavirus pandemic left its mark on 2020. We implemented comprehensive hygiene plans and initiated many other measures to protect our employees' health.

For further information, please refer to the section "Employees."

Measures that promote health within the Company not only help individual employees and ensure long-term business success, but also have positive effects beyond that on society as a whole. We use holistic health management to take on social responsibility and promote a proactive culture of health. We support our employees in maintaining their health and occupational safety with a host of target audience-specific measures and extensive prevention programs. We consider the statutory requirements to be only the minimum standard we must achieve. Our corporate occupational health and safety measures are effectively incorporated into our structures via certified management systems and appropriate policies and guidelines. We support the Group-wide approach with a uniform international health, safety, and environmental management system based on the international DIN ISO 45001, DIN EN ISO 14001, and DIN EN ISO 9001 standards for occupational safety and health, environmental protection, and quality.

The Board of Management bears overarching responsibility for safeguarding health, occupational safety, and the environment. We pool together and manage our programs at Group level, with on-site health and safety managers responsible for putting them into practice. We systematically evaluate the programs to ensure they are effective. The health rate, for instance, is reported to the Board of Management once a year. In addition, we review the results of our employee survey, evaluating stress prevention measures under collective agreements, health insurance reports, and competitor benchmarks. We analyze this data each year to derive measures that exceed the statutory requirements. Raising awareness, prevention, and encouraging individual responsibility are high priorities at our Company.

Group-wide initiatives serve to promote health awareness and health literacy among our employees. On completion of the employee survey, for example, all teams across 29 countries are issued recommendations, along with measures to be implemented on the basis of their particular health index rating. In Germany, a range of services are available to employees to promote health in the workplace, including comprehensive check-ups, colon cancer screenings, and flu shots. The program also includes courses on nutrition, exercise, and relaxation (stress prevention, mindfulness, etc.). Due to the coronavirus pandemic, many courses were held online in 2020. In addition, with our Germany-wide employee and executive advisory service, we offer a portfolio of support services in the area of psychosocial health, but also crisis prevention and expert advice in the event of psychosocial crises and extreme incidents. Throughout 2020, occupational medicine specialists were available to answer employees' medical questions with regard to coronavirus.

Standards in Germany serve to improve occupational safety by regulating aspects such as safe, ergonomic environments in buildings and vehicles. In addition to services available to all employees, there are also target group-specific measures, e.g., driver safety training for certain areas of work. Our aim is to promote employees' health, boost their motivation, improve the health rate, and continue to reduce the accident rate.

A variety of key figures demonstrate the effectiveness of our corporate health management services. The health rate, including long-term illnesses at Deutsche Telekom in Germany was 95.0 % in 2020 (prior year: 94.0 %). Excluding long-term illnesses, the health rate in 2020 stood at 96.5 % (prior year: 95.5 %). The health rate is reported to the Board of Management at the end of each quarter. Our aim for 2020 was to bring the Group-wide health rate up to 95.9 % (excluding long-term illnesses). The total number of work-related accidents continued to decline in the reporting year in comparison with the previous year. With 3.8 accidents (resulting in over three days of absence) per thousand employees, the accident rate in Germany was well below the industry average. The Group-wide health index – calculated in 29 countries as part of the last employee survey in 2019 – remained constant at 3.6 (on a scale from 1.0 to 5.0). The next survey is scheduled for 2021.

Aspect 3: Social concerns

Access to state-of-the-art information technology is key to participating in the information and knowledge society. Our promise with the #TAKEPART brand campaign is to enable as many people as possible to participate – also and especially in times of crisis. We are delivering on that promise with an array of different activities. In this context, the security of our customers' data is of prime importance. But the internet is also supposed to be a space in which everyone can feel safe and where we interact on the basis of democratic principles. That is why we are actively pushing for a positive culture of online debate, promoting the competent use of ICT, and making a stand against hate speech and for digital civil courage.

For further information on our corporate identity and our Guiding Principles, please refer to the sections "Group organization" and "Employees."

Deployment of ICT products to the benefit of society SDG 12 FINANCE

During the coronavirus pandemic, the internet has enabled us to physically distance yet still stay close to others. In 2020, we provided practical assistance with various solutions and campaigns. In Germany, for instance, we gave our customers free data volumes under their plans. What is more, together with SAP we developed a coronavirus tracing app (Corona-Warn-App) on behalf of Germany's Federal Government. As of December 2020, the app had been downloaded over 23 million times. Many of our national companies, too, were able to provide rapid solutions. T-Systems Iberia, our national company in Spain, for example, cooperated with Mercabarna, a Spanish food wholesaler, to develop an app that links up supermarkets, social welfare organizations, and logistics companies in a digital marketplace. The idea behind the app was to get donations of food quickly to where they are urgently needed in Spain during the pandemic.

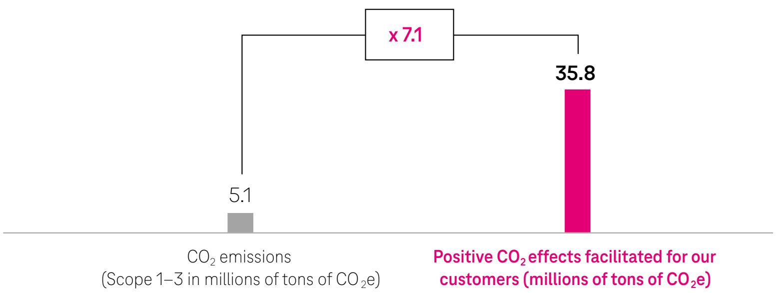
We can use our products, services, and activities to contribute to tackling many environmental and social challenges, as was made clear in a comparison with the 17 sustainability goals (SDGs) adopted by the United Nations. For instance, ICT solutions can help reduce resource consumption in agriculture and increase harvests, shape cities up for the future in terms of sustainability, make mobility more sustainable, stabilize power supply grids, or improve access to education and medical care – areas of application that offer market opportunities for our Company. In order to evaluate the concepts described in this NFS, it is important to also look to the opportunities digitalization opens up for sustainable development. For this reason, we are addressing the topic here, even though it is not required under the CSR Directive Implementation Act.

For further information on our sustainability risks, please refer to the section "Risk and opportunity management – Risks and opportunities."

Using the Sustainable Revenue Share ESG KPI, we determine how much revenue (excluding T-Mobile US) we generate from products that make a contribution to sustainability. In 2020, this share amounted to just over 44 %. For the Enablement Factor ESG KPI, we also calculate the positive CO_2 effects facilitated for our customers through using selected products. We combine this figure with our own CO_2 emissions to determine the enablement factor, which we use to measure our overall performance in relation to climate protection. According to this figure, the positive CO_2 effects facilitated for our customers in Germany were 610 % higher in 2020 than our own CO_2 emissions (enablement factor of 7.1 to 1). The substantial increase against the prior year (enablement factor of 2.4 to 1) is another consequence of the coronavirus pandemic; it results largely from the increased use of our web- and video-conferencing tools due to the growing number of people working from home and home schooling.

Enablement Factor ESG KPI

Deutsche Telekom Group in Germany in 2020



Sustainable products are another key competition factor at our Company. In order to highlight these sustainability benefits to our customers, we have suitable products certified by recognized environmental labels. The majority of Telekom Deutschland's fixed-network devices and media receivers, for example, carry the Blue Angel seal of approval, which was also awarded to the joint system of Telekom Deutschland and Teqcycle for taking back cell phones.

We also use our "we care" label to identify products, services, measures, and initiatives that offer ecological or social sustainability added value, e.g., in the Environment category, our green network in Germany and our reusable carry bags. Further information on the second category of the "we care" label – Digital participation – can be found in the next two sections. SDG 12 ENVIRONMENT

Detailed information on this will be published in our 2020 CR report.

Network access and digital responsibility

All around the world, having access to state-of-the-art information technologies is a precondition for economic performance and participation in a knowledge and information society. That is why we continue to rapidly expand our infrastructure and improve transmission speeds with new, secure technology. SDG 8 FINANCE

Demand for faster data services with full-coverage availability is growing continuously. We invested around EUR 17 billion (not including spectrum investment) primarily in building and operating networks in Europe and the United States, with around EUR 5.5 billion of this figure earmarked for Germany alone. Hence, the majority of the Group's investment volume in Germany is for the build-out of broadband networks. These investments have already paid off – during the coronavirus pandemic, for example, our network was running stably despite increased data traffic. This build-out is based on the goals of our Europe-wide integrated network strategy, which we use to help achieve the EU Commission's network build-out targets and the Federal Government's Digital Agenda and broadband strategy. Founded on two pillars – building out mobile networks and rolling out optical fiber – our strategy sets out, among other elements, to upgrade our mobile networks with 4G/LTE technology so as to offer greater network coverage with fast mobile broadband. In the reporting year, preparations were made to decommission the existing 3G network on June 30, 2021. By the end of 2020, we already covered more than 98.7 % of German households with LTE. We also pushed ahead with the 5G build-out in Germany in 2020: by the end of the year, two thirds of the population had been granted access to the new technology. In 26 cities across Germany, the 5G network is operating in the 36 GHz band, at top speeds of up to 1 Gbit/s (as of the end of 2020). At the end of the reporting year, our fixed network provided around 36 million households with fiber-optic-based technology. In addition to FTTH build-out and vectoring technology, we are using other innovative products, such as our hybrid router, which combines the transmission bandwidths of fixed-network and mobile communications, thus attaining higher transmission speeds – particularly in rural areas. We also moved forward with the build-out of fiber right to the home (FTTH) in the reporting year, connecting a further 600,000 households to the fiber-optic network in 2020 using this network technology. Thus a total of more than two million households in Germany now have the option of a direct connection to Deutsche Telekom's fiber-optic network. SDG 9 STRUCTURE

For further information about our build-out targets, please refer to the section "Group strategy."

In general, we want to make our network infrastructure and our products as efficient, environmentally friendly, and harmless to health as possible. That is why we are committed to addressing the topic of mobile communications and health responsibly. In the context of the award of the 5G licenses, there is public debate around the potential effects of 5G on health. We have been providing information on the scientific evidence regarding mobile communications and health for more than 20 years now. Together with Telefónica Deutschland, Vodafone, and 1&1, we also support the information platform www.informationszentrum-mobilfunk.de. This platform provides expert, evidence-based information on mobile communications topics subject to controversial public debate, such as health, research, technology, benefits, and applications. In 2020, the information platform collaborated with the German Association of Towns and Municipalities to publish a series of information brochures on network build-out for municipalities. We adopted our Group-wide EMF Policy (EMF being short for "electro-magnetic fields") back in 2004. It defines standard requirements – which considerably exceed the applicable national legal requirements – for addressing mobile communications and health-related matters. SDG 3 ENVIRONMENT

For further information, please refer to the section "Risk and opportunity management."

Responsibility for shaping the digital transformation has to be assumed by society as a whole. Our Board of Management plays an active role in this discussion, which entails looking at matters such as how we can use artificial intelligence (AI) responsibly. AI is a well-hidden feature in an ever-growing number of ICT products and services. It opens up opportunities, but also presents challenges. Back in 2018, under the auspices of Group Compliance Management, we were one of the first companies worldwide to adopt AI guidelines on digital ethics. These guidelines provide a framework for a responsible approach to AI. In 2020, we incorporated the requirements formulated in our AI guidelines into our Privacy and Security Assessment, a procedure we use to assess whether new or updated IT systems comply with our security and data privacy requirements. In the reporting year, we also developed internal testing procedures like the robust AI assessment and continued to apply the internal test seal developed in 2019 for Deutsche Telekom AI projects. In order to firmly entrench the AI guidelines in the Company, we continue to provide our employees with further training on how to deal with the requirements. SDG 8 RELATIONSHIPS

Connect the unconnected

But access to technology alone is not enough to ensure everyone can participate in the knowledge and information society – people also need to know how to use digital media safely, competently, responsibly, and for the benefit of everyone. Increasingly, this issue has not only a private dimension – the protection of personal data – but also a socio-political one. Hardly any area of life is untouched by digitalization. That is why we are working to build media literacy and democracy skills in the population. In doing so, we are guided by the aspiration embodied in our #TAKEPART campaign to keep everyone connected, namely that digital participation also includes participation in society. SDG 10 RELATIONSHIPS

As one of Germany's major corporate foundations, the Deutsche Telekom Foundation is dedicated to improving education in STEM subjects in the digital world. Since 2018, it has been supporting the initiative "The Future of STEM learning" and, together with five universities, developing concepts for good STEM teaching. In total, the Deutsche Telekom Foundation has invested EUR 1.6 million in this project. SDG 4 RELATIONSHIPS

The individual national companies are responsible for implementing projects on media literacy. Examples include the youth promotion programs in Slovakia and the United States. Slovak Telekom's national education program ENTER encourages digital education, while T-Mobile US' Changemaker Challenge is a contest in which young people contribute ideas for better coexistence – in the categories technology, environment, and education. Three winners were chosen from among 428 applicants.

All of our initiatives for greater media literacy in Germany can be found on the website "Media, sure! But secure." (www.medienabersicher.de/en/), where we provide informational material for all target groups. Deutsche Telekom's #TAKEPART stories – tales from the digital world for teenagers and young adults – are a practical take on digitalization issues of social relevance and translate them into a range of offers for multipliers. The aim is to raise awareness, highlight alternatives, try out new behaviors, and make the dialog on social media more constructive. All modules of the #TAKEPART stories are also available in simplified German. Our multi-award-winning Teachtoday initiative (www.teachtoday.de/en/) helps children and young people learn how to navigate the internet safely and skillfully. Since 2020, a new toolbox has been available for multipliers and teachers. It comprises more than 100 formats that deal with media literacy and democracy skills. They can be used without any specialist knowledge and have been designed for two key age groups: 9 to 12 and 13 to 16. The initiative also publishes the children's magazine Scroller.

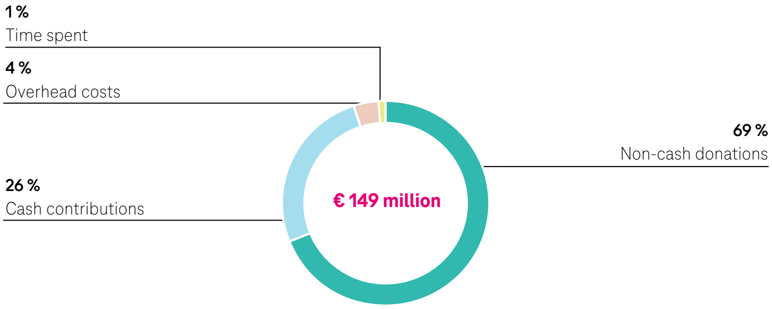
In 2020, our media literacy initiatives focused on “digital civil courage” and dealt with the question of how we want, and are able, to interact with each other on the internet and social media. The downsides of this interaction include hate speech and fake news, which are socially divisive. Together with Deutsche Telekom’s brand management, we launched the campaign “#TAKEPART – No Hate Speech.” Working closely with 44 partners – such as Gesicht zeigen! (Show your face) and #ichbinhier (I’m here) – we are setting an example for more digital civil courage and against turning words into weapons. The corresponding campaign spot was shown on television and other media. Podcasts enabled us to reach out to many thousands of people – including new target groups like teenagers and young adults. Digital civil courage was also a topic of discussion at an international meeting of Deutsche Telekom managers and at the Magenta Moon event. Overall, we reached some 15 million people through the campaign and accompanying events (not including the campaign on TV/radio and in movie theaters). The campaign and the underlying commitment to civil courage online bear the “we care” label in the “Digital participation” category. In this category, the label highlights positive contributions toward solving social challenges in the digital world. SDG 4 RELATIONSHIPS

“Act responsibly” has been specifically named in our strategy since 2020 and social responsibility aspects likewise form part of Deutsche Telekom’s brand profile. The topic also features regularly in sales support contexts and on MagentaTV. In 2020, we broadcast four programs on Scroller-TV. Scroller-TV and the children’s magazine Scroller earned us two Comenius Awards in 2020, Europe’s most prestigious honor for digital education media.

Data privacy is another focal point of our efforts. Our advisory service www.digitallysecure.en and our app-based “We Care” magazine offer practical advice on how to use digital media safely and securely.

We measure the impact of our Group’s social commitment with a set of three ESG KPIs. The Community Investment ESG KPI maps our social commitment in terms of financial, human, and material resources. In 2020, this amounted to EUR 149 million. This strong year-on-year increase was attributable in particular to donations of handsets and services of T-Mobile US rendered as part of its “Digital participation” campaign. The Beneficiaries ESG KPI shows how many people have benefited from our community activities: 16.4 million in 2020. The Media Literacy ESG KPI calculates which proportion of the target group has benefited from media literacy programs as part of our social commitment efforts. In 2020, this KPI was 45 %, up from 41 % in the prior year and precisely at this year’s target figure of 45 %. The rising popularity of our offerings stems largely from a burgeoning interest among the public at large in acquiring media literacy and democracy skills. In times of coronavirus, social and digital media are being not only used, but also abused, more than ever – fueling growing concerns and ultimately helping to boost interest in our offerings. The 2020 ESG KPIs for the Deutsche Telekom Group in Germany were EUR 34 million (Community Investment), over 12 million (Beneficiaries), and 39 % (Media Literacy).

Community Investment ESG KPI



Data privacy and data security SDG 16 STRUCTURE

People will only use ICT solutions if they trust in the security of their personal data – and only then can these solutions develop their true potential for more sustainable development. As a result, we attach particularly great importance to protecting and securing data.

For further information, please refer to the section “Risk and opportunity management.”

Our active data protection and compliance culture, which has been built up over ten years, sets national and international standards. The data privacy-related compliance management system outlines the measures, processes, and audits we use to ensure compliance with laws, regulations, and voluntary commitments to uphold data privacy in the Group.

Since 2009, the Group Board of Management has been advised by an independent Data Privacy Advisory Board comprising reputable experts from politics, science, business, and independent organizations. At the beginning of 2020, the role of the Advisory Board was strengthened through the addition of new members and permanent guests from the ranks of the Board of Management and the Supervisory Board of Deutsche Telekom AG.

Data privacy and data security are governed by the corresponding Group policies: Binding Corporate Rules Privacy (BCRP) regulates how the Group treats personal data, while the Group Security Policy contains significant security-related principles valid within the Group, which are based on the international ISO 27001 standard. These policies allow us to guarantee an adequately high and consistent level of data privacy and security throughout our entire Group.

We issue an annual transparency report – since 2014 in Germany, and since 2016 in our national companies – in which we set out the nature and scope of our disclosures to security authorities. We are thus fulfilling our statutory duty as a telecommunications company.

In order to ensure even better data privacy and data security within our Group, our corporate units are audited and certified several times a year by internal and external experts. This includes the annual (re-)certification of the Telekom Security management in accordance with ISO 27001, regular Group-wide internal security checks, and the annual review of the individual Group units in connection with security maturity reporting. These audits help us assess the status quo of security in our Group.

Every two years, we perform a sample survey of data privacy and data security awareness across the Company. In the course of the Group Data Privacy Audit (GDPA), we survey 25,000 Deutsche Telekom employees on topics related to data privacy and data security. The focus of our Online Awareness Survey (OAS) is on security awareness at the Company. The results are used to calculate the Data Protection Award indicator – which quantifies the level of data protection in the units on a scale from 0 to 100 %. It is based on what the employees said they thought, did, and knew about data protection. The Data Protection Award indicator was calculated in 2020 at 86 % (2018: 76 %, excluding T-Mobile US). The OAS surveys around 42,000 employees Group-wide (excluding T-Mobile US) across all levels of the hierarchy and provides data on security awareness. With academic support, we use the results from this survey to determine the Security Awareness Index (SAI). In the last survey in 2018, the index was 80.3 of a maximum of 100 points (higher than in any other benchmark company). We also have our processes and management systems as well as products and services certified by external, independent organizations such as TÜV, DQS, DEKRA, and auditing firms. The IT systems at Telekom Deutschland were most recently certified as secure in 2020 by the testing institute TÜV Informationstechnik (TÜViT) of the TÜV Nord Group.

Telecommunications companies are required to train their employees on issues related to data protection law when they begin their employment. Deutsche Telekom goes above and beyond these legal requirements: Every two years, we train all of our employees in Germany and place them under an obligation to uphold data privacy and telecommunications secrecy. Corresponding requirements apply to our national companies. Where there is a greater risk of data such as customer or employee information being misused, we also provide additional online training designed for self-study, give data privacy presentations, and host classroom training courses on specialized topics such as protection of customer data.

Since July 1, 2020, the Group's cybersecurity expertise has been pooled at Deutsche Telekom Security, a Deutsche Telekom subsidiary that leads the market for IT security solutions in Germany. Deutsche Telekom Security is responsible for everything related to internal security and its goal is to protect all Group units. It offers consumers and business customers solutions to make information technology more secure, from smartphones through to corporate infrastructure. In the Cyber Defense and Security Operation Center, more than 240 security experts around the world monitor our systems and those of our customers around the clock.

We react to new emerging threats and continuously develop innovative processes for defending against attacks. And for good reason: cyberattacks on companies are becoming more aggressive and sophisticated across all industries. In the reporting period alone, we registered on average almost 45 million attacks per day on our honeypot systems. Of course, not all of the attacks picked up by our sensors are high-level threats. Most are automatic scanning tools seeking to exploit potential vulnerabilities. While these do not necessarily count as fully fledged attacks, they are still to be seen as relevant early-stage activities. In a shielded environment, Deutsche Telekom Security even develops its own malware and uses it to test whether new systems can reliably detect and mitigate attack vectors. In this way we ensure our own critical IT infrastructure is protected. We also offer other operators critical infrastructure advisory services, for example to energy providers.

Our security experts use their experience to help develop security solutions for our customers. In 2020, Deutsche Telekom Security brought a wide range of new solutions to market maturity. Among other things, our key security and defense offerings were combined in the Magenta Security Shield package, so as to offer our customers even better protection. Data privacy and security play a fundamental role in the development of our products and services. We review the security of our systems at every step of development using the Privacy and Security Assessment process both for new systems and for existing systems when the technology or method of data processing is modified. We use a standardized procedure to also document the data privacy and data security status of our products throughout their entire life cycle. Our security management systems are certified externally. At the same time, we ensure that our services also comply with specific regulatory requirements from other industries, such as TISAX in the automotive industry.

Youth protection aspects are also taken into consideration in our product and service design. When we develop services that could be relevant in terms of youth protection in Germany, we consult our Youth Protection Officer for suggestions of restrictions or changes. In 2014, we appointed a Child Safety Officer (CSO) in each of our national companies in Europe. The CSO acts as a central contact for the relevant stakeholders of the community, and plays a key internal role in coordinating issues relevant to youth protection. Since protecting minors when they interact with media is a challenge across many different industries, we cooperate with different youth protection organizations and participate in alliances such as the "Alliance to better protect minors online," which aims to make the internet a safer place for children and young people. SDG 3 RELATIONSHIPS

We work with research institutes, industry partners, initiatives, standardization bodies, public institutions, and other internet service providers worldwide with a view to fighting cybercrime and enhancing internet security together. For instance, we collaborate with the German Federal Office for Information Security throughout Germany and with the European Union Agency for Network and Information Security at a European level. The Cyber Security Cluster Bonn is an association of authorities and companies in Bonn that are dedicated to consulting, education, and research in the field of cybersecurity. As an expert committee, the Cyber Security Cluster Bonn offers direct advice to German and European government bodies. SDG 17 RELATIONSHIPS

Aspect 4: Respecting human rights

We place high priority on respecting human rights. This applies not only to our Company, but also to our business partners and our approximately 20,000 suppliers in more than 80 countries – whom we explicitly place under the same obligations.

Labor standards in the supply chain and in the Group SDG 10 EMPLOYEES

There are still places in the world where human rights are not a given. As part of our global procurement activities, we can be exposed to country- and supplier-specific risks. These include, for example, inadequate local working and safety conditions. Violations cause severe damage to those affected and can result in reputational damage and negative financial consequences for companies.

For further information, please refer to the section "Risk and opportunity management."

As a responsible company, we have made an express commitment to upholding the UN Guiding Principles on Business and Human Rights adopted by the United Nations Human Rights Council in 2011 (Ruggie Principles). The obligation to respect human rights is anchored in our core regulations – i.e., our Guiding Principles and our Code of Human Rights & Social Principles policy statement. The latter underscores our commitment to protecting human rights and to the goals of the German National Action Plan on Business and Human Rights adopted by the Federal Government in 2016. At the same time, the code embodies our commitment to complying with the principles laid down by the International Labour Organization (ILO), the Organisation for Economic Co-operation and Development (OECD), the Universal Declaration of Human Rights, and the UN Global Compact. We also require our suppliers to comply with all our guidelines related to human rights. Within the Group, the main focus of our attention is on preserving the right to collective agreements, and on ensuring diversity and equal opportunity.

For further information, please refer to the passages entitled "Collaboration with employees' representatives/trade unions" and "Diversity and equal opportunity."

In order to meet the requirements of the UN Guiding Principles, we have developed an extensive program to implement these Principles throughout our Group and introduced an ongoing process comprising several interconnected measures and tools. The program includes the policy statement, promoting awareness, a mechanism for lodging complaints, a risk and impact analysis, and reporting.

We use two main instruments to review our Code of Human Rights & Social Principles in the Group: Firstly, we compile a central Human Rights & Social Performance Report each year. For 2020, all 121 of the companies surveyed declared in this report that they comply with the rules and principles of the Code of Human Rights & Social Principles. We also included our five joint ventures in the survey for 2020. The report indicated no violations for 2020. Secondly, we have established a central point of contact for human rights issues, which can be reached via the email address “humanrights@telekom.de.” Further contact options and an anonymous whistleblower system can be found on Tell me!, our Group-wide whistleblower portal. We look into all tip-offs received and introduce countermeasures, provided the information is identified as plausible. In 2020, nine tip-offs relating to human rights were received via the point of contact and the whistleblower portal. Not all of these tip-offs were deemed plausible. Whenever necessary, we carry out review processes at our national companies to assess employer-employee relationships. To do so, we compile five human rights-related key performance indicators, such as employee satisfaction, then assess these using a traffic light system. SDG 16 RELATIONSHIPS

For further information about employee satisfaction, please refer to the section “Employees.”

In addition, we conduct an annual formal review of compliance with our Employee Relations Policy. In February 2020, an employee relations policy review was conducted at Crnogorski Telekom in Montenegro. After a review like this, the results are discussed with the regional managers in our national companies. If necessary, we agree measures such as a Human Rights Impact Assessment and Engagement – a process for estimating the actual and potential effects of business activities on human rights, as well as the ability of the organization to prevent, mitigate, or eliminate negative effects. In view of the coronavirus pandemic, we were unable to perform any further assessments abroad in 2020. The pandemic also prevented us from holding on-site training courses to raise awareness among managers and employees for human rights issues. Instead, we organized a Human Rights Risk Assessment at Group Headquarters, in the course of which we identified further Group-wide challenges as regards human rights; among other things, these will make it necessary to adjust individual policies and communications measures. We will take corresponding action before the end of 2021.

Our perception of ourselves as a company that acts in a socially and ecologically sustainable way includes assuming responsibility along our entire value chain. We have been working to improve sustainability throughout our supply chain for many years. Our strategy for sustainable procurement practices is embedded Group-wide in our procurement processes. The heads of the CR and Procurement units are jointly responsible for its implementation. They report to the Board of Management members for HR and Legal Affairs as well as Finance. An escalation process calls for decisions to be made at Board of Management level in severe cases. The Sustainable Procurement working group supports our international procurement units in meeting sustainability requirements. Our sustainability principles for Procurement are set out in the Group’s Global Procurement Policy. The supplementary Procurement Practices provide specific guidelines for procurement in Germany and serve as recommendations for our national companies. The section of the Procurement Practices covering sustainability gives purchasing officers an overview of the CR criteria that are to be taken into account in each stage of the procurement process. An e-learning tool is available to our employees throughout the Group for training purposes. SDG 8 RELATIONSHIPS

We cannot guarantee that all our suppliers conform to the principles of our Supplier Code of Conduct. We review their compliance regularly to minimize risks and support suppliers in further developing their sustainability performance, working closely with them on these issues. Leading up to the supplier evaluation, we classify our categories as critical or non-critical based on risk and opportunity. We have defined 14 Corporate Social Responsibility (CSR) risk criteria and four CSR opportunity criteria on the basis of expert interviews.

For the supplier evaluation itself, we use a multi-stage approach: The Supplier Code of Conduct, for instance, is an integral part of all supplier agreements and binding for all of our suppliers. Ethical, social, and ecological principles as well as fundamental human rights are codified in this document. When selecting a supplier after issuing an invitation to tender, sustainability factors are given a weighting of 10 %. In addition, new suppliers are subjected to a sustainability risk assessment by an external audit firm. In this way, we discover if there is any increased risk in terms of specific sustainability criteria at any of our suppliers.

Sustainability assessments and reviews are conducted for selected suppliers of critical categories. Depending on their individual sustainability performance and risk classification, we use a range of instruments, for instance, the information system EcoVadis, mobile surveys, or on-site supplier audits (social audits). Our focus here is not only on our direct suppliers but also, wherever possible, on downstream suppliers. We also boost the effectiveness of our audits by collaborating with 15 other telecommunications companies in the Joint Audit Cooperation (JAC). In 2020, we completed a total of 89 social audits (76 audits and 13 mobile surveys) – 29 at our direct and 60 at our indirect suppliers. Since 2010, we have carried out 728 audits within the framework of the JAC. The coronavirus pandemic had little impact on the planned JAC audits: where in-person audits were not possible, they were conducted by video conference, for example. SDG 10 RELATIONSHIPS

We work in close cooperation with our strategically important suppliers on improving their sustainability performance, for example, in terms of environmental protection, working hours regulations, and occupational health and safety. This is done primarily as part of the development program we initiated for suppliers. Since 2018, we have been implementing this program on the basis of a voluntary industry-wide approach known as the Sustainable Development Program (SDP). In addition to Deutsche Telekom, telecommunications companies Telefónica and Swisscom have thus far joined the SDP as well and more are to follow. In the reporting period, six further suppliers (two of Deutsche Telekom, three of Swisscom, one of Telefónica) were included in the SDP. Since the launch of the program in 2014, a total of 29 suppliers have completed the SDP, achieving measurable ecological, social, and economic progress. Suppliers made further progress in 2020, too. For instance, one of them succeeded in raising its employee satisfaction level by 11.5 %. Another installed its own photovoltaic system, cutting by 3,700 MWh/year the amount of energy needed to heat and cool its buildings and saving 3,034 metric tons of CO_2e emissions.
SDG 17 RELATIONSHIPS

As announced in the 2019 CR Report, we changed our sustainability performance metric for procurement in 2020 in order to meet the increasing requirements of our stakeholders. To this end, one of the steps we took was to define two new ESG KPIs: The Procurement Volume Without CR Risk ESG KPI – for which the target is 95 % by 2025 – measures the procurement volume from direct business partners on whom an established external service provider carried out checks in the reporting period for negative reports in the media and found no irregularities. It also includes suppliers for whom irregularities were identified, but where corresponding corrective action was taken. The share of this procurement volume subjected to a risk assessment amounted to 99.6 % in 2020. On the other hand, the Order Volume Verified as Non-Critical ESG KPI – target for 2025: 60 % – measures the share accounted for by suppliers checked for social and ecological criteria by means of dedicated reviews – e.g., via EcoVadis, the Carbon Disclosure Project (CDP), social audits, supplier visits, or our Supplier Development Program. In 2020, the share of these CR-qualified suppliers was 62 %. Both ESG KPIs are calculated in respect of the audited Group-wide procurement volume already largely mapped in a standardized procurement reporting system (excluding the "Network Capacity" category and T-Mobile US). The new KPIs replace the previous indicators "Sustainable procurement" and "Top 200 CR-qualified suppliers."

We are constantly working to enhance the social and ecological sustainability of our value chain. In the reporting year, we developed specific sustainability criteria for IT and network products and tested them in a pilot project. As of 2021, these criteria will be applied in all tenders for hardware products and have a weighting of 10 % when selecting suppliers.

Detailed information on our supplier management system will be published in our 2020 CR report.

Aspect 5: Fighting corruption

Corruption and unfair business practices violate national and international law. We reject every form of corruption, which is why corruption avoidance measures constitute a focus of our compliance activities.

Ethical business practices and compliance SDG 16 EMPLOYEES

We feel it is highly important that all staff and executive bodies in our Group act with integrity and comply with our values, rules of conduct, and applicable laws and statutory requirements at all times. The goal of our compliance activities is to prevent violations and improper business behavior and to integrate compliance into our business processes early on and enduringly. Our customers need to be able to trust that our actions meet the highest standards for compliance and integrity around the world. This is essential if we are to be seen as a reliable partner.

We have expressed our commitment to complying with ethical principles and both legal and statutory requirements. We have anchored this pledge in our Guiding Principles and our Code of Conduct. The Code of Conduct is valid throughout the Group and has been introduced in all of our national companies.

Group Compliance Management, our central compliance organization, also plays a key role in establishing corporate governance structures and a corporate culture that focus on integrity. It promotes a compliance culture and establishes a set of values centering around the issue of compliance at our Group, and encourages managers and employees to internalize these values. Our understanding of compliance therefore far exceeds simply conducting business legally, i.e., in line with laws and internal regulations, and aims to ensure everyone in our Group behaves with integrity.

We have introduced a comprehensive compliance management system to establish integrity and compliance with the law as pillars of conduct across the entire Group. The compliance management system serves to mitigate exposure to legal and financial risks, minimize the risk of reputational damage being sustained by the Company, its employees or executive bodies, prevent violations of applicable law and internal policies and regulations, and deter conduct not in compliance with our values. All our activities comply both with legal and statutory requirements and with our own internal policies and regulations. Responsibility for the compliance management system lies with the Board of Management department for Human Resources and Legal Affairs. In addition, one person at management or board of management level in each Group company is in charge of compliance. Our Chief Compliance Officer is responsible for the Group-wide design, advancement, and implementation of the compliance management system. Compliance officers implement the compliance management system and our compliance goals locally at the level of our operating segments and national companies.

We take many different actions and measures to prevent and fight corruption. Our compliance management system is based on the Compliance Risk Assessments (CRAs), which we use to identify and assess compliance risks and introduce suitable preventative measures. To this end, we have introduced a Group-wide process to be carried out annually. The companies that will take part in the CRAs are selected according to the level of maturity of their compliance management system (maturity-based model). In the reporting year, the CRAs included 69 companies and covered almost 94 % of the workforce (according to the headcount figures for the fully consolidated companies). The individual Group companies are responsible for conducting the CRA, with support and advice given from the central compliance organization. We have our compliance management system regularly reviewed, with particular attention paid to anti-corruption measures. In the two-year period 2020/21, a total of 23 German and international companies will be externally audited.

We regularly provide risk-oriented and target group-specific compliance and anti-corruption training. We have set up the Ask me! advice portal to address all kinds of issues relating to compliance. The portal contains reliable information for employees on laws, internal policies, and rules of conduct relevant to their daily activities.

Despite all precautions, we are not always able to prevent breaches of law or violations of regulations at the Company. The Tell me! whistleblower portal is available to employees and external parties for reporting breaches or suspected breaches of the law or of internal policies and regulations. In 2020, 113 compliance-related tip-offs were submitted via the Tell me! portal (prior year: 122 tip-offs). Over the course of the year, 46 of these were confirmed to be cases of misconduct and dealt with accordingly. Within the scope of the legal framework available to us, we systematically pursue all tip-offs, including those that reach us via other channels, and implement commensurate sanctions in compliance with the relevant statutory provisions. We have introduced a Group-wide reporting process to control and monitor these activities.

With our Supplier Code of Conduct as an integral component of our General Terms and Conditions for Purchasing, we obligate our suppliers to, among other elements, refrain from any kind of corruption or conduct that could be interpreted as such. We select our business partners based on compliance criteria and conduct risk-oriented compliance business assessments. We have been offering regular e-learning training courses on compliance to our suppliers since 2014. SDG 17 RELATIONSHIPS

Innovation and product development

VTI strategy: we enable today’s business and shape the future

At Deutsche Telekom, innovation means creating the best (digital) customer experience on the basis of the best network – now and in the future. To this end, we neither manufacture smartphones, nor do we create our own film content, or the automation technology and sensors for industrial campus networks. Our core competency consists in integrating the individual components so that, in conjunction with our network and IT infrastructure, we can guarantee the best customer experience at a reasonable price with resilient and future-proof technology. This is precisely the task of our Technology and Innovation Board of Management department (VTI), which works in close cooperation with our operating segments. VTI is where we combine and integrate our Technology, Innovation, IT, and Security functions. This structure will allow us to meet the demands of the future network generation and the associated requirements not only of our customers, but also of society as a whole – also in terms of network security and sustainability. Our Group strategy includes the claim to “lead in technology.” That applies not only to high-speed broadband access, but also to responsible network production. That is an economic and ecological necessity, especially given growing cloudification, increasing data traffic, and the rising number of active components in our network. SDG 9 ENVIRONMENT

Gaming exemplifies the comprehensive nature of the role we play. We do not program games, but offer creators of games and gamers themselves a cloud gaming platform that uses the latest NVIDIA RTX servers with powerful graphics cards. Our networks enable a seamless end-to-end experience that also includes access to stable bandwidth. It is a service we can already offer our fixed-network broadband customers, and our LTE/4G and 5G mobile customers. On top of that, we are building infrastructure to integrate distributed cloud capacity (edge clouds) into our networks. That is getting the cloud closer to the gamers. We define and configure our networks in such a way as to provide stable, low-latency gaming traffic, making for a user experience without interruptions and delays. At the same time, we help a large number of people #TAKEPART by facilitating access to our platform.

The crisis triggered by coronavirus has underscored the importance of investing in resilient, future-proof technology: our networks and IT were, are, and will remain secure and stable. That would not have been possible without the IP migration in Europe and the IT turnaround in Germany.

We are thus in a position both to enable Deutsche Telekom's current business and to simultaneously shape the future. We are convinced that, in line with the priorities of our segments, we can reliably deliver results, constantly develop product, industry, and technological innovations, and simultaneously hone and refine our ways of working – all in the best interests of Deutsche Telekom.

- **Delivery Innovation:** VTI is a supplier for the Group. As such, it is particularly important that we consistently meet our obligations. That means conscientiously delivering our services, leveraging the synergies offered by centralized production, and working cost-efficiently. At the same time, we can also shape the future, e.g., by promoting agile working methods to make our production future-proof.
- **Experience Innovation:** We are Deutsche Telekom's central innovation team. Constantly pursuing innovations that benefit both our customers and the Group is our task and our obligation – but we also consider it an expression of the freedom we enjoy. Our technological innovations form the underpinnings for this. We work in close cooperation with the segments in order to meet all customer requirements, and create useful and meaningful innovations.
- **Capability Innovation:** Continuing to turn Deutsche Telekom into a software-based company entails transforming our capabilities. We want to recognize future changes in our Company and be able to handle them as they arise. Changes become entrenched especially when accompanied by cultural innovation in the shape of skills transformation and the systematic retraining and further training of our employees as software engineers, AI experts, and network architects. By the end of 2020, we had given 1,000 of our employees intensive training in topics relevant for the future, such as software development, artificial intelligence, and cloud computing in 15 Skill Academies. SDG 4 EMPLOYEES

Innovation priorities

Where does innovation come from? Everywhere. That is why it is important to ensure we pursue our innovation activities at an intragroup level and that they are aligned with our strategy. Our interconnected innovation areas provide a holistic, Group-wide framework for this. In the reporting year, we continued to hone our innovation priorities in close coordination with the operating segments, building on our activities in 2019:

- **Connectivity:** We are working to ready our router operating system for the digital future – with enhanced cloud-based connectivity management and service quality, a superior customer experience and standardized operation via app, PC, or TV, and value-added applications, such as child protection functions, home security, predictive maintenance, and troubleshooting. This new router generation is based on a scalable global reference system (Reference Design Kit, RDK), which we are constantly fine-tuning together with other leading telecommunications providers. In 2020, we launched initial applications and prototypes in Germany, Hungary, Croatia, and Greece. We will be starting a comprehensive pilot with the latest router generation in early 2021.
- **MagentaGaming:** We readied our cloud-based gaming offering for the market, launching it at Gamescom in August 2020. In an effort to become the best entertainment aggregator in our markets, we are continuously evolving the offering's functions and features, expanding the available content, integrating payment and customer loyalty systems, and developing mobile gaming applications.
- **Smart Home:** We began cloudifying our smart-home offerings in the previous year, with the aim of making the ecosystem future-proof. We achieved a substantial increase in customer satisfaction, in part by making the activation process a lot simpler. The 2020 financial year saw the integration of Smart Home into Telekom Deutschland's new broadband service, which entailed the changeover to hardware-based applications and in-app service activation via Telekom ID to increase user numbers.
- **Home Orchestration:** We want to improve the customer experience at home by ensuring the easy, seamless, and uniform interaction of all Deutsche Telekom's services and devices, and by enabling the services of selected partners. We continue pushing forward with this integration and orchestration of the home network, TV, smart speakers, smart-home applications, and entertainment services. Initial applications, e.g., Wi-Fi Sharing, have already gone live.

- **Magenta Voice:** In summer 2020, we launched the first mini speaker on the German market. This compact speaker version was honored with the German Design Award. What is more, multiple individual designs make it truly customizable. With smart voice control (also known as voicification), we want to further enhance the way our customers experience our services, and to simplify interaction with technology and devices. In addition, we are constantly evolving the voice platform, winning over new partners, and integrating further voice-controlled Telekom services (e.g., TV, Smart Home). Ongoing functionality enhancements have resulted in rising customer satisfaction levels. In parallel, we are pushing forward with B2B solutions.
- **5G:** With 5G, we are creating the basis for the digital world of tomorrow, especially when it comes to real-time communication. This next-generation technology is the key to innovative applications for virtual reality and extended reality (XR), connected and autonomous driving, robotics, and Industry 4.0. In 2020, we defended our position as innovation leader for the 5G core network by launching dynamic spectrum sharing (DSS), a new antenna technology that for the first time enables the parallel use of LTE and 5G in the same frequency band. DSS has been key to successfully expediting the 5G build-out and thus contributed in a major way to accomplishing our current level of network coverage reaching two thirds of the population in Germany.
- **Campus Networks:** Campus networks for corporate customers are one of the core applications for 5G technology. Campus networks integrate dedicated mobile connectivity with edge computing and integrated digital applications from the fields of production, automation, and logistics, enhancing companies' options to automate their production, and achieve stability and flexibility. We continued expanding our campus portfolio in 2020 and, at the end of the year, successfully completed pilot projects for a 5G campus at the University Hospital Bonn and a "private-only" campus for corporate customers with their own spectrum. The 5G NR NSA product, Campus L, has been ready for rollout since December 2020, while the Campus M version was launched in summer 2020.
- **Network Differentiation:** In this innovation program, we are developing software solutions for the automated analysis and operation of network infrastructure based on artificial intelligence (AI) and machine learning. In addition, a multi-vendor strategy serves to strengthen autonomy and enables us to maintain our innovation leadership. This approach to network production is based on cloud and software technologies that will significantly enhance the customer experience and improve both flexibility and scalability. At the same time, it lowers production costs and opens up new monetization options. The Open Test & Integration Center (OTIC) was opened in Berlin. Here, start-ups, suppliers, operators, and systems integrators can test out how new components interact with mobile networks. The goal is to create a vendor-independent RAN that also interacts quickly and easily with other networks. This is the vision being pursued by the network operators and suppliers that have joined forces in the O-RAN Alliance.
- **AI Enterprise:** By integrating artificial intelligence, we will ensure that our products and services remain competitive into the future. The focus of our activities in 2020 was on scaling up the chatbots already based on AI in order to further personalize customer interactions across all points of contact. German computer magazine Computer Bild named our "Frag Magenta" chatbot the best chatbot by a German telecommunications provider (issue 24/2020). We also continued to personalize our marketing and sales activities so as to be able to offer our customers tailored solutions that are based on our previous interactions with them.
- **Big Data:** This is an innovation area in which we are driving the implementation of Group-wide principles for data processing and analytics. Our uniform data model will enhance our data analyses and enable us to easily transpose successful analyses to new markets. As our top priority is the privacy and integrity of our customers' data, customer and network data remain with the relevant national companies. Applications have been implemented at five national companies and have already resulted in significant efficiency gains.
- **Sustainable Telco:** Our latest innovation area is devoted to making telecommunications providers more sustainable. Currently, the main focus is on energy-optimized network production and the resource-efficient design of products and services. The reporting year saw successful prototypes and tests for AI-based, smart energy management in the mobile network and for decentralized renewable energy production.

Three-pronged innovation strategy

We set ourselves apart from the competition and generate growth in three ways:

1. In-house developments
2. Partnerships
3. Start-up funding

1. In-house developments

In 2020, we continued to pursue our current innovation topics and optimized our delivery process, developed new products, and simultaneously ramped up our transformation into a more agile company.

- **Delivery innovation:** Artificial intelligence drives internal digitalization, e.g., in campaign management or with the Magenta chatbot, which *Computer Bild*, a German computer magazine, named best chatbot by a German telco in its 24/2020 issue. Dynamic spectrum sharing helped us build on our leadership position. This new antenna technology enables the parallel use of LTE and 5G in the same frequency band.
- **Experience innovation:** In the consumer arena, we executed the commercial launch of the mini speaker and MagentaGaming. Industrial campus networks also reached the market.
- **Capability innovation:** In the wake of our transformation into an agile company, more than 70 % of our employees now work in an agile set-up, which is also having a positive impact on IT delivery. For example, around two-thirds of our IT deployments now take place outside of the traditional waterfall development model.

Thanks to our centralized research unit, **Telekom Innovation Laboratories (T-Labs)**, we have access to our own R&D centers. At our T-Labs sites in Berlin, Be'er Sheva, Budapest, and Vienna, we collaborate with the world's leading universities, research institutes, and other companies' innovation centers. Together with these partners, T-Labs is conducting research & development at the interfaces between science and entrepreneurship, with a view to shaping the future in our current key areas: Blockchain, Intelligence, and Experience. The T-Labs teams are solving specific customer problems, enhancing Deutsche Telekom's innovative strength, and tapping into the topics of the future for networks, computing, and processes. SDG 9 RELATIONSHIPS

- **Blockchain** has multiple thrusts: In the first, blockchain technologies are being assessed to see whether they can help make Deutsche Telekom's internal processes more efficient and transparent. A specific example is wholesale roaming, where, in partnership with the GSM Association (GSMA) and other telecommunications companies, we have designed a solution for creating, signing, and billing contracts. The medium-term goal is to work together with the GSMA to create an industry standard to enable further use cases to be implemented using this solution. The second thrust focuses on using the blockchain as infrastructure. This could be crucial, for example, to development of the M2M economy, where producers and consumers connect in a decentralized manner and share trusted data. Another new topic of interest is the development of decentralized identity solutions that could allow people and even machines to autonomously store and manage their own identities. Above and beyond that, we are looking into new ways of participating in open-source projects.
- **Intelligence** relates to all aspects of teaching cognitive abilities to machines. The resulting artificial intelligence (AI) is defined as the imitation of human intelligence or intellectual processes by computer systems. Such processes include learning, drawing conclusions, and automatic correction. T-Labs' main focus is on developing innovations that are thematically related to the requirements of a telecommunications provider and that help automate or optimize its infrastructure, processes, or products. AI research is currently focused on the following: communication networks (so as to optimize network planning for the rollout of new technologies such as fiber optic or 5G); cybersecurity AI (in order to protect Deutsche Telekom's customers and its own infrastructure, and achieve fair, verifiable results using AI); and quantum AI (to enhance both the speed and quality of machine learning processes). In addition, we are launching sustainability AI – which uses AI-based optimizations to make more efficient use of valuable resources. SDG 15 ENVIRONMENT
- **Experience** developed an infrastructure for smart city solutions that is based on micro-services. Developed using open standards, the infrastructure allowed for the integration into the existing OGC platform operated by the City of Hamburg. The platform enables citizens to access a variety of information about their city (free parking spaces, available charging stations for electric vehicles, etc.). The services developed reflect the quest to satisfy the future needs of society. The Experience team collaborates with scientists, businesses, and other partners to shape both the customer journey for every product and the value added by every service. Specific results include prototypes and tests to improve streaming quality, and to utilize XR technology for Deutsche Telekom's business areas.

University Partnerships is being established in cooperation with a large number of Deutsche Telekom units to function as a Group-wide linchpin for innovation, further training, and HR marketing. **Academia as a Service** was launched by T-Labs as an active research network aimed at fostering global academic partnerships, e.g., by starting pilot projects or putting Academia partners into contact with Deutsche Telekom stakeholders. T-Labs' active promotion of university partnership programs assists Deutsche Telekom's HR department in recruiting talented new employees and helps strengthen the Company's corporate brand.

2. Partnerships

We draw on the expertise and abilities of our partners in order to implement the digital transformation. For example, we rely on the tremendous innovative energy coming out of Silicon Valley, Israel, Germany, and other innovation hotspots across the globe. The following are some examples of successful partnerships:

- Deutsche Telekom concluded an agreement with **SK Telecom** to set up a **joint venture for 5G technology**. The joint venture will assist both companies in developing innovative 5G solutions. The focus is on solutions that ensure in-house 5G coverage, initially for the European market. In-house coverage, which is accomplished using 5G repeaters, is currently an untapped market niche, and the joint venture can play a pioneering role in this area. In the medium to long term, we are assessing options for partnerships in the fields of augmented reality (AR) and virtual reality (VR) services, mobile edge computing (MEC), and the app market.
- Deutsche Telekom joined the **Open RAN Policy Coalition**, building on its groundwork in this field: promoting and accelerating carrier-grade open-RAN solutions for an even better customer experience in our networks. As a trailblazer in this area, we founded the global #OpenRAN movement back in 2016. Its mission is to develop specifications to open up and cloudify the RAN, and to encourage a more lively and competitive environment for network equipment providers. Since then, Open RAN has gained considerable momentum. The technical standards and interfaces of the O-RAN Alliance are making the RAN open, smart, and fully interoperable.

- Together with U.S. navigation specialist **Swift Navigation**, Deutsche Telekom is launching a solution for reliable, high-precision geopositioning in the European market. Called Precise Positioning, the system is accurate to the centimeter and enables, for example, lane-accurate navigation for (semi-)autonomous vehicles. Conventional satellite navigations systems like GPS are accurate only to within three to five meters. Skylark™, Swift's cloud solution, corrects this satellite data, allowing the location of autonomous vehicles and machines to be determined with greater accuracy. Via the mobile network, data flows continuously between the ground-based reference stations operated by Deutsche Telekom, the cloud solution from Swift, and the M2M SIM card in the vehicle, delivering precise correction data and enabling exact positioning in real time. Precise Positioning opens up new cross-industry mobility options and possibilities to develop autonomous applications that require exact, reliable positioning. The potential application areas include the automotive industry, logistics, drones, rail traffic, agriculture, the construction industry, and even consumer solutions. In the agricultural sector, for instance, with Precise Positioning self-driving machines can be deployed to sow crops, spread fertilizer, or plow fields with inch-perfect precision and thus save seeds, fertilizer, and energy. SDG 13 ENVIRONMENT
- Deutsche Telekom is now working together with **RemoteMyApp** (RMA) as its partner for modern game streaming technology to serve the cloud gaming business area and bring its MagentaGaming service to the market. Under the partnership, the streaming solution is provided under a limited-time exclusivity arrangement in Deutsche Telekom's footprint markets.
- Deutsche Telekom is also partnering up with **Nreal**, an incredibly innovative provider of mixed reality hardware and software with multiple accolades to its name including as a winner at the CES Innovation Awards. Under the partnership with Nreal, Deutsche Telekom has developed a variety of mixed reality solutions for gaming, entertainment, and productivity, which offer our customers the opportunity in our shops and at other locations to experience the huge potential of our 5G networks first hand.
- **TM Forum** is a leading global alliance of over 700 companies working together to standardize application integration for service providers from the information and telecommunications technology sectors. As a TM Forum member, Deutsche Telekom is a signatory to the Open API Manifesto and its contributions include working with co-members to further develop the standard for open APIs. Open APIs promote better interoperability with partners and help to standardize the integration points between software applications. This is an essential piece of the puzzle both in terms of establishing cross-industry component recycling and ensuring the integration capability of innovations.
- Deutsche Telekom joined the 1000+ Solutions Challenge Alliance of the **Solar Impulse Foundation** in order to identify and promote technologies to reduce carbon emissions in the ICT sector. We are working hand in hand with the Foundation to accelerate the rollout of sustainable and profitable solutions for the ICT industry. We will also make use of these solutions to help achieve our own climate targets.

3. Start-up funding SDG 9 RELATIONSHIPS

As Deutsche Telekom's leading start-up program, the tech incubator **hubraum** puts external start-ups in touch with the relevant business units in our Group, so that together they can offer innovative products to consumers and business customers. To this end, hubraum provides the start-ups with seed financing from its own investment fund and targeted innovation programs geared to our strategic growth areas and technologies.

Since founding hubraum in 2012, we have set up a strategic investment portfolio of over 30 companies and worked together closely with around another 350 start-ups from Europe and Israel in areas such as the real-time gigabit society (e.g., 5G and edge cloud), the smart data economy (e.g., AI and process automation), and the Internet of Things (e.g., NB-IoT and Industry 4.0). With Europe's first 5G networks and edge cloud infrastructure, the hubraum campus in Berlin offers start-ups not only co-working office space, but also exclusive access to our Group's networks, product platforms, and test data to help them build up their businesses faster. Launched in 2019, the hubraum 5G prototyping initiative was continued in 2020 with more specific programs:

B2B – Campus Network Program. Under the Campus Network Program, five start-ups were chosen to develop future applications for 5G campus networks in collaboration with Deutsche Telekom. The applications are to be implemented, for instance, at the Aachen-based Center Connected Industry (CCI), of which Deutsche Telekom is a member.

B2C – Consumer Entertainment Program. Starting in July 2020, seven start-ups worked on projects as part of our 5G Consumer Entertainment Program, the results of which were presented in early October 2020. The goal was to develop concrete 5G applications. The following start-ups received investment funding from Deutsche Telekom:

- In mid-2020, hubraum and its partners **Nreal**, **Qualcomm**, and **Unity** jointly hosted a mixed reality innovation program for start-ups. Over 150 start-ups from across the globe applied to be included on the program, with 14 teams accepted as the 2020 cohort. The participating teams were each given a pair of Nreal Light mixed reality glasses and were able to begin refining their ideas at the end of the year. They have until the Demo Day in spring 2021 to finalize their projects.
- Australian start-up **tagSpace** is already collaborating with n-tv, a news channel. The company is testing how to integrate conventional news content and dedicated specials – e.g., on the fall of the Berlin Wall – into an augmented reality (AR) app.
- Together with **Quake Capital**, a U.S.-based investor specializing in seed funding for early-stage start-ups, and Mediengruppe RTL, in 2020 seven start-ups were selected to test and evolve their ideas in Deutsche Telekom's live network as part of the 5G Consumer Entertainment innovation program. Their goal was to turn 5G into a first-hand experience for our customers. This three-month program was held around Deutsche Telekom's Headquarters in Bonn, where the start-ups were given access to 5G infrastructure for testing purposes.

- You can use the Dance Fight app developed by **Virtual Arts** to put your dance moves to the test and compete live against other dancers. People across the globe follow these dance contests and can vote for their personal favorites. Dance Fight is already available in the Apple and Google app stores in the United States.
- **MojiLaLa's** LeoAR app enables you to place 3D objects in the real world, letting virtual dinosaurs roam through Berlin, for example. Super RTL, a television channel, already uses this app, thus benefiting from the start-up program. German soccer team 1. FC Köln, too, is already testing integrating figures into one of the start-up's AR apps.

Another innovation program focusing on extended reality was launched in 2020 and is set to continue in 2021.

Innovation governance

Innovation cycles are getting shorter and shorter. As a result, we must be agile and flexible in how we manage and budget our innovation projects. We orient ourselves toward the best-practice approaches used by innovative start-ups and successful companies, and to the latest findings from research and academia.

Portfolio and Innovation Board

The Portfolio & Innovation Board (PIB) plays a central role in managing our innovations. This Group-wide body ensures that we set the right priorities by identifying and selecting the innovation projects for our Group and deciding on the method of implementation. Our efforts are guided primarily by the Group strategy and we create full transparency across the Group regarding our investments in innovation.

Corporate Innovation Fund

Our Corporate Innovation Fund (CIF) is managed centrally by the PIB. Similar to a venture capital approach, the CIF offers all business and product ideas generated within the Group a flexible and results-oriented form of funding for a specific project phase. The provision of an additional innovation budget allows us, for example, to fund new innovation projects at short notice and with little red tape. Such financing is granted independently of annual planning periods, and therefore intensifies our focus on market and customer requirements. Innovation can take place anywhere across Deutsche Telekom, as long as the proposed business and product ideas fit within our Group's central innovation focuses.

Investment Committee

We established the Investment Committee to speed up investment decisions on our multi-year innovation priorities. Its objective is to act like an (internal) venture capitalist. The Investment Committee allocates funding according to success, orienting itself to the approach used in the start-up industry and among venture capital investors, whereby raising new funding from capital investors is dependent on the venture's performance. This gives us the flexibility we need when developing innovation topics and focuses efforts on success. Funding is made available for the next project phase only when specific outcomes that are relevant to our customers are achieved.

Deutsche Telekom Capital Partners

Deutsche Telekom Capital Partners (DTCP), established in early 2015, is Deutsche Telekom's investment management group. It manages approximately USD 1.7 billion of assets and advises a portfolio of over 60 companies on behalf of Deutsche Telekom and other institutional investors. DTCP pursues two investment strategies: growth equity in Europe, the United States, and Asia, and investments in digital infrastructure in Europe. The prime motive for DTCP's investments is financial. For example, it acquires shares in companies still in the growth phase and aids those companies' further growth, with a view to selling its stake for a profit later on. DTCP also plays an active role in establishing business relations between the innovative portfolio companies and Deutsche Telekom in order to add value for both sides.

In the growth equity field, the focus on cloud-based software-as-a-service (SaaS) solutions for companies resulted in a positive development, not least due to the spike in the number of people working from home and to increasing digitalization. New additions to the growth equity portfolio included Aircall (call center software), Arctic Wolf Networks (corporate network security), Auth0 (single sign-on systems), Catenoid (online video), and Epsagon (app management). In addition, DTCP increased its stakes in the successful portfolio companies AppsFlyer (marketing analytics) and LeanIX (IT architecture suite). Through the entrance of a new majority shareholder in Pipedrive, a provider of CRM software, DTCP was able to divest part of its stake in the company. The successful investment in Community Fibre, a fiber-optic provider for the London metropolitan area, was DTCP's first in a fiber-optic network and another milestone in the field of digital infrastructure. Cell towers, fiber-optic networks, and data centers are set to form a focus of further DTCP investments.

The strategic investment fund Telekom Innovation Pool (TIP) is available for investments that are mainly strategically motivated. Advised by DTCP, Deutsche Telekom makes investments in and promotes business start-ups that have a strategic focus and clearly collaborate with the Group's business managers. TIP actively pursues long-term innovations for the Deutsche Telekom Group, particularly in the fields of software-defined networking (SDN) and the digitalization of business operations. In 2020, TIP made five new corporate investments: Cynet (network security), Everphone (rented mobile devices), RemoteMyApp (cloud-based gaming solutions), Weaveworks (Kubernetes services), and vHive (drone surveillance of business assets).

Patent portfolio

Patents are gaining more and more significance in the telecommunications industry. Our patent strategy has to keep pace with the constant evolution of market players and fields of activity. On the one hand, our Group's scope for action must be maintained. On the other, in addition to pursuing our own research and development activities, we want to pave the way to open innovation through collaborative projects and partnerships. National and international patent rights are vital for these types of activity. We are strongly dedicated to generating and maintaining our own patents. In the reporting year, Deutsche Telekom held a total of around 8,800 patent rights. We are continuing our intense efforts to develop and streamline our patent portfolio. This will secure the value of the rights we hold and ensure they are in line with our Group's strategic objectives. We have put in place a professional patent law management process to keep our patents safe.

Investment in research and development

Research and development (R&D) expenditure includes pre-production research and development, such as the search for alternative products, processes, systems, and services. By contrast, we do not class as R&D expenditure the costs of developing system and user software which is designed to improve productivity and make our business processes more effective. R&D expenditure in the Deutsche Telekom Group amounted to EUR 33.1 million in 2020 (2019: EUR 45.4 million). In 2020, our Group's investments in internally generated intangible assets to be capitalized were also up year-on-year at EUR 448.4 million compared with EUR 344.2 million for the previous year. These investments predominantly relate to internally developed software, mainly in our Group Headquarters & Group Services segment and our Systems Solutions operating segment.

Employees

Supporting people. Driving performance.

We at Deutsche Telekom are actively shaping the digitalization of society and are engaged in the cultural and digital transformation of our own company. In many areas, environmental effects, new technologies, and business models entail fundamental changes to our working world and the skills we require for it. Our aspiration is to steer this change process and, in doing so, shift the focus of attention to people. After all, it is our employees who make all the difference. In order to offer our customers not only outstanding products and services, but also excellent customer service, we need the very best employees – now and in the future. That is why we also have to remain an attractive employer for talented individuals. We need to create a working environment that encourages flexible, participative ways of working, and entrench a culture of learning that enables us to build up the new skills needed to meet current and future challenges.

Our priorities in 2020

1. Tackle the challenges posed by the coronavirus pandemic
2. Evolve our culture and design new working environments
3. Continue the long-term transformation of our workforce

In the following, we provide details of sample projects and initiatives designed with these priorities in mind.

Our HR work based on the priorities

1. Tackle the challenges posed by the coronavirus pandemic SDG 3 EMPLOYEES

Throughout 2020, the coronavirus pandemic compelled us to take special action to maintain our operational capability and protect our employees. The Group-wide measures described below were taken in collaboration with the Group Situation Center to prevent the spread of the pandemic, inform the workforce, and intervene where necessary. The Group Situation Center forms part of Deutsche Telekom's system for managing security incidents. It is responsible for coordinating, managing, and monitoring the measures taken to tackle serious threats; it reviews and evaluates the available information, and implements countermeasures – either directly, for example, as part of Deutsche Telekom Security's master incident management system, or by delegating responsibility to employees or units with the corresponding expertise.

Maintaining our operational capability. In order to maintain our operational capability, employees in the local organizations who are responsible for operating critical infrastructure and maintaining business-critical processes were assigned to teams at short notice and spread across various locations. In addition, 16,000 employees from the 49 service centers transitioned to working from home within one week, and a further up to 80,000 colleagues in Germany and up to 180,000 colleagues globally are also able to work remotely. This was made possible by the rapid rollout of mobile working options and IT support (new facilities for remote working were set up for 16,000 employees at short notice). In addition, country-specific measures were adopted in line with local requirements, e.g., risk bonuses, a monthly allowance for employees with direct customer contact (in Greece, North Macedonia, Croatia, and Hungary, for instance), the introduction of short-time working, and the transfer of staff between key areas such as shops and service centers. Our 7,000 field staff – equipped with appropriate protective gear and information for customers (such as the recommendation to air the premises before the technician's visit) – continued calling on customers to configure connections, rectify faults, or optimize their WiFi so they could work from home (#MagentaHelden (magenta heroes)). As a token of its appreciation, the Board of Management of Deutsche Telekom AG decided to award all active employees (non-civil servants, trainees, civil servants, and in exceptional cases also loan and temporary staff) – with the exception of the United States operating segment – a special coronavirus bonus of EUR 500 each.

Measures to protect employees and ensure hygiene. Measures that are key to preventing the spread of the pandemic within the Group included the precautionary quarantining at home of suspected coronavirus cases, issuing protective clothing to employees (especially service personnel and those working in our shops), supplying all employees with everyday masks, and providing disinfectant. As early as in spring 2020, employees were obligated to wear masks in the office and the frequency of cleaning was ramped up significantly. The maximum occupancy at meetings was reduced to match the corresponding room size so as to enable proper physical distancing. Beyond that, business travel to high-risk COVID-19 destinations was stopped at an early stage.

Information and offers of support. We were for the most part able to stop the spread of coronavirus within the Group by providing all relevant contacts at the local organizations with daily briefings from the Group Situation Center, reporting all suspected and actual cases of illness to the latter, and putting in place a process to intervene in confirmed cases. Our constant efforts to inform and protect all our employees and establish rules of conduct were supplemented and reinforced by a personal Coronavirus Update newsletter issued by our Board of Management member for Human Resources and Legal Affairs. We also made use of our extensive network with other DAX-listed companies and the world of science to continually evolve our practices and share our own best practice with other companies. Above and beyond that, we supported our employees and managers by providing them with virtual formats on topics such as leadership, remote collaboration, and resilience (for instance, the online seminar "Starke Psyche (A strong psyche)") and by setting up additional IT support channels and a helpline for dealing with psychological problems. Moreover, we were able to offer all our employees in Germany a regular opportunity to chat online with a virologist and hygiene expert from the University of Bonn. This live chat option not only provided the participants with a rundown of the current situation, but also covered key topics, gave recommendations on how to behave, provided answers to employees' questions, and dealt with the consequences for the "new normal" in working life at Deutsche Telekom. We were also able to provide parents with a free one-year premium license for Sofatutor, Germany's largest online learning platform. SDG 4 EMPLOYEES

Social cohesion. Just how important social cohesion is for us has been evident throughout the course of the pandemic, especially during the lockdown phases. Interaction, sharing ideas, and just being together and having common experiences form the basis for innovation and creativity, and engender a feeling of safety and belonging. Since fall 2020, we have made targeted investments in initiatives to promote social cohesion. These include formats such as culture gigs (live concerts), virtual sporting and knowledge challenges, and virtual lunches with colleagues from different parts of the Company. We also offered our employees the opportunity to get together virtually for a digital Christmas party. More than 11,000 of our staff took part in the event via live stream.

Health rate and health management. As a result of the comprehensive measures taken, the Company's health rate reached historic highs in May, June, and August 2020. What is more, the figures throughout 2020 were consistently higher than in the previous year. In 2020, Deutsche Telekom AG was once again honored with the Corporate Health Award, Germany's most prestigious prize for excellence in corporate health management. A total of 352 employers across 15 industries took part in the demanding scientific selection process. Among the reasons given for the award this time around were our comprehensive, convincing, and targeted offerings, and our innovative ideas for responding to current trends and challenges – such as My Health Journey, an annual program for mental strength.

Employee satisfaction. According to data collected by the Group-wide employee survey conducted in 2019 (excluding T-Mobile US), our commitment index score – i.e., our measure of employee satisfaction – was good at 4.0 (on a scale from 1.0 to 5.0). We also conduct regular pulse surveys to obtain feedback from our employees. The survey conducted in November 2020 resulted in record figures in almost all areas: employee participation (120,000 colleagues or a return rate of 77 %) and top survey results regarding satisfaction (80 %), leadership quality (88 %), brand identity (85 %), learning (85 %), COVID-19 – information (94 %), COVID-19 – mobile working (88 %), and COVID-19 – protection (91 %).

Employee satisfaction (commitment index)[a]

	2019	2017
Group (excluding T-Mobile US)	4.0	4.1
Of which: Germany	4.1	4.1
Of which: international	3.9	4.1

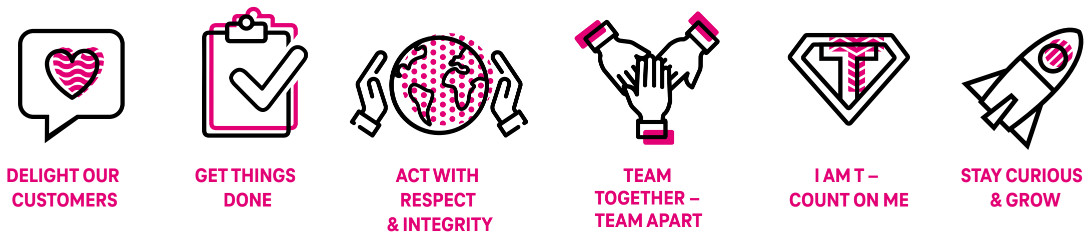
[a] Commitment index according to the employee surveys carried out in 2019 and 2017.

T-Mobile US conducts its own employee survey. The results of the survey conducted in 2020 (survey period: January through September, excluding former Sprint employees) showed that 92 % of respondents take pride in working for the company. 85 % said they would recommend T-Mobile US as a great place to work, and 84 % believe the Company inspires them to go above and beyond their usual work-related duties. These results are among the highest in the Group. T-Mobile US has been awarded numerous accolades in recent years for its appeal as an employer. In 2020, T-Mobile US was once again named Best Place to Work by the independent employee platform Glassdoor. In addition, T-Mobile US improved its position in the Fortune Best Companies to Work For top 100 list, moving up from 49 (2019) to 42 (2020). Ethisphere Institute named T-Mobile US one of the World's Most Ethical Companies for the twelfth year in a row. T-Mobile US also scored 100 in the Human Rights Campaign's Corporate Equality Index for the eighth time in a row, making it the best place to work in terms of equal treatment of homosexual, bisexual, and transgender people.

2. Evolve our culture and design new working environments SDG 8 EMPLOYEES
We are convinced that corporate culture is a key factor in a company's long-term success. That is why culture has always played a crucial role at Deutsche Telekom. But corporate culture must also reflect the changing needs of customers and employees. For this reason, we understand culture to be a process and not something static. In January 2020, we announced our corporate purpose: "We won't stop until everyone is connected." It has since proven itself to be a widely accepted cultural framework and, in times of physical distancing, has gained even more in importance.

Our Guiding Principles. Culture is part of the corporate DNA and, as such, influences not only our ways of working. That is what makes our Guiding Principles so important, leading us to reflect on our behavior on a daily basis and acting as a cultural indicator. When our updated Guiding Principles, revised in a dialog-driven process, were presented in February 2020, we could not have known just how quickly the coronavirus pandemic would put them to the test. Our living culture stood the test, providing our employees with support and guidance throughout the pandemic. Apart from a largely virtual, international Living Culture Day that scored over 16,000 mentions on social media, we offered numerous formats for focusing on corporate culture and implemented specific measures, for instance, digital collaboration formats and a redesigned learning platform.

Our six Guiding Principles



Designing new working environments. SDG 8 RELATIONSHIPS The coronavirus pandemic has dramatically changed where and how we work together. Even after the pandemic has passed, many of these changes will remain. After all, the new trails we have blazed have proven their worth. With that in mind, Deutsche Telekom and the Group Works Council agreed on a Manifesto on the new Way of Working, the goal of which is to maintain performance, employee satisfaction, and employer attractiveness:

1. We will take the best of both worlds: the type of work will determine the mix of mobile and in-person work, whether the latter is performed on the customers' premises, in our shops, or in the office. The share of mobile working is set to rise significantly, not just because it "works," but because it even enhances productivity in many areas. But real-life interaction, too, will remain a key component of our working life. That is because the success of creative collaboration, complex problem-solving, and team processes often hinges on physical proximity.
2. Our offices will become places of encounter: the office is set to remain the most important location for our identity. More than ever before, our office buildings will become places for teamwork, encounters, and social and creative interaction.
3. Digital tools will become even more important: digital collaboration tools have become our constant companions and key helpers in our daily work. For this reason, we will ramp up our Group-wide investment in IT tools, equipment, and enablement.
4. We will travel less: going forward, we will get by with fewer business trips, thus making a contribution to sustainability.
5. Our understanding of leadership will change: it will not be based on attendance and control, but on trust and transparency. We will face new challenges when it comes to virtual leadership and to leading hybrid teams. It will become even more important for our managers to create a safe, motivating "space," formulate clear objectives, provide feedback, and monitor results. We will offer a wide range of virtual tools to support our managers in this area.

3. Continue the long-term transformation of our workforce
It is our responsibility to ensure that we have the right employees in the right place at the right time, that they enjoy competitive conditions, and are able to grow and develop. In addition to both the transformation initiatives driven by digitalization and automation, and to staff reduction and restructuring measures, the decisive tools in achieving this goal are proactive total workforce management, the digitalization of our core processes, and massive investment in developing skills.

Major transformation initiatives. In 2020, we again succeeded in transforming individual business areas of the Group, e.g., Deutsche Telekom IT at T-Systems, and our consumer sales entity. Against the backdrop of digitalization and changing customer behavior, the difficult realignment of consumer sales was also implemented in a socially responsible manner. What is more, we successfully realigned our B2B telecommunications business and combined it within the Germany operating segment.

Collective bargaining round for 2020. In the midst of the coronavirus pandemic, we negotiated a new collective agreement in record time at the end of March 2020. The collective agreement applies nationwide to around 60,000 employees, trainees, and students on dual study programs. Despite the prevailing economic uncertainty, Deutsche Telekom's intention was to offer (planning) certainty early on both for the employees covered by the collective bargaining round and for the company itself, and send a clear and positive signal for the economy. In line with the ongoing push to digitalize our core processes, the collective bargaining round was conducted for the first time in virtual form.

Skills development. Our employees' skills and expertise are among our Company's most important resources and thus crucial to our business success. These skills must be geared to the future and kept up to date. We are responsible for providing an environment in which employee skills can be transformed. With the introduction of a Global Job Architecture (GJA) and the continued harmonization of collective agreements on remuneration, the ver.di trade union, the Group Works Council, and Deutsche Telekom were jointly responding to the challenges this future presents. The aim of the GJA is to comprehensively consolidate and simplify the function structures. Under the GJA, all jobs in the Group are grouped together according to job families and job clusters. This is important to allow all jobs in the Group to be clearly identified. With the help of these tools, 7,500 required future profiles were identified, which will now be used for recruitment and reskilling/upskilling initiatives. Simplifying and standardizing our Group-wide job profiles is also a key prerequisite for rolling out our skills management program SkillsUP! in selected corporate units. Personal development talks help pinpoint where individual skills are lacking, while development plans can be continuously adapted by means of tailored training programs. Strategic, qualitative HR planning takes changing market conditions into account to plot the right course when investing in the skills that will be needed going forward. That includes cutting-edge performance management that enables an ongoing dialog between managers and employees.

Youlearn. Two of our top priorities are to digitalize our portfolio of training courses and strengthen our culture of learning. With our Youlearn initiative – aimed at entrenching self-paced learning in our everyday working life – we have significantly enhanced our employees' options for upgrading their skills. Employees in Germany and our European national companies devoted over 2.3 million hours of their time to learning in the reporting year – that was 2.4 working days per employee on average. That figure was down from the previous year due to the pandemic and the consequent cancellation of virtually all traditional classroom seminars from March 2020 onward. But the digital training courses developed with the Youlearn initiative helped us fill the gap in offerings and further increase acceptance of digital learning. SDG 4 EMPLOYEES

Percipio & Coursera. Yet, to achieve simplicity and take the digital transformation forward, we need new organizational forms, expertise, and a cultural change – in short, we need to master a whole host of new skills if we are to tackle current and future challenges. We tackled these developments head on with measures such as the introduction of the Youlearn initiative to promote a culture of self-paced learning in our everyday working life. What is more, we rolled out Percipio (an intelligent learning platform also dubbed the "Netflix of learning") and integrated Coursera as a provider of digital further-training courses offered by top-ranking universities, thus providing our employees with a high-quality training service. The increase in our digital learning rate from 46 % to 69 % and over 170,000 registrations for Percipio since the third quarter of 2019 validate our efforts in this area. We firmly believe that a state-of-the-art learning environment is central to our obligation as an employer to act responsibly. SDG 4 EMPLOYEES

Employer brand. We maintained our presence in the recruitment market in 2020 and, despite the coronavirus pandemic, stayed in contact with the talents in order to enhance trust in our employer brand. The crisis precipitated by coronavirus has changed the needs of both society as a whole and our target group of IT/NT talents, heightening the need for meaning, participation, and security. We integrated this change in values into our employer brand strategy, channeling it directly into specific employer messages. In our #IWILLNOTSTOP campaign, mission and purpose as well as meaningful work have already become part and parcel of the promise we make as an employer. The coronavirus pandemic further strengthened our focus on digital employer branding. New digital formats were developed to get Deutsche Telekom's culture as an employer across.

Recruiting and onboarding. We want to be the magnet for global digital talent. Even amid the coronavirus pandemic, we succeeded in recruiting around 800 new employees in Germany in 2020, including in the ICT sector, and 2,150 new trainees, a high percentage of whom have technical/IT backgrounds. A quick digital recruiting process with a positive digital candidate journey is the key to success here. Particularly during the pandemic, we relied on our motto “Stronger together” to reinvent our onboarding process. One highlight of this is the virtual global welcome event entitled “New Unstoppables.” Our international careers website is a platform offering job-seekers clear and transparent information, for example, on the digital/virtual recruiting process. We also make use of game-based assessments in the recruitment process. These are a new generation of psychometric tests in the form of online games and are being deployed in the context of our hiring process for the Start up! trainee program. In addition, we use digital tools that rank final university grades on the basis of algorithms, thus enabling a fair comparison. By addressing specific target groups, our recruiting strategy also aims to encourage more talented women to join our Company. 2020 marked the eighth time that female students of STEM subjects (science, technology, engineering, mathematics) from all over the world were able to compete for our Women’s STEM Award. We are also involved in Femtec, a career program for female STEM students, and in the Global Digital Women network. SDG 5 EMPLOYEES We have shown that digital recruitment is a crucial success factor when it comes to responding rapidly to changing requirements and continuing to secure employees with critical profiles for the Company.

Practicing diversity. We are committed to equal opportunity and diversity at the Group. Promoting diversity – also in our management teams – is part of our identity. Our target to fill 30 % of management positions across the Group with women still applies. Across the Group, the proportion of women in middle and upper management stood at 27.1 % at the end of 2020. At 45 %, Deutsche Telekom AG had an above-average proportion of women on its Supervisory Board, and with women occupying 37.5 % of the positions on its Board of Management, the Company occupies first place among the 30 DAX-listed companies. SDG 5 EMPLOYEES

Diversity is a key success factor and goes beyond just gender. In order to develop successful products, we must understand the needs of our customers, and we can do that only if our Company is just as diverse as society. The Human Resources and Legal Affairs Board of Management department is responsible for the Group’s diversity and inclusion strategy, while a large number of diversity allies in the individual subsidiaries and different countries are tasked with putting the corresponding measures into practice and implementing the relevant offerings. In early summer 2020, our Board of Management member for Human Resources launched the RethinkDiversity initiative to take a creative approach to developing and implementing further measures and projects. It includes, for example, the establishment of a diverse talent pool, with women making up at least 40 % of the members, and a program in which top male managers are assigned to mentor up-and-coming female employees destined to take over as the next generation of managers. We thus also focus on diversity aspects – such as age, cultural background, and gender – in the succession management process at senior management level. When it comes to diversity and inclusion, we continue to pursue a steady, long-term policy, also collaborating with external diversity partners such as the Competence Center Technology-Diversity-Equal Opportunities e.V. The goal is for everyone to be able to achieve their full potential and to make diverse management teams our “new normal.”

levelUP! In the age of digitalization, managers must possess skills and methods that differ greatly from those needed in the analog world. That is why we support our executives with levelUP!, an innovative digital further-training service for successful leadership in the digital age. levelUP! comprises modules that can be combined as required. Knowledge is shared primarily via interactive, digital learning formats in combination with classroom training. In 2019, the levelUP! program underwent a change of content, focusing primarily on agile leadership. Some 1,200 executives participated in the first two rounds of this latest incarnation of the levelUP! program. In 2020, the program was held in a fully digital format for the first time.

Due to the huge success of levelUP!NextGeneration in 2019, we offered the program again in 2020. In view of the particular challenges posed by the coronavirus pandemic, we decided to offer this program for motivated high potentials in a purely digital form. 500 employees from all over the world took part in this four-month development program, which features digital learning and imparts innovative, inspiring, and concrete leadership topics and skills. levelUP!NextGeneration also helps us strengthen and encourage intragroup and cross-segment collaboration. SDG 4 EMPLOYEES

Major HR and CR awards in 2020 SDG 17 RELATIONSHIPS

Corporate Equality Index 2020
For the eighth consecutive time, T-Mobile US earned the top score of 100 in the Human Rights Campaign Foundation's Corporate Equality Index.

World's Most Ethical Companies 2020
Ethisphere Institute named T-Mobile US one of the World's Most Ethical Companies for the twelfth year in a row.

Comenius Award 2020
Deutsche Telekom won two Comenius Awards for its digital education media Scroller-TV and children's magazine Scroller.

FTSE4Good Index
For the twelfth consecutive year, OTE in Greece was ranked one of the leading companies for its commitment to environmental protection, a caring society, and corporate governance.

Corporate Health Award 2020
Deutsche Telekom received the award for excellence in health and safety management.

"Favorite employer" in Kurier ranking
For the second time in a row, Magenta Telekom (T-Mobile Austria) was named "favorite employer" by the Austrian daily newspaper Kurier.

Building Public Trust Award 2020
The PwC jury honored Deutsche Telekom as the DAX 30 company with the best climate reporting.

Deutscher Personalwirtschaftspreis
With its cutting-edge HR apps, Deutsche Telekom Services Europe took first place in the Digital HR category of the German HR management award.

2020

DAX ESG 50 Index
Deutsche Telekom was added to the new sustainability index.

Excellence in Challenges by Selectio
Hrvatski Telekom honored with Excellence in Challenges award by the leading HR consulting company in Croatia.

CSR Index 2020
Telekom Romania was awarded a Gold Level prize for corporate sustainability and social responsibility in Romania.

Power of Attraction Award 2020
T-Mobile Polska came out on top in the Recruiting Process category at the award ceremony organized by Puls Biznesu, a Polish magazine.

Smart City Poland Award
T-Mobile Polska came first in the Environmental Protection category with a project for smart trash cans.

Top Employer 2020
Magenta Telekom (T-Mobile Austria) took third place in Austria's Top Employer awards.

"Best employee training in Germany" in Capital magazine's ranking
Magazine ranked Deutsche Telekom as leading provider of training in 2020, in particular for its trainee courses and dual study programs.

Sustainable Company 2021
Magenta Telekom (T-Mobile Austria) was given the Kurier newspaper's seal of approval for its climate protection activities, and its social and economic responsibility.

For an overview of which sustainability indexes list the T-Share, please refer to the section "Corporate responsibility and non-financial statement."

Headcount development

The Group's headcount increased by 7.5 % compared with the end of the prior year, mainly due to the integration of Sprint employees in the United States. The developments were varied across our segments: In our Germany operating segment the number of employees decreased by 4.4 % compared with 2019 due to the take-up of socially responsible instruments in connection with staff restructuring, such as the dedicated retirement and phased retirement programs. The total number of employees in our United States operating segment increased by 50.7 % compared with December 31, 2019, primarily due to the integration of the Sprint workforce. In our Europe operating segment, the headcount was down 7.1 % compared with the end of the prior year, with staff levels decreasing in Hungary, Greece, and Romania in particular. The total headcount in our Systems Solutions operating segment was down 4.7 % against year-end 2019, primarily as a result of efficiency enhancement measures. In the Group Development operating segment, the 3.1 % increase in the number of employees can be attributed to the insourcing of activities previously carried out externally to achieve cost savings at T-Mobile Netherlands. The headcount in the Group Headquarters & Group Services segment was down 4.1 % compared with the end of 2019, mainly due to ongoing staff restructuring at Vivento.

Workforce statistics

Headcount development

		Dec. 31, 2020	Dec. 31, 2019	Change %	Dec. 31, 2018	Dec. 31, 2017	Dec. 31, 2016
FTEs in the Group		**226,291**	**210,533**	**7.5**	**215,675**	**217,349**	**218,341**
Of which: Deutsche Telekom AG		15,374	17,461	(12.0)	19,259	21,428	22,571
Of which: civil servants (in Germany, with an active service relationship)		10,583	12,153	(12.9)	13,507	15,482	15,999
Germany operating segment		66,051	69,117	(4.4)	71,549	64,798	66,410
United States operating segment		71,303	47,312	50.7	46,871	45,888	44,820
Europe operating segment		41,273	44,410	(7.1)	47,964	47,421	46,808
Systems Solutions operating segment		28,395	29,800	(4.7)	28,945	37,924	37,472
Group Development operating segment		2,684	2,603	3.1	1,976	1,967	2,572
Group Headquarters & Group Services		16,585	17,292	(4.1)	18,370	19,351	20,258
Breakdown by geographic area							
Germany		89,032	94,111	(5.4)	98,092	101,901	104,662
International		137,258	116,422	17.9	117,582	115,448	113,679
Of which: other EU member states		55,816	58,743	(5.0)	61,249	59,952	59,456
Of which: rest of Europe		2,168	2,055	5.5	2,471	2,620	2,581
Of which: North America		71,617	47,652	50.3	47,245	46,332	45,364
Of which: rest of world		7,658	7,971	(3.9)	6,618	6,543	6,278
Natural attrition	%	**3.9**	**5.3**	**(26.4)**	**5.1**	**4.7**	**4.0**
Of which: Germany	%	2.0	2.3	(13.9)	1.9	1.7	1.4
Of which: international	%	6.6	9.5	(30.5)	9.8	9.2	8.1
Productivity trend[a]							
Net revenue per employee	thousands of €	452	378	19.4	350	346	331

[a] Based on average number of employees.

Personnel costs

billions of €

		2020	2019	Change %	2018	2017	2016
Personnel costs in the Group		18.9	16.7	12.7	16.4	15.5	16.4
Of which: Germany		8.8	8.7	0.7	9.2	8.5	9.8
Of which: international		10.1	8.0	25.7	7.3	7.0	6.6
Special factors[a]		1.8	1.0	77.0	1.2	0.6	1.6
Personnel costs in the Group (adjusted for special factors)		17.0	15.7	8.2	15.2	14.9	14.8
Net revenue		101.0	80.5	25.4	75.7	74.9	73.1
Adjusted personnel cost ratio	%	**16.8**	**19.5**	**(13.7)**	**20.1**	**19.9**	**20.3**
Personnel costs at Deutsche Telekom AG under German GAAP		**2.3**	**2.3**	**(1.5)**	**2.5**	**2.7**	**3.5**

[a] Expenses for staff-related measures.

Forecast[1]

Statement by the Board of Management on the expected development of the Group

In 2020, we broke new ground: the business combination of T-Mobile US and Sprint has made us a Group generating revenue of over EUR 100 billion, with almost 230,000 employees worldwide and a unique 5G spectrum position on our most important mobile communications markets. At the same time, we successfully continued our growth course on both sides of the Atlantic despite the difficult economic environment as a result of the coronavirus pandemic. Furthermore, it is already clear that the synergies arising from the business combination of T-Mobile US and Sprint are impacting on our results faster than previously expected. We want to use this strong starting position going forwards to underpin our success with solid financial growth rates, further extend our technology leadership with the best state-of-the-art networks, and thereby continue to systematically implement our Leading European Telco strategy.

As communicated at our 2018 Capital Markets Day, we are targeting the following compound annual growth rates (CAGR) for the period from 2017 through 2021 – taking into account the implications of the business combination of T-Mobile US and Sprint:

- **Revenue:** 1 to 2 %
- **Adjusted EBITDA:** 2 to 4 %
- **Free cash flow (before dividend payments and spectrum investment):** around 10 %

For 2021, we expect to post the following year-on-year trends, assuming a comparable consolidated group and constant exchange rates:

- **Revenue** is likely to increase again slightly in 2021. We expect service revenue to increase.
- **Adjusted EBITDA AL** is expected to be EUR 37.0 billion in 2021. In the reporting year, adjusted EBITDA AL came in at EUR 35.0 billion; on a like-for-like basis, i.e., adjusted for comparability with the adjusted EBITDA AL forecast for 2021, adjusted EBITDA AL stood at EUR 37.6 billion.
- **Free cash flow AL** is expected to grow to around EUR 8.0 billion in 2021. Free cash flow AL in 2020 was EUR 6.3 billion; on a like-for-like basis, i.e., adjusted for comparability with the free cash flow AL forecast for 2021, free cash flow AL stood at EUR 6.6 billion.

Economic outlook

In its economic forecast from January 2021, the International Monetary Fund (IMF) expects global economic growth to return to 5.5 % in 2021 after the historic downturn in 2020. We also expect to see a tangible economic recovery in our core markets, although it will likely be the end of 2021/the start of 2022 before economic activity returns to pre-coronavirus levels.

Forecast on the development of GDP and the unemployment/non-employment rates in our core markets for 2021 and 2022

%	GDP for 2021 compared with 2020	GDP for 2022 compared with 2021	Unemployment/ non-employment rate in 2021	Unemployment/ non-employment rate in 2022
Germany	3.7	3.6	6.1	5.7
United States	4.4	3.4	6.0	4.8
Greece	3.8	5.3	17.5	16.7
Romania	4.0	4.9	6.2	5.1
Hungary	4.4	4.6	4.4	3.9
Poland	4.1	4.6	5.3	4.1
Czech Republic	3.6	4.9	3.3	3.2
Croatia	4.7	5.0	7.5	6.9
Netherlands	2.8	2.9	6.4	6.1
Slovakia	4.7	4.4	7.8	7.1
Austria	3.4	3.6	5.1	4.9

Source: Consensus Economics, European Commission; last revised: January 2021.

The unemployment rate for Germany and the non-employment rates for the other countries are presented in conformance with ILO standards.

[1] The forecasts contain forward-looking statements that reflect management’s current views with respect to future events. Words such as “assume,” “anticipate,” “believe,” “estimate,” “expect,” “intend,” “may,” “could,” “plan,” “project,” “should,” “want,” and similar expressions identify forward-looking statements. These forward-looking statements include statements on the expected development of revenue, EBIT, EBITDA after leases, adjusted EBITDA after leases, ROCE, cash capex, and free cash flow after leases. Such statements are subject to risks and uncertainties, such as an economic downturn in Europe or North America, changes in exchange and interest rates, the outcome of disputes in which Deutsche Telekom is involved, and competitive and regulatory developments. Some uncertainties or other imponderables that might influence Deutsche Telekom’s ability to achieve its objectives, are described in the “Risk and opportunities management” section of the combined management report and in the “Disclaimer” at the end of the Annual Report. Should these or other uncertainties and imponderables materialize, or the assumptions underlying any of these statements prove incorrect, the actual results may be materially different from those expressed or implied by such statements. We do not guarantee that our forward-looking statements will prove correct. The forward-looking statements presented here are based on the future structure of the Group, without regard to significant acquisitions, disposals, business combinations, or joint ventures that may arise at a later date. These statements are made with respect to conditions as of the date of this document’s publication. Without prejudice to existing obligations under capital market law, we do not intend, or assume any obligation, to update forward-looking statements.

Expectations for the Group

Expectations up to 2022. We expect profitable growth to continue over the next two years. This will provide a sound basis for achieving our financial ambitions – as communicated at our 2018 Capital Markets Day and taking into account the implications of the business combination of T-Mobile US and Sprint.

We expect our **financial performance indicators** to develop as follows in 2021 and 2022:

- **Revenue** should increase slightly year-on-year in 2021 and remain stable in 2022. The forecast for 2021 is based on a slight increase in revenue in the Germany, United States, and Group Development operating segments. Revenue is expected to remain stable in the Europe operating segment and to decline slightly in the Systems Solutions operating segment in 2021. Then in 2022, we expect revenue to increase slightly in the Germany operating segment and to increase in Group Development. In our other operating segments, revenue is expected to remain stable in 2022. Service revenue is projected to increase year-on-year in both 2021 and 2022.
- **Adjusted EBITDA AL** is expected to come in at around EUR 37.0 billion in 2021 and to rise in 2022. In the next two years, adjusted EBITDA AL will be negatively affected by the gradual exit from the business model of terminal equipment leases in the United States, with revenues from terminal equipment leases being offset primarily by the depreciation of the capitalized terminal devices on the expenses side. Terminal equipment leases were a major pillar, in particular, at Sprint. In its place, marketing activities are set to shift increasingly toward terminal equipment sold under installment plans.
- We are forecasting a slight decrease for EBIT in 2021. The partial reversal of impairment losses on spectrum licenses at T-Mobile US had a strong positive effect in the reporting year. We expect EBIT to rise sharply again in 2022. The expiry of the amortization of UMTS licenses in the Germany operating segment will contribute to the positive trend.
- **Return on capital employed (ROCE)** is expected to decline in 2021 and return to growth in 2022. Hence, we expect to achieve our target for ROCE to be higher than the expected weighted average cost of capital (WACC) again in 2022, following a briefly increased burden in 2021 from the integration costs arising from the business combination of T-Mobile US and Sprint.
- Our investments – measured in terms of **cash capex** (before spectrum investment) – are expected to amount to around EUR 18.4 billion in 2021 and to remain stable in 2022. We want to continue investing heavily in building out our network infrastructure in Germany, the United States, and Europe in order to safeguard our technology leadership in the long term.
- **Free cash flow AL** (before dividend payments and spectrum investment) is expected to reach around EUR 8.0 billion in 2021. We also expect a strong increase in free cash flow AL in 2022 due to good operational development.
- At the end of 2020, we had the following **ratings**: BBB with a stable outlook (Standard & Poor's – S&P); BBB+ with a stable outlook (Fitch); and Baa1 with a negative outlook (Moody's). Maintaining an investment grade rating within the A– to BBB range will enable us to retain access to the international capital markets and is thus a key component of our finance strategy.
- We are forecasting a slight decrease for our **EPS** (adjusted for special factors) in 2021. The EPS for 2020 includes a positive effect from the subsequent measurement of the stock options to buy shares in T-Mobile US received from SoftBank in June 2020. We expect to see a strong increase in adjusted EPS in 2022.

Our debt issuance program puts us in a position to place issues in the international capital markets at short notice, while our commercial paper program enables us to issue short-term papers in the money market. T-Mobile US is being refinanced primarily in the form of senior secured and unsecured notes.

Bonds and loans in the total amount of EUR 7.2 billion and EUR 7.0 billion will fall due for repayment in 2021 and 2022, respectively. A number of T-Mobile US bonds include issuer termination rights. If the premature termination and refinancing of these bonds result in economic gains, this could give rise to further refinancing requirements. We plan to issue new bonds in various currencies. The exact financing transactions will depend on developments in the international finance markets. In January 2021, T-Mobile US placed unsecured notes with a total volume of USD 3 billion on the market. We also intend to cover part of our liquidity requirements by issuing commercial paper.

We want to continue leveraging economies of scale and synergies through suitable partnerships or appropriate acquisitions in our footprint markets. There are no plans, however, to expand into emerging markets. We will continue to subject our existing partnerships and equity investments to regular strategic reassessments with a view to maximizing the value of our Company.

Our expectations for the period until 2022 for the Group and the operating segments as regards our financial and non-financial performance indicators are shown in the following tables. They assume a comparable consolidated group and constant exchange rates. If the economic situation should deteriorate or any unforeseen state or regulatory interventions arise, the expectations expressed here may change accordingly. Given the level of macroeconomic uncertainty in the context of the continuation of the coronavirus pandemic, we cannot rule out the possibility of deviations either. All trends denote year-on-year changes. To indicate the intensity and trends of our forecasts, we apply the following assessment matrix: strong decrease, decrease, slight decrease, stable trend, slight increase, increase, strong increase.

Financial performance indicators

		Results in 2020	Pro forma in 2020[a]	Expectations for 2021[b]	Expectations for 2022[b]
Net revenue					
Group	billions of €	101.0	106.7	slight increase	stable trend
Germany	billions of €	23.8	23.6	slight increase	slight increase
United States (in local currency)	billions of $	70.1	76.4	slight increase	stable trend
Europe	billions of €	11.3	11.3	stable trend	stable trend
Systems Solutions	billions of €	4.2	4.2	slight decrease	stable trend
Group Development	billions of €	2.9	3.0	slight increase	increase
Service revenues					
Group	billions of €	78.9	83.3	increase	increase
United States (in local currency)	billions of $	50.6	55.4	increase	increase
Profit (loss) from operations (EBIT)	billions of €	12.8	13.5	slight decrease	strong increase
EBITDA AL	billions of €	33.2	35.9	decrease	slight increase
EBITDA AL (adjusted for special factors)					
Group	billions of €	35.0	37.6	37.0	increase
Germany	billions of €	9.2	9.2	9.4	increase
United States (in local currency)	billions of $	24.0	26.8	25.8	increase
Europe	billions of €	3.9	3.9	3.9	slight increase
Systems Solutions	billions of €	0.2	0.3	0.3	slight increase
Group Development	billions of €	1.1	1.2	1.2	increase
ROCE	%	4.6		decrease	increase
Cash capex (before spectrum investment)					
Group	billions of €	17.0	17.8	18.4	stable trend
Germany	billions of €	4.2	4.2	stable trend	increase
United States (in local currency)	billions of $	10.7	11.7	increase	stable trend
Europe	billions of €	1.8	1.8	slight decrease	stable trend
Systems Solutions	billions of €	0.3	0.2	stable trend	stable trend
Group Development	billions of €	0.5	0.5	strong increase	increase
Free cash flow AL (before dividend payments and spectrum investment)	billions of €	6.3	6.6	around 8.0	strong increase
Rating					
Standard & Poor's, Fitch		BBB, BBB+		from A- to BBB	from A- to BBB
Moody's		Baa1		from A3 to Baa2	from A3 to Baa2
Other					
Dividend per share[c, d]	€	0.60		Dividend follows EPS (adjusted for special factors) growth, minimum of € 0.60	Dependent on finance strategy[e]
EPS (adjusted for special factors)	€	1.20		slight decrease	strong increase
Equity ratio	%	27.4		25 to 35	25 to 35
Relative debt		2.78x		> 2.75x[f]	> 2.75x[f]

[a] Significant changes in the organizational structure and in the composition of the consolidated Group included up to the date of preparation of the consolidated financial statements and the combined management report (e.g., the business combination with Sprint in the course of the year and the divestiture of Sprint's prepaid business, the acquisition of Simpel, the reassignment of the growth area Internet of Things (IoT) to the Germany operating segment, and the reassignment of the Austrian cell tower business to the Group Development operating segment).

[b] On a comparable basis.

[c] The expectation regarding the dividend per share refers to the respective financial year indicated.

[d] Subject to approval by the relevant bodies and the fulfillment of other legal requirements.

[e] We will provide information about the further development of our finance strategy for the years following 2021 at our Capital Markets Day, which is planned for 2021.

[f] Deviation from the target range of 2.25–2.75x for a short period due to the business combination of T-Mobile US and Sprint.

Non-financial performance indicators

		Results in 2020	Pro forma in 2020[a]	Expectations for 2021	Expectations for 2022
Group					
Customer satisfaction (TRI*M index)		72.2		slight increase	slight increase
Employee satisfaction (commitment index)		4.0		stable trend	stable trend
Fixed-network and mobile customers					
Germany					
Mobile customers	millions	48.5	48.5	increase	increase
Fixed-network lines	millions	17.6	17.6	stable trend	slight decrease
Retail broadband lines	millions	14.1	14.1	increase	increase
Television (IPTV, satellite)	millions	3.9	3.9	increase	increase
United States					
Postpaid customers	millions	81.4	81.4	increase	increase
Prepaid customers	millions	20.7	20.7	increase	increase
Europe					
Mobile customers	millions	45.6	45.6	slight increase	increase
Fixed-network lines	millions	9.1	9.1	stable trend	stable trend
Broadband customers	millions	7.0	7.0	increase	increase
Television (IPTV, satellite, cable)	millions	5.1	5.1	increase	increase
Systems Solutions					
Order entry	billions of €	4.6	4.6	stable trend	slight increase
ESG KPIs					
Total CO_2e emissions (Scope 1+2)	kt CO_2e	2,512		strong decrease	strong decrease
Energy Intensity ESG KPI	kWh/terabyte	119		strong decrease	strong decrease
Carbon Intensity ESG KPI	kg CO_2/terabyte	23		strong decrease	strong decrease
Order Volume Verified as Non-Critical ESG KPI	%	62		increase	increase

[a] Significant changes in the organizational structure and in the composition of the consolidated Group included up to the date of preparation of the consolidated financial statements and the combined management report.

For further information on the development of the non-financial performance indicators of our operating segments, please refer to the section "Expectations for the operating segments."

In both 2021 and 2022, we intend to achieve a moderate improvement in **customer loyalty/satisfaction** – which is measured using the **TRI*M index** performance indicator.

Having achieved a high level of 4.0 – on a scale of 1.0 to 5.0 – on the **commitment index** in the 2019 employee survey, and in view of the results of the pulse surveys conducted in 2020, we expect the positive response of our employees regarding our Company to remain stable in the next employee survey in 2021.

For further information on our ESG KPIs and our expectations, please refer to the section "Corporate responsibility and non-financial statement."

Our planning is based on the following exchange rates:

Currency		Exchange rate
Croatian kuna	HRK	7.54
Polish zloty	PLN	4.44
Czech koruna	CZK	26.46
Hungarian forint	HUF	351.20
U.S. dollar	USD	1.14

Expectations for Deutsche Telekom AG. The development of business at Deutsche Telekom AG, the Group's parent company, is reflected particularly in its service relationships with its subsidiaries, the results of the subsidiaries' domestic reporting units, and other income from subsidiaries, and from associated and related companies. In other words, our subsidiaries' results from operations and the opportunities and challenges they face are key factors shaping the future development of Deutsche Telekom AG's figures. Accordingly, in addition to our expectations for the Group, the expectations described on the following pages concerning the operating segments' revenue and earnings – such as strong competition, regulatory intervention, market and economic expectations, etc. – have an impact on our expectations concerning the development of Deutsche Telekom AG's future income after taxes.

For the 2020 financial year, we will propose a dividend of EUR 0.60 per dividend-bearing share, which will also serve as a baseline for the dividend for the 2021 financial year. Since the 2019 financial year, the dividend has reflected relative growth in adjusted earnings per share. Based on the aforementioned expectations for our operating segments and the resulting effects, and taking existing retained earnings into account, Deutsche Telekom AG expects to distribute a dividend of at least EUR 0.60 per dividend-bearing share for the 2021 financial year, subject to approval by the relevant bodies and the fulfillment of other legal requirements.

Expectations for the operating segments

Germany

The German market for telecommunications services again saw a slight further contraction of 0.4 % in 2020 largely driven by the impact of the coronavirus pandemic. Revenue losses were recorded primarily due to declines in roaming and visitor revenues. The downward trend in revenue is expected to slow to -0.2% in 2021. Ongoing revenue losses due to the pandemic, regulatory effects, and the decline in traditional fixed-network telephony will not be fully offset by still growing demand for mobile data volumes and faster connectivity in the consumer and business customer area. In the German mobile market, revenues are expected to increase by 0.4 % in 2021 (source: EITO).

For the wider ICT market, which covers IT services as well as telecommunications, EITO forecasts growth of 1.6 % for 2021. This plus will primarily result from IT market growth, which, at 2.3 %, will continue to exceed growth in telecommunications revenues in 2021. The already high demand regarding services for business customers (e.g., outsourcing, project business, consulting) and software-based services (virtualization and cloud business, e.g., in the form of software as a service, platform as a service, or infrastructure as a service) has gained further momentum following the rise in internet use prompted by the coronavirus pandemic.

Innovative integrated products and attractive supplementary services – such as TV and streaming options, and smart-home services – are becoming increasingly important for our competitive position with consumers, while cloud services, security applications, and solutions for Industry 4.0 are gaining in significance with business customers. We set ourselves apart from other providers with our broad range of products and services, rate plan innovations like our new convergent offering MagentaEINS Plus, and innovative fixed-network products like our Smart Speaker Mini. We are the first telecommunications company in Germany to have tackled the topic of sustainability head on in the form of our “we care” sustainability label, which we launched to improve the transparency of our products.

The mobile communications market in Germany is currently dominated by three providers, each with its own network infrastructure, who deploy 4G/LTE and 5G technology to ensure that the majority of the population has access to high-speed mobile Internet. At the spectrum auction that concluded on June 12, 2019, Drillisch Netz AG, a subsidiary of United Internet AG, acquired mobile spectrum and has announced its intention to set up a fourth mobile network. This is not a new market player, as United Internet AG is already active on the market as a service provider with around 10 million customers. It will presumably take years to build-up its own mobile network and United Internet has announced it intends to make use of wholesale national roaming services while it does so. United Internet is currently in negotiations with all three network operators regarding these wholesale services.

By contrast, the fixed-network broadband market hosts a large number of players with differing infrastructures – from national through to regional providers. We are assuming that competition from cable network operators will remain intense and that the number of providers who have their own DSL and fiber-optic networks will increase. Competition is also being increased by providers specializing in FTTH infrastructure.

In our Germany operating segment, we continue to work on our comprehensive transformation program and are aiming to secure our market position as the leading integrated telecommunications provider in Germany by means of innovative, competitive offers. We completed the IP migration in Germany at the end of 2020, creating a foundation from which we can effectively implement further technological innovations in the future. We will increasingly reduce the complexity of our products and processes through automation and digitalization initiatives, and ensure greater end-to-end responsibility. Our goal is to deliver the best customer experience with the best service. Hence, we continue to make systematic investments in the brand and shopping experience and are working to realign consumer sales. The aim of our realignment activities, which we started in 2020, is to improve the organizational structure and make the necessary workforce adjustments by the end of 2021. Nevertheless, we remain committed to our nationwide shop infrastructure in Germany, via which we offer personalized advice and one-on-one customer contact. Our network of shops is the largest of all our German competitors. Furthermore, as of January 1, 2021, Deutsche Telekom reassigned the business and profit responsibility for Deutsche Telekom IoT GmbH from the Systems Solutions operating segment to the Business Customers unit in the Germany operating segment. The Group subsidiary established in summer 2020 is responsible for the IoT business of Deutsche Telekom. This reassignment puts us in a position to serve the IoT market more quickly and thus to strengthen Deutsche Telekom’s position on this growth market. The combining of the Business Customers unit’s telecommunications services under one roof in mid-2020 brings us a step closer to our ambition of becoming the preferred partner for digitalization. From now on, small and large business customers as well as multinational corporations will increasingly be served worldwide with an integrated portfolio for telecommunications and IoT services. From fixed network and mobile communications through to IT, we plan to create one-stop integrated solutions professionally and fast that provide our customers with optimum, sustainable support in a digital world.

In the fixed network, we want to offer fiber-optic-based products to more and more customers, creating for them the best customer experience. Our Germany-wide IP-based network achieves high transmission bandwidths of up to one gigabit per second. In order to always offer our customers competitive high-speed lines, we increasingly invest in our fiber-optic network build-out. From 2021, we plan to build out fiber to the home (FTTH) to an average 2 million households per year. Our build-out will benefit both people in towns and cities and those in rural areas. What is more, we are working towards further partnerships to provide even more customers with high-bit-rate internet access – and setting a benchmark for sustainable broadband infrastructure.

In mobile communications, we are keeping our promise to build out the network and are therefore the leader in terms of network coverage, speeds, and customer experience. In total, two thirds of the population of Germany can already use this state-of-the-art mobile technology on the Telekom network. The 5G network is being built out with a combination of two spectrum bands. The 2.1 GHz band, which has wide reach, will provide high mobile bandwidths in rural areas in particular. The 3.6 GHz band offers high-speed 5G in densely populated areas like big cities. The service is already available in 26 German cities.

We want to set ourselves apart from our competitors by offering the best convergent connectivity. In September 2020, we extended our convergent offering with MagentaEINS Plus, thereby setting yet another benchmark – the first fully-integrated offering combining fixed network and mobile communications in one contract with more freedom, more to share, more simplicity, and more flexibility. When designing our products, we pay particular attention to consistently high quality, a simple rate plan structure, and the innovative evolution of our existing service portfolio. With the introduction of our new cloud gaming service, MagentaGaming, we offer customers the opportunity to access a wide-ranging games portfolio without downloads for a small monthly price. We are focusing on enhancing the performance of our rate plans and will orient the latter to the needs of our customers – for example, by expanding all our MagentaMobil rate plans to include StreamOn flat rates and higher data volumes, and by utilizing the 5G mobile communications standard.

In addition, our multi-brand strategy in mobile communications allows us to address the entire customer spectrum – from smart shoppers through to premium customers. We impress our business customers with our Business Mobile rate plans, which already include the new 5G standard and can be expanded with additional options catering exclusively to this target group.

We want to secure an ever larger share of the growing TV market, with a focus on our entertainment and exclusive streaming offers in the Megathek library on MagentaTV, i.e., a wide array of entertainment: from action to drama, from originals and exclusives to top international series and films, as well as the best of the German TV stations ARD and ZDF. In order to give our customers the best possible television experience, we are expanding our offering with streaming services and partners, such as TVNOW, Netflix, Prime Video, Sky, Disney+, DAZN, and Videoload. In this way, MagentaTV combines multiple entertainment worlds in one. To this end, we are investing in our IPTV platform and winning new customers with attractive content, services, and strong partnerships.

We want to remain the market leader in Germany in terms of revenue over the coming years and extend our lead through rising service revenues. We are responding to our customers' constantly growing demand for bandwidth and continuing to invest extensively in broadband networks, innovative products, and outstanding customer service. In our broadband business, revenues are constantly growing and customer satisfaction levels rising, and we want to continue this growth trend again in 2021. We will improve customer satisfaction by actively evolving our mobile services (e.g., Mein Magenta app) and ensuring seamless service across all channels (e.g., web, hotline, shop).

We expect revenue to grow slightly in our Germany operating segment in 2021 and 2022 alike, despite regulatory effects in our core business and tough competition. Our value drivers are growing mobile and TV revenues (a result of our multi-brand strategy), rising numbers of customers with high-speed lines, and revenue growth with business customers, for example, thanks to the positive trend in IT and cloud business. We want to continue expanding our fiber-optic services, both by means of business models with wholesale products (such as the contingent model) and through further partnerships.

We also anticipate that our growth initiatives in Germany will offset the volume-driven decline in revenue from traditional fixed-network business and that we will continue consolidating our position as market leader in mobile and fixed-network communications. Thanks to our outstanding network quality and the progress we are making with fiber-optic build-out, we expect to see an increase in the next two years in the number of mobile customers as well as growth in our broadband products, fueled by demand for TV and high-speed lines. Our initiatives to digitalize ICT solutions business for our business customers will continue enhancing revenues from IT and cloud services, and from M2M/IoT business. In wholesale business, we expect sales volumes to fall overall, mainly due to the fact that our wholesale customers are migrating their end customers to alternative cable and fiber-optic-based infrastructure. We nevertheless expect demand for our contingent model to be high.

In each of the next two years, we expect to post year-on-year increases in earnings in our Germany operating segment. For 2021, we expect adjusted EBITDA AL to increase to around EUR 9.4 billion, driven in particular by high-value revenue growth and a simultaneous reduction in indirect costs, mainly through digitalization and automation. Our adjusted EBITDA AL is likely to rise further in 2022. We are forecasting a slight improvement in the adjusted EBITDA AL margin through 2022.

Our course is set for innovation and growth: While we will continue to consistently promote investments in new technologies with great intensity in the future, we will wind down legacy systems, cutting costs in the process. Over the coming years, we will focus our investments on building out a forward-looking fixed-network and mobile infrastructure (e.g., FTTH and 5G). Our aim here will be to close gaps in the network in rural areas and provide urban centers with the high bandwidth they require. We want to continue this rollout efficiently and, to this end, are participating in funding programs. We expect our cash capex to remain stable year-on-year in 2021 and to increase year-on-year in 2022.

United States

The global economic slowdown of 2020 was reflected, although not severely, in the overall U.S. ICT market, declining from 2019 by 1.9 %. Growth was down or reversed across nearly all ICT sectors, including IT equipment and services, and total telecommunications infrastructure and services. Only the market value of voice and data services remained stable compared with 2019. Some reversals are forecast for 2021 – with growth expected in total market ICT growth, mobile data services, and telecommunications equipment.

The U.S. mobile market continues to be characterized by competition among the major mobile carriers – now numbering three after the successful merger of Sprint and T-Mobile US. Overall mobile revenues are expected to increase annually with subscriber growth, data consumption increases, and growth in the device market. Plan rates remain competitive. As anticipated, the MVNO offerings from cable companies Altice, Charter, and Comcast increased in competitive prominence in 2020. Cable outpaced their MNO counterparts through the second quarter of 2020, netting one million adds compared to 882,000. Cable can present an even greater competitive threat if they are able to leverage recently acquired mid-band spectrum; Charter and Comcast both won sizeable amounts of spectrum in the recent 3.5 GHz band auction, as did Cox cable who has yet to deploy a MVNO.

Leading industry associations such as GSMA expect the United States to lead global migration to 5G. The United States' 5G is expected to accelerate in 2020 and beyond, with providers expanding their capacity and coverage in spectrum bands below 6 GHz. The FCC has also taken an aggressive stance on putting millimeter Wave (mmWave) frequencies in the hands of operators, auctioning off the 24 and 28 GHz bands, and undertaking more mmWave auctions (in the 37, 39, and 47 GHz bands) in late 2019. GSMA expects almost half of all mobile connections to be running on 5G networks by 2025. T-Mobile US expanded its 5G network leadership, by reaching 280 million people, utilizing the 600 MHz spectrum holdings it acquired in April 2017 and covering over 100 million people with Ultra Capacity 5G by 2020, utilizing the 2.5 GHz spectrum holdings it acquired in the merger with Sprint.

Following the completion of the merger with Sprint, T-Mobile US hit the grounding running with its initiatives for 2020, carrying great momentum into 2021 even against the backdrop of the coronavirus pandemic. In 2021, T-Mobile US will continue to focus on creating shareholder value and providing the best value experience in the U.S. wireless industry. Key elements of the company's focus include consistently and profitably outgrowing the competition, unlocking the value of synergies faster and bigger than anticipated, and making the necessary investments in the near term to position the company for long-term success. T-Mobile US customer growth initiatives center on attracting and retaining a loyal customer base by offering devices when and how customers want them, and providing plans that are simple, affordable, and without unnecessary restrictions to deliver the best value in wireless. T-Mobile US continues to keep this winning formula through providing this best value proposition in the market, while providing winning customer service married with its leading 5G network.

T-Mobile US expects continued increases in postpaid and prepaid customers in 2021 and 2022 with expansion in underpenetrated growth vectors such as small town rural and enterprise to fuel future growth. Military, 55+, family plans, and previous greenfield retail expansion have all helped fuel industry-leading growth over the last few years while allowing T-Mobile US to deliver great financial returns along with industry-leading subscriber growth. In addition, continued growth of the upper and lower age demographics is expected in the U.S. wireless market. However, competitive pressures and unforeseen changes in the wireless communications industry in the United States may significantly affect the expected ability to attract and retain postpaid and prepaid customers.

T-Mobile US expects a slight increase in total revenues in U.S. dollars in 2021 and a stable trend for 2022 as postpaid customer growth momentum is partially offset by the continued adoption of lower ARPU customer categories (Military, 55+, and family plans) somewhat pressuring ARPU. Further adoption of 5G devices is anticipated to lead to equipment revenue growth and increases in installment device financing, but partially offset by lower lease revenues, extended device upgrade cycles, and increased rates of customers activating with a previously purchased device.

For 2021, T-Mobile US expects adjusted EBITDA AL of USD 25.8 billion and an increase in 2022. The development of adjusted EBITDA AL will be affected by the gradual exit from handset leasing in the upcoming years. Sprint had a higher focus on handset leasing, which shall be replaced by an increased focus on equipment installment plans. Revenue growth is expected to outpace increases in expense as T-Mobile US is focused on customer growth and delivering synergies of the merger with Sprint by driving operating cost efficiencies and site decommissioning as the network is integrated and customers are migrated to the destination network. However, investments to unlock growth vectors such as the growth in digitalization and supporting small town, rural, and enterprise growth, as well as the expectation of increased switching activity from network migrations, will impact adjusted EBITDA AL.

Excluding expenditures relating to spectrum, T-Mobile US expects an increase in 2021 and stable cash capex growth in 2022 in U.S. dollars as capex remains elevated for the network integration and the rapid pace of deployments to continue building out the 5G network which now covers more than 100 million people with Ultra Capacity 5G.

Europe

In 2020, the coronavirus pandemic had a substantial negative impact on economic output in the countries of our Europe operating segment. In 2021, the economy is likely to recover. Real GDP will rise in our segment's footprint countries by between 3.4 and 4.7 % per annum in 2021. However, a potential increase in unemployment in conjunction with ongoing economic uncertainty could have a negative impact on household and business expenditure for telecommunications services. The (partial) lockdown imposed at the start of 2021 could have a detrimental effect on revenues from business customers, roaming, and prepaid services in particular.

We are assuming that the forecast of these macroeconomic conditions will only have a limited impact on the development of our telecommunications markets (including IT). This assumption has been confirmed by EITO, which anticipates a modest initial recovery for the countries of our Europe operating segment for 2021, with slight growth of 0.4 %. This is based on an improved forecast for IT business, while the telecommunications market is expected to remain at the prior-year level.

Taking the telecommunications market on its own, Analysys Mason also forecasts a stable trend for total revenues for 2021 and an increase of almost 2 % for 2022. Customer demand for a fast and reliable broadband connection is also expected to lead to growth in broadband revenues of around 3 % for the next two years. According to Analysys Mason, the trend towards increased data usage will also continue, especially in households that have not previously had a sufficiently fast broadband line. Demand has also grown as a result of the coronavirus-induced shift towards working from home. On top of this, the fiber-optic build-out is being accelerated. In most Central and Eastern European countries, there is still the possibility of increasing broadband network coverage. Additional regulatory-induced measures will likely further boost investments in network infrastructure. This growth is being bolstered by the growing number of companies offering convergent products. In traditional pay-TV business, according to Analysys Mason, the number of customers using an OTT offer will increase significantly over the next two years, as will the number of IPTV lines. Accordingly, TV revenues for 2021 will also increase by 1 % and for 2022 by more than 2 %. Following the downturn in 2020, mobile business will slowly start to recover again in 2021, according to the Analysys Mason forecast – with modest growth of just under 1 % in 2021 and almost 2 % in 2022.

We aspire to remain Europe's leading telecommunications provider in the coming years. We are convinced that a country-wide integrated fixed-network and mobile network infrastructure will be a key success factor. Our FMC product portfolio is already available to customers in all of our national companies. Another milestone on the road to success is digitalization: by making intelligent use of our network infrastructure, which comprises a range of technologies, especially 5G, we want to offer innovative solutions for households, business customers, and municipalities. With our fully integrated offers and digitalization, which is fast gaining momentum, we plan to continue to ensure the best customer experience and continue to improve customer satisfaction.

The Europe operating segment is distinguished by its strong investment portfolio: All of our national companies are integrated providers of telecommunications services and, as well as having a high brand recognition value, are substantially relevant in their respective home markets. In the last year, for instance, we were already able to provide our customers in Poland with comprehensive convergent services by utilizing Orange’s fiber-optic network. In the Czech Republic, we are working with a partner to run our own fiber-optic network. In Romania, we will take a different tack and transform the company from an integrated provider into a mobile-only provider: On November 6, 2020, OTE concluded an agreement with Orange Romania concerning the sale of the 54 % stake in Telekom Romania Communications, which operates the Romanian fixed-network business, to Orange Romania. The transaction is subject to approval by the authorities as well as other closing conditions.

Our goal is to deliver the best customer experience. Our successful convergent product portfolios MagentaOne and MagentaOne Business provide strong offerings with which we can help shape developments in the European markets. We made significant progress in the reporting year: we doubled the penetration rate in the last three years, and more than 50 % of our customers already have a MagentaOne contract. We want to increase this share successively over the next two years. Our FMC offering is to provide the best customer experience: With a strong set of add-on services (“more for more” principle), it is our view that MagentaOne is an excellent option for getting the best out of the mobile and fixed-network world. We believe it will lead to higher levels of customer satisfaction and a lower churn rate. Over the next two years, we plan to maximize the business benefits arising from greater customer satisfaction, further lower the churn rate, and increase FMC revenues as a percentage of total revenues.

We are convinced that only top customer service will enable us to take the next step toward achieving the best customer experience. Digitalization can make a major contribution in this regard. The service app for consumers enables us to largely digitalize our interaction with customers, meaning we can meet customer needs in a more personalized and efficient way, and position products and innovative services in the market more quickly. This service app has been established in all of our national companies; in the reporting year, we achieved a penetration rate in the Europe operating segment of 62 %. We firmly believe that our customers will reward the benefits it brings. Thus, we believe we can achieve first or second place in customer satisfaction rankings of telecommunications companies in the respective national companies in the next two years, as measured by the TRI*M index which is based on empirical research.

Our TV business remains key to the success of FMC. In addition to a seamless experience of TV and entertainment offers, we continue to attach importance to high quality and – where it makes sense – exclusive proprietary content. Going forward, we will continue negotiations, depending on local market conditions, to acquire (co-)exclusive rights to broadcast sports events, such as the UEFA Champions League and the Europa League, or the rights to TV movies/series. However, we still believe high-quality local content to be very relevant in our markets. This is why we would like to offer our customers a wide range of such content. By implementing a new TV platform, we can improve the customer experience on the one hand, and rapidly roll out new services and content on the other. We are also working together with what are known as OTT players, like Netflix or Prime Video, and gradually expanding our range of OTT services to all screens – especially to our Android-TV-based terminals. Overall, we expect to continue growing our revenues from TV business over the next two years.

The broadband build-out will remain a key focus of activities in the coming years. Our state-of-the-art network infrastructure supports the digital transformation and enables us to leverage our technology leadership. We therefore plan to take part in further spectrum auctions – particularly for 5G. The 5G launch is advancing in our national companies: after Austria, the marketing of 5G also officially began in Hungary, Poland, the Czech Republic, Slovakia, Croatia, and Greece in 2020. Further countries in our Europe operating segment will gradually follow suit over the next year, depending on their local market needs and on the results of spectrum auctions. To this end, we have completed initial pilot projects in almost all our footprint countries and made the necessary technical preparations. In parallel to the launch of 5G, we continue to expand LTE reach and implement further LTE frequency layers in order to increase network capacity. In this way, we will achieve our target of 99 % network coverage in our European footprint in the next year. One aim of our integrated network strategy is to make further advances in the fiber-optic rollout. In addition to Hungary, Greece, Slovakia, Croatia, North Macedonia, and Montenegro, we are also investing massively in building out our fiber-optic networks in Austria and the Czech Republic. We plan to achieve fiber-optic coverage of 38 % by 2022.

In the next two years, our business customers in the Europe operating segment will have even better options to shape their future in digitalized business life. First of all, we will further tailor our offers to the changed needs of our customers. For example, our MagentaOne Business offers include video conferencing solutions for all business customer groups. Whether small or large, companies can further increase their productivity thanks to our exclusive partnership with Microsoft. In the area of security, we provide solutions, for example, for smart video surveillance for cities and municipalities, but also for private companies of all sizes. For our corporate customer business, we expect this to result in rising revenues from both telecommunications and ICT/cloud services. Our product portfolio continues to center on the efficiency of our business customers: as a strong partner for digitalization, we make it possible to satisfy additional customer needs, for example by optimizing websites or increasing payment options. Connectivity is also more important than ever for business customers. We would like to serve this need with our convergent offers, comprising the best connectivity (5G and optical fiber), efficient productivity, and state-of-the-art security solutions.

In our Europe operating segment, we expect to increase our customer base over the next two years, mainly thanks to a strong focus on MagentaOne, our convergence brand. Consequently, we expect the number of TV and broadband customers to increase in 2021 and 2022. We are also planning for slight growth in the number of mobile customers in 2021, gaining further momentum in 2022. We expect the number of fixed-network lines to remain stable in 2021 and 2022.

We expect revenues for our Europe operating segment to remain stable in 2021 and 2022, measured on a comparable basis, i.e., at constant exchange rates and market conditions, and given an unchanged organizational structure.

Vigorous competition in the markets of our operating segment could potentially put pressure on our margins. To be ready for such an eventuality, we want to increase our productivity and exploit the benefits of digitalization, for instance by automating processes in order to realize cost-cutting potential. Accordingly, we anticipate adjusted EBITDA AL to develop positively. We expected adjusted EBITDA AL to amount to around EUR 3.9 billion in 2021 and to increase slightly in 2022.

In order to maintain our technology leadership, we continue to invest in our integrated networks and plan to maintain our high level of investments over the next few years. Since we invested more than planned in the reporting year, cash capex will decrease slightly year-on-year in 2021. It is expected to level out in 2022.

Systems Solutions

Overall, growth in the IT market is expected to continue apace over the next two years, while cost pressure and intense competition are likely to persist. The impact of the coronavirus pandemic has accelerated digitalization in many areas. As a consequence, we expect further growth in demand for solutions for cloud services, big data, the Internet of Things, the digitalization of business processes, and IT security (cybersecurity).

After a brief decline in 2020, the market for IT services is likely to continue growing over the next few years. At the same time, this market is undergoing a radical transformation, e.g., due to ongoing standardization and automation, demand for smart services, and the changes being wrought by cloud services in outsourcing business. Further challenges have arisen in the shape of digitalization, the growing importance of cybersecurity, big data, and increasing mobility. Traditional IT business will continue to decline, while cloud services, the Internet of Things, mobility, and cybersecurity may achieve double-digit growth rates. In view of all this, our plan is to continue investing increasingly in growth markets – especially in digitalization (e.g., EDGE, artificial intelligence (AI), and blockchain), multi- and hybrid cloud services, and cybersecurity.

Part of our Group strategy is the ambition to be a leading partner for business customer productivity. We give our customers help and guidance in implementing digital business models with our offerings for connectivity, digital business, cloud and infrastructure, and security, as well as through our strategic partnerships.

Under the program to transform our systems solutions business, we realigned our organization and workflows on a portfolio basis, thereby creating the basis for business transparency and dedicated portfolio management and strategy. We are continuing to drive forward expansion of the growth business (e.g., public cloud managed services) while at the same time stabilizing and making further cost savings in established IT business (e.g., managed infrastructure services and private cloud), with the aim of bringing about a significant shift in the revenue mix towards our growth areas.

We are among the top providers in the European IT market. Our very high levels of customer satisfaction are a core element in maintaining this position in the long term as well as in playing a leading role in digitalization.

Overall, we are forecasting a stable trend in order entry and a slight decline in revenues for the Systems Solutions operating segment in 2021. Adjusted EBITDA AL is expected to develop stably and come in at around EUR 0.3 billion. Due to ongoing investments in growth areas, we expect cash capex to remain stable. For 2022, we expect to see a slight year-on-year increase in order entry, stable revenues, a slight increase in adjusted EBITDA AL, and stable cash capex.

Group Development
Our companies T-Mobile Netherlands and GD Towers dominate the performance of our Group Development operating segment.

While the Dutch mobile communications market continues to be shaped by sustained high price pressure and intense competition, this is expected to ease moderately in the coming years. The Netherlands is ahead of much of Europe with its bundling of fixed-network and mobile products into convergent offers (FMC). Nevertheless, the strong discount segment comprising mobile providers' secondary brands will continue to make for lively competition. The main components of our strategy for T-Mobile Netherlands continue to be the repositioning of the T-Mobile core brand, expansion of our portfolio of convergent products, and efficient cost management. Following the successful integration of Tele2 Netherlands, the Dutch MVNO and SIM provider Simpel was acquired to support our long-term strategy. The acquisition of Simpel secures our mobile market shares, creates synergies, and makes us more competitive in the consumer market.

GD Towers comprises the equity investments DFMG, T-Mobile Infra B.V., and, since the start of 2021, Magenta Telekom Infra GmbH. With some 32,500 sites, DFMG is the biggest provider of passive wireless infrastructure for mobile communications and broadcasting in Germany. We expect demand for cell sites to rise steadily over the next few years, given that network operators plan both to close gaps in coverage and to increase the density of mobile networks to meet the growing demand for mobile data services. With around 3,150 sites, T-Mobile Infra B.V. is one of three providers of passive wireless infrastructure in the Netherlands. On January 21, 2021, Deutsche Telekom, Cellnex Telecom S.A., the newly established, independently managed investment company Digital Infrastructure Vehicle I SCSp (DIV), and others signed an agreement to merge Deutsche Telekom's and Cellnex's respective Dutch subsidiaries for mobile infrastructure. Under the deal, the Dutch cell tower company T-Mobile Infra B.V. will be sold to DIV and subsequently merged into Cellnex Netherlands B.V. Magenta Telekom Infra GmbH bundles the Austrian radio tower business, operating around 7,000 sites.

We expect the revenues of our Group Development operating segment to increase slightly in 2021, as well as in 2022. Adjusted EBITDA AL is set to increase in 2021 to around EUR 1.2 billion; for 2022 we expect a further increase. The positive trend in revenue and adjusted EBITDA AL is mainly driven by the continued build-out of sites at DFMG and the FMC strategy with planned customer additions at T-Mobile Netherlands.

We expect investments in our Group Development operating segment to continue growing strongly in 2021, with a further increase projected for 2022. This is mainly on account of the ongoing build-out of cell sites by DFMG in Germany together with a slight decrease in investment activity at T-Mobile Netherlands due to the advanced stage of the integration of Tele2 Netherlands.

Group Headquarters & Group Services
At Group Headquarters & Group Services, we will stay focused over the next two years on our ongoing efficiency enhancement measures, with which we are further optimizing our structures, especially within Group Services. We will also continue to focus on implementing our cost-cutting measures. This will primarily involve reallocating human resources, bundling standardized processes for the Group, and enhancing the value of our real estate portfolio by means of innovative space and workplace concepts. As these cost cuts will put us in a position to offer our services more cost-effectively, the operating segments stand to benefit from them as well. Against the backdrop of the pandemic, we are working on flexible concepts that will enable us to adjust our capacities at short notice to take account of current developments.

In the coming years, too, our Board of Management department Technology and Innovation will drive not only the development of innovative technologies, products, and services, but also IT standardization and the ongoing establishment of centralized production platforms. Major areas of capital expenditure in the years 2021 and 2022 will include technology development, the implementation of our IT strategy, and security. We expect this to reduce overheads and capital expenditure, driven by IT operating costs and by the ongoing standardization of IT infrastructure and platforms.

In the long term, these savings will help the Group finance its innovation endeavors. We are focusing innovation topics, such as development of the new 5G mobile communications standard and network slicing, evolution of a proprietary smart system for the voice control of Deutsche Telekom products and services, and introduction of a uniform operating system for the routers marketed by the Group. Technological innovations will serve to safeguard the network and technology leadership of our Germany and Europe operating segments in the long term and to evolve the campus networks, which are designed to improve the integrated automation of our international industrial customers' production processes. Ultimately, every one of our investment projects revolves around enhancing the customer experience.

Risk and opportunity management

Board of Management's assessment of the aggregate risk and opportunity position

The assessment of the aggregate risk position is the outcome of the consolidated analysis of all material risk categories or individual risks. The aggregate risk position did not change fundamentally in 2020 compared with the previous year. Our major challenges particularly include the regulatory factors, economic uncertainty in consequence of the coronavirus pandemic, the implementation of the business combination of T-Mobile US and Sprint, intense competition and the associated price pressure in the telecommunications business, as well as the pressure to change arising from new technologies and strategic transformation. As it stands today, Deutsche Telekom AG's Board of Management sees no risk to the Group's continued existence as a going concern. As of the reporting date and the time of preparing the financial statements, there were no risks that jeopardize Deutsche Telekom AG's and key Group companies' continued existence as a going concern.

We are convinced that we will also be able to master challenges and exploit opportunities in the future without having to take on any unacceptably high risks either for our business or for society and the environment. We strive to achieve a good overall balance between opportunities and risks, with the aim of increasing added value for our stakeholders by analyzing and seizing new market opportunities. SDG 16 FINANCE

For further information on sustainability, please refer to the section "Corporate responsibility and non-financial statement."

Risk and opportunity management system

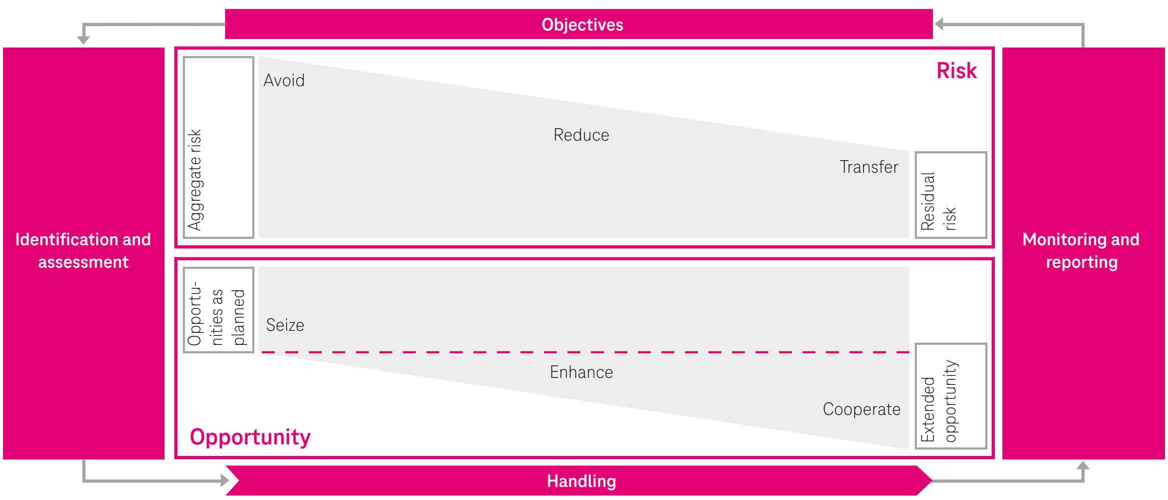
As one of the world's leading providers in the telecommunications and information technology industry, we are subject to all kinds of uncertainties and change. In order to operate successfully in this ongoing volatile environment, we need to anticipate any developments at an early stage and systematically identify, assess, and manage the resulting risks. It is equally important that we recognize and exploit opportunities. We therefore consider a functioning risk and opportunity management system to be a central element of value-oriented corporate governance.

A risk and opportunity management system of this kind is not only necessary from a business point of view; it is also required by laws and regulations, in particular § 91 (2) of the German Stock Corporation Act (Aktiengesetz – AktG). Deutsche Telekom AG's Audit Committee monitors the effectiveness of the internal control system and the risk management system as required by § 107 (3) sentence 2 AktG.

Our Group-wide risk and opportunity management system covers strategic, operational, financial, and reputational risks as well as the corresponding opportunities for our fully consolidated entities. The aim is to identify these risks and opportunities early on, monitor them, and manage them in accordance with the desired risk profile. For this purpose, we make use of internal and external information sources.

The standard process described below provides a framework. Once risks and opportunities have been identified, we move on to analyze and assess them in more detail; the effects of risks and opportunities are not offset against each other. We then decide on the specific course of action to be taken, for example, in order to reduce risks or seize opportunities. The respective risk owner implements, monitors, and evaluates the associated measures. The steps are repeatedly traversed as required and modified to reflect the latest developments and decisions.

The risk and opportunity management system



Our risk and opportunity management system is based on the globally applicable risk management standard of the International Standards Organization (ISO). ISO standard 31000 “Risk management – Principles and guidelines” is regarded as a guideline for internationally recognized risk management systems.

Our Internal Audit unit reviews the functionality and effectiveness of elements of our risk management system at regular intervals. The external auditor mandated by law to audit the Company’s annual financial statements and consolidated financial statements in accordance with § 317 (4) of the German Commercial Code (Handelsgesetzbuch – HGB) examines whether the risk early warning system is able to identify at an early stage risks and developments that could jeopardize the Company’s future. Our system complies with the statutory requirements for a risk early warning system.

In addition, our Group Controlling unit specifies a series of Group guidelines and processes for the planning, budgeting, financial management, and reporting of investments and projects. These guidelines and processes guarantee both the necessary transparency during the investment process and the consistency of investment planning and decisions in our Group and operating segments. They also provide the Board of Management with support in reaching its decisions. This process also includes the systematic identification of strategic risks and opportunities.

Organization of the risk and opportunity management system
The Group Risk Governance unit defines the methods for the risk and opportunity management system that is applied Group-wide and for the associated reporting system, in particular the Group risk report. All of our operating segments as well as the Group Headquarters & Group Services segment are connected to the central risk and opportunity management system of the Group via their own risk and opportunity management. The Group risk report, which primarily aggregates the contents provided by our segments, is approved by the Board of Management on a quarterly basis and presented to the Audit Committee of the Supervisory Board. We inform the Audit Committee about all of the latest developments and/or changes in the risk management system at a special meeting held annually. The relevant owners in each of the segments are responsible for identifying, assessing, and continuously monitoring risks. Management takes potential opportunities into account in the annual planning process and continuously develops them further during business operations.

Risk identification and reporting
Each operating segment produces a quarterly risk report in accordance with the standards laid down by the central risk management and based on specific materiality thresholds. These reports assess risks, taking into account their extent in terms of impact on results of operations or financial position, as well as their probability of occurrence, and they identify action to be taken and suggest or initiate measures. The assessment additionally includes qualitative factors that could be important for our strategic positioning and reputation, and that also determine the aggregate risk. We base our assessment of risks on a period of two years. This is also the length of our forecast period. If significant risks exist beyond the forecast period, these are monitored on an ongoing basis.

The Group risk report, which presents the main risks, is prepared for the Board of Management on the basis of this information. The Board of Management informs the Supervisory Board. The Audit Committee also examines this report at its meetings. If any unforeseen risks arise outside regular reporting of key risks, they are reported ad hoc.

Identification and assessment of opportunities in the annual planning process
The systematic management of risks is one side of the coin; securing the Company’s long-term success by means of integrated opportunities management is the other. That is why identifying opportunities and subjecting them to a strategic and financial assessment is an essential part of our annual planning process. It allows us to factor those opportunities into our forecasts for financial and non-financial performance indicators.

The short-term monitoring of results and the medium-term planning process help our operating segments and Group Headquarters identify and seize the opportunities in our business throughout the year. While short-term monitoring of results mainly targets opportunities for the current financial year, the medium-term planning process focuses on opportunities that are strategically important for our Group. In this context we distinguish between two types of opportunity:

- External opportunities, i.e., those with causes over which we have no influence, for example, the revocation of additional taxes in Europe.
- Internal opportunities, i.e., those that arise within the Company, for example by focusing our organizational structure on innovation and growth areas and products, or through business partnerships and collaborations from which we expect to reap synergies.

We are constantly enhancing the efficiency of our planning process so as to gain greater scope for action. This puts the organization in a position to identify and seize new opportunities and generate new business. The preliminary plans of our operating segments form the basis for a concentrated planning phase during which members of the Board of Management, business leaders, senior executives, and experts from all business areas intensively discuss the strategic and financial focus of the Group and its operating segments, and from all of which they ultimately produce an overall picture. The identification of opportunities from innovation and their strategic and financial assessment play a major role throughout this process. This "brainstorming" may result in opportunities being taken and transferred to the organization, or rejected and passed back to the respective working groups for revision.

Risk assessment and risk containment

Assessment method

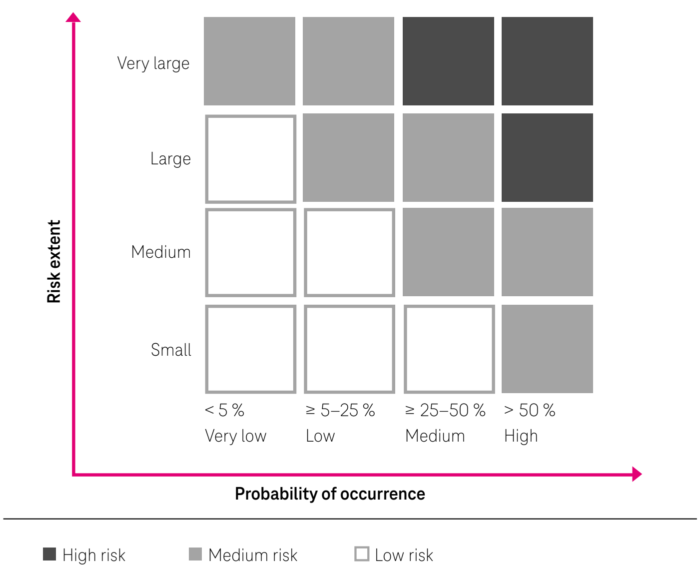
Risks are assessed on the basis of "probability of occurrence" and "risk extent." The following assessment yardsticks apply:

Probability of occurrence	Description
< 5 %	Very low
≥ 5 to 25 %	Low
≥ 25 to 50 %	Medium
> 50 %	Large

Risk extent	Description
Low	Limited negative effects on business activities, results of operations, financial position, and reputation; individual EBITDA AL risk < € 100 million
Medium	Certain negative effects on business activities, results of operations, financial position, and reputation; individual EBITDA AL risk ≥ € 100 million
Large	Significant effects on business activities, results of operations, financial position, and reputation; individual EBITDA AL risk ≥ € 250 million, and/or affects more than one Group entity
Very large	Damaging negative effects on business activities, results of operations, financial position, and reputation; individual EBITDA AL risk ≥ € 500 million, and/or affects more than one Group entity

By assessing risks according to the aspects described above, we classify them as low, medium, and high risks, as shown in the following graphic.

Risk significance



We report all risks classified as "high" and "medium." Exceptions are possible, for example, risks from prior years that we can continue to list for the sake of reporting continuity although they are classified as "low" in the current reporting period.

It should be noted that risks with an extent currently assessed as being small may in the future have a stronger impact than risks currently assessed as having a larger extent. This may be due to uncertainties that cannot be assessed at present and over which we have no influence. Uncertainties of this kind also give rise to risks that are currently unknown to us or that we presently consider to be insignificant and that may affect our business activities in the future.

Risk containment measures

Group insurance management. To the extent possible and economically viable, we take out adequate Group-wide insurance cover for insurable risks. DeTeAssekuranz – a subsidiary of Deutsche Telekom AG – acts as an insurance broker for Group insurance management. It develops and implements solutions for the Group's operational risks using insurance and insurance-related tools and places them on the national and international insurance markets.

Taking out insurance cover is an essential option for our external risk transfer. The coverage of risks in our Group insurance programs requires the transfer of risk for the purpose of protecting the Group's financial position. That means that the possible extent of the risk must have reached a volume "relevant for the Group" or the risks have to be bundled and managed at Group level to protect the Group's interests (opportune reasons/cost optimization/risk reduction).

Business continuity management (BCM). BCM is a process within operational security and risk management that helps protect business processes from the consequences of damaging incidents and disruptions. It ensures the continuation of business processes through ongoing analysis, assessment, and management of relevant risks for people, technology, infrastructure, supply and service relationships, and information. The aim is to identify potential threats at an early stage and to keep the impact and duration of a disruption of critical business processes to an acceptable minimum by ensuring appropriate resilience in the organization plus the ability to effectively cope with threats. SDG 8 FINANCE

To this end, BCM identifies critical business processes and business processes requiring protection, including any supporting processes, process steps, and assets (people, technology, infrastructure, information, and supply and service relationships). Appropriate precautionary measures are also defined. In particular, security management works in coordination with the relevant units and process owners to analyze the possible consequences of external and internal threats with relevance for security, such as natural disasters, vandalism, or sabotage. Once the extent of potential losses and probability of occurrence have been assessed, preventive measures can be put in place and contingency plans developed.

The individuals responsible initiate and execute further measures to mitigate the risks. A wide range of measures are available, depending on the risk type. A few examples of these measures are:

- We tackle market risks with comprehensive sales controlling and intensive customer management.
- We manage interest and currency risks by means of systematic risk management and hedge them using derivative and non-derivative financial instruments.
- We also take a whole array of measures to deal with operational risks: for example, we constantly implement operational and infrastructural measures in order to improve our networks; continually enhance our quality management system, the associated controls, and quality assurance; and offer our employees systematic training and development programs.
- We deal with risks from the political and regulatory environment through an intensive, constructive dialog with policymakers and the authorities.
- We deal with risks arising from brand, communication, and reputation by continuously analyzing the market and communications.
- We minimize risks in connection with legal proceedings by ensuring suitable support for those proceedings and by designing contracts appropriately in the first place.
- The Group Tax unit identifies potential tax-related risks at an early stage and systematically records, assesses, and monitors them. It takes any measures necessary to minimize tax-related risks and coordinates them with the Group companies affected. The unit also draws up and communicates policies for avoiding tax risks.

Risks and opportunities

In the following section, we present all risks and opportunities of significance to the Group that, as things currently stand, could affect the results of operations, financial position, and/or reputation of Deutsche Telekom and, via the subsidiaries' results, the results of operations, financial position, and/or reputation of Deutsche Telekom AG. We describe the majority of the risks before the measures for risk containment are taken. If any remaining risks have been identified despite such measures for risk containment, they are labeled as such. If risks and opportunities can be clearly allocated to an operating segment, this is presented accordingly in the following.

In order to make it easier to understand and see their effects, we have allocated the individually assessed risks to the following categories:

Corporate risks

	Probability of occurrence	Risk extent	Risk significance	Change against prior year
Industry, competition, and strategy				
Economic risks, Germany	Medium	Medium	Medium	Deteriorated
Economic risks, United States	Medium	Medium	Medium	Deteriorated
Economic risks, Europe	Medium	Medium	Medium	Deteriorated
Risks relating to the market and environment, Germany	Medium	Medium	Medium	Unchanged
Risks relating to the market and environment, United States	Medium	Very large	High	Deteriorated
Risks relating to the market and environment, Europe	Medium	Medium	Medium	Unchanged
Risks relating to innovations (substitution)	Medium	Medium	Medium	Unchanged
Risks relating to strategic transformation and integration	Medium	Very large	High	Unchanged
Regulation	see Risks and opportunities relating to regulation			
Operational risks				
Employees	Medium	Small	Low	Unchanged
Risks relating to IT/NT network operations, Germany	Low	Large	Medium	Unchanged
Risks relating to IT/NT network operations, United States	Very low	Large	Low	Unchanged
Risks relating to IT/NT network operations, Europe	Very low	Large	Low	Unchanged
Risks relating to existing IT architecture, United States	Medium	Medium	Medium	Unchanged
Future viability of the IT architecture, United States	Medium	Medium	Medium	Unchanged
Procurement	Low	Small	Low	Unchanged
Data privacy and data security	High	Medium	Medium	Unchanged
Brand, communication, and reputation				
Brand and reputation (reporting in the media)	Low	Small	Low	Unchanged
Sustainability risks	Low	Medium	Low	Unchanged
Health and environment	Low	Medium	Low	Unchanged
Litigation and anti-trust proceedings	see Litigation			
Financial risks				
Liquidity, credit, currency, interest rate risks	Medium	Medium	Medium	Unchanged
Tax risks	see Tax risks			
Other financial risks	see Other financial risks			

Risks and opportunities from industry, competition, and strategy

Risks and opportunities relating to the macroeconomic environment. As an international corporation, we operate in a large number of countries, using a range of currencies. A substantial economic downturn could generally reduce the purchasing power of our customers and adversely affect our access to the capital markets. Exchange rate fluctuations could impact on our earnings.

The coronavirus pandemic threw the global economy into deep recession in 2020 and will also continue to shape its course in 2021. Leading institutes and organizations do not expect economic activity to return to pre-pandemic levels until the end of 2021/start of 2022. Apart from the coronavirus pandemic, the main risks to future economic development are potential geopolitical shocks and uncertainties from international trade conflicts.

Higher demand for certain telecommunications services means the impact of the coronavirus pandemic is being felt less severely by the telecommunications industry than by other industries. Nevertheless, there is still uncertainty regarding the extent to which business activities and thus the results of operations and financial position of Deutsche Telekom could be affected overall depending on how the pandemic develops. Possible factors could include renewed travel restrictions, the closure of Telekom Shops, disrupted supply chains, further declines in roaming and visitor volumes, falling terminal equipment sales, or a drop in the number of new contracts being taken out. In addition, corporate customer business may decline further, for example, due to delayed or changed customer decisions. The possibility of an increase in the number of consumers and business customers defaulting on their payments cannot be ruled out either. Deutsche Telekom has put in place cost-saving measures to mitigate potential effects on earnings. The coronavirus pandemic has a negative impact on the Group's economic business risks. In the United States, Germany, and Europe operating segments, the risk significance was regraded from "low" to "medium."

These risks are counterbalanced by opportunities, especially if the coronavirus pandemic can be contained on a lasting basis. After a harsh coronavirus winter, we expect the European economy to see recovery from spring 2021. The pace of economic recovery is also likely pick up in the United States. Many countries in Eastern Europe saw relatively robust economic growth in the coronavirus pandemic, and are expected to perform above the EU average again in 2021.

Risks relating to the market and environment. The main market risks we face include the steadily falling price level for voice and data services in the fixed network and in mobile communications. In addition to price reductions imposed by regulatory authorities, this is primarily attributable to ongoing intense competition in the telecommunications industry.

Competitive pressure is expected to continue, especially in the fixed network in Germany and the countries of our Europe operating segment. In the broadband market, the trend of disproportionate growth in the market shares of regional network operators and supra-regional specialist FTTH providers, particularly in Germany, continues to establish itself. They build out their own infrastructure and thus increase their market coverage. Increasingly this is done with fiber-optic infrastructure, thereby increasing their customer numbers and expanding their own value added. There is still strong competition to gain new customers by cutting prices and offering introductory discounts.

We expect ongoing price pressure for mobile voice telephony and mobile data services, which could adversely affect our mobile service revenue. Among the main reasons for this price pressure are data-centric, aggressively priced offers. Providers that do not have their own infrastructure (MVNOs) market such offers over the internet, for instance, while there is also the risk that smaller competitors will take unforeseen, aggressive pricing measures. Technological innovations such as the use of pure eSIMs in smartphones could put further pressure on prices by increasing the willingness of customers to switch providers.

Drillisch Netz AG acquired mobile spectrum in the spectrum auction held in Germany in 2019 and subsequently made a public statement declaring its intention to begin setting up a fourth mobile network over the next few years. Furthermore, Drillisch has defined access to an existing network via national roaming to be a prerequisite to building out its own network and has begun negotiations with all three German network providers. In fall of 2020, Drillisch called upon the Bundesnetzagentur in its role as arbitrator to move forward the negotiations on national roaming with Deutsche Telekom and Vodafone. Changes in the market for wholesale mobile services may affect the retail and wholesale area.

Another competitive risk lies in the fact that, both in the fixed network and in mobile communications, we are increasingly faced with competitors who are not part of the telecommunications sector as such, but are increasingly moving into the traditional telecommunications markets. This mainly relates to major players in the internet and consumer electronics industries. As a result, we are exposed to the risk of a further loss of share of value added and falling margins due to increasingly losing direct customer contact to competitors.

T-Mobile US has multiple wireless competitors, some of which have greater resources and compete for customers based principally on service/device offerings; price; network coverage, speed, and quality; and customer service. Market saturation in the United States will continue to cause the wireless industry's customer growth rate to be moderate in comparison with historical growth rates, or possibly negative, leading to ongoing competition for customers. T-Mobile US expects that its customers' appetite for data services will place increasing demands on its network capacity. The scarcity and cost of additional wireless spectrum, and regulations relating to spectrum use, may adversely affect T-Mobile US' business, financial condition, and operating results. T-Mobile US faces intense and increasing competition from other service providers as industry sectors converge, such as cable, telecommunications services and content, and satellite television. Joint ventures, mergers, acquisitions, and strategic alliances in the wireless sector have resulted in and are expected to result in larger competitors competing for a limited number of customers.

The business combination of T-Mobile US and Sprint was consummated on April 1, 2020. Implementing the business combination poses complex challenges for T-Mobile US, which must be successfully overcome in order to realize the predicted synergies and to meet the conditions imposed by the authorities. The combination of the two companies to form the new T-Mobile US affects all operational areas; for instance, the integration of the mobile networks and the IT and technology environments, customer management, sales, HR management, logistics, and the control environment. At the same time, it will be necessary to fulfill multiple conditions, including those agreed with the antitrust and regulatory authorities such as the Federal Communications Commission (FCC), the U.S. Department of Justice (DoJ), the supervisory authorities in various U.S. states, and the Committee on Foreign Investment in the United States (CFIUS). With the divestiture of Sprint's prepaid business and the confirmation of an agreement to sell spectrum to DISH, on July 1, 2020, we fulfilled a major prerequisite of the U.S. authorities for approving the merger. Following the first half of 2020, we increased the risk significance in the risk category "Risks relating to the market and environment, United States" to "high" to reflect the challenges posed by the integration.

Our Systems Solutions operating segment also faces challenges. Continued strong competition and persistent cost pressure are adversely affecting traditional IT business. In addition, the technological shift toward cloud solutions and digitalization in the IT sector is prompting new, strongly capitalized, competitors to enter the market. This may lead to revenue losses and declining margins at T-Systems. On the other hand, innovation areas such as artificial intelligence (AI) and industrial IoT create opportunities for new project business.

Opportunities relating to the market and environment. The telecommunications and IT market is extremely dynamic and highly competitive. The economic and competition conditions as well as customers' changing wants and needs affect our actions and impact on our Company indicators. We generally expect the situation to develop as described in the section "Forecast."

Risks relating to innovations (substitution). Innovation cycles are getting shorter and shorter. This confronts the telecommunications sector with the challenge of bringing out new products and services at shorter and shorter intervals. New technologies are superseding existing technologies, products, or services in part, in some cases even completely. This could lead to lower prices and revenues in both voice and data traffic. These substitution risks could impact our revenue and earnings. We deal with the impact of substitution risks by offering package rates, for example: we offer new and existing customers integrated solutions from our product portfolio. The introduction of the new 5G mobile standard as a technological innovation entails uncertainties in the form of upcoming spectrum auctions and their conditions of award, regulatory requirements, public discussions on security and electromagnetic compatibility, and the limited number of telecommunications hardware providers represented in planning scenarios.

Opportunities relating to innovations. In addition to the risks described, ever-shorter innovation cycles enable us to drive the digital transformation of our society and to provide our consumers and business customers with innovative products and solutions. That is why our innovation and product development activities are decisive when it comes to identifying opportunities and making the most of them in an increasingly competitive environment. In order to guarantee this, and do justice to the growing convergence of networks, products, and IT, we have combined all relevant functions under joint management in our Board of Management department Technology and Innovation, in order to enable closer integration of the areas of innovation, networks, IT, and security. SDG 9 FINANCE By doing so, we are putting the development of outstanding, seamless customer experiences front and center, and this year we won awards, for example, for our smart-home products and our digital assistant "Frag Magenta."

For further information on our innovation activities, please refer to the section "Innovation and product development."

5G is the new generation of mobile telecommunications networks. Not only are we involved in a large number of different organizations and forums, we are also working intensively in collaboration with research institutions and industry to continue developing this standard, which will address an array of challenges facing telecommunication networks. These include purely technical requirements, such as achieving a substantial increase in capacity, bandwidth, and availability, and lower latency. In addition, there are fundamental issues, such as IoT communication on a large scale in the Internet of Things (IoT) and the growing need for reliability, security, and guaranteed service quality in industrial applications. 5G thus offers not only the immediate opportunity of cost-effectively managing rapidly increasing demands in existing business models going forward, but also opportunities for further business models by marketing network capabilities (e.g., network access, localization, security, identity, storage location, temporary storage, real-time processing) to relevant partners. We are already working on implementing the first use cases such as campus networks, mobile gaming, and mobile edge computing, in which data is processed in a decentralized manner (at the edges of the network). Together with other technologies like the NarrowBand Internet of Things (NB-IoT) and artificial intelligence (AI), 5G and edge computing provide the underpinnings for the further digital transformation of society. SDG 13 STRUCTURE

Risks relating to strategic transformation and integration. We are in a continuous process of strategic adjustments and cost-cutting initiatives. If we are unable to implement these projects as planned, we will be exposed to certain risks. In other words, the benefit of the measures could be less than originally estimated, take effect later than expected, or not at all. Each of these factors, individually or in combination, could have a negative impact on our business situation, financial position, and results of operations.

Collaboration with Chinese suppliers was impeded in 2020 by the enduring trade conflict between the United States and China. Since 2020, on account of security concerns, the United States has restricted the use of U.S. technology for and by Chinese suppliers. A large number of countries in which Deutsche Telekom also operates (including Greece and Poland) supported this Clean Network initiative, which prohibits the use of products from critical vendors in telecommunications networks in the medium term. The long-running debate on 5G security in Germany may result in Chinese manufacturers being partially excluded from networks. In that case, we, too, would face a cost-intensive process of replacing all installed products.

Opportunities relating to strategic transformation and integration. SDG 9 FINANCE The IP transformation (all IP) concluded in Germany in the reporting year offers many opportunities: the resulting logical network speaks one language and, in technical terms, functions largely independently of the services transmitted. This will enable efficiency gains, e.g., by reducing the complexity of maintenance and operation, switching off service-specific legacy platforms, and saving energy. In addition, all IP will generate growth potential in the short to medium term by improving the customer experience of existing services (e.g., better voice quality, more customer self-service, greater configuration flexibility) and, in the medium to long term, by providing an indispensable basis for convergence products and the Internet of Things (IoT), and by shortening the time to market for new products.

One of the key benefits of the all-IP network is that it also acts as a foundation for the future cloud- and software-based production of networks and services. It creates opportunities to increase efficiency, accelerate the provision of new services and features, improve quality, and tap into new revenue potential, while at the same time increasing automation.

We are driving forward the transformation of our IT using agile development. This approach allows us to exploit new opportunities for efficient IT production, through the modular provision of components as well as through accelerated development. Furthermore, agile development makes it possible to reduce big bang risks in the delivery of major software releases.

Risks and opportunities relating to regulation SDG 16 RELATIONSHIPS

In the following section, we describe the main regulatory risks and opportunities that, as things currently stand, could affect our results of operations and financial position, and our reputation.

Regulatory risks arise from telecommunications-specific statutory regulations at the national, European, and U.S. level, and from the consequent powers of national authorities to regulate or intervene in the market and limit our freedom as regards product design and pricing. Deregulation can give rise to regulatory opportunities. Regulatory intervention, which we can only anticipate to a limited extent, may exacerbate existing price and competitive pressure. There are concerns that regulation in Germany and other European countries may also impact revenue and earnings trends in the medium to long term.

Changes in regulatory policy and legislation

EU legal framework for telecommunications. The European Electronic Communications Code, which reforms central EU regulation of the telecommunications sector, primarily price and access regulation, spectrum policy, sector-specific rules on consumer protection, and the universal service regime, entered into force on December 20, 2018. The member states had 24 months as of that date to transpose the requirements into national law. However, implementation has been delayed in a number of countries, including Germany. The corresponding Telecommunications Modernization Act (Telekommunikationsmodernisierungsgesetz) is not expected to pass into law before the second quarter of 2021.

The revision of the EU legal framework for telecommunications remains part of a package of new EU legislation on the single market for electronic communications that provides for amendments to the regulations governing media services – mainly due to the growing importance of internet offerings – which are competing with the TV services previously focused on (e.g., regarding copyright law, laws for the protection of minors from harmful media, consumer protection, and the liability of internet service providers (in particular hosting) for third-party content). At the national level, too, specific amendments (for instance, to the German State Media Treaty and the German Telemedia Act, as well as to competition law) are being discussed in response to the phenomena of digitalization and convergence.

For further information on key regulatory decisions, please refer to the section "The economic environment."

Awarding of spectrum

Risks could arise from the fact that inappropriate auction rules and frequency usage requirements, excessive reserve prices, or disproportionately high annual spectrum fees could jeopardize our planned acquisition of spectrum. Inappropriate conditions for the awarding of spectrum can include, for example, extensive build-out requirements and, in some cases, requirements to grant network access (national roaming, service provider access). By contrast, we see an opportunity in particular in the fact that such spectrum award procedures enable mobile network operators to obtain the optimum amount of spectrum for their future business. We would thus be equipped for further growth and innovation. The upcoming award procedures mainly relate to the auctioning of additional spectrum in the 700 MHz, 2,500 MHz, 3,400 MHz to 3,800 MHz, and the 26,000 MHz ranges. In addition, spectrum licenses, especially in the 900 MHz, 1,800 MHz, and 2,100 MHz ranges, will expire between 2021 and 2022 in some countries and need to be renewed. Award procedures are currently being prepared in Croatia, Poland, Romania, Slovakia, Hungary, and the United States.

For further information on spectrum auctions that were completed in 2020 or are still ongoing, please refer to the section "The economic environment."

Areas in which national regulators may intervene

European and national laws and regulations grant national regulators extensive powers of intervention. In addition to the aforementioned Code, a case in point at the European level is the **EU Regulation concerning the single market for electronic communications**, which was enacted in 2015. It contains provisions on **international roaming, net neutrality, and obligations to provide information**, which restrict our product design options, mainly as regards retail products. The Body of European Regulators for Electronic Communications (BEREC) has published guidelines for implementing this regulation. Risks arise from how the national regulators interpret both the regulation and these guidelines. When the Telecommunications Modernization Act enters into force in 2021, the previously non-binding communication by the Bundesnetzagentur on the interpretation of certain parts of the regulation will be replaced by a legally binding administrative order issued by the Bundesnetzagentur. In addition, national regulatory authorities have wide-ranging powers under law to require products to be adjusted in order to enforce the regulation and to impose fines in cases of non-compliance.

Our Group companies in Germany and Europe continue to be subject to extensive **regulation of wholesale products**, obligating us to make our network and services available to our competitors wherever we are deemed to have significant market power as an operator. The national regulators regularly check and determine the corresponding terms, conditions, and prices of these wholesale offerings. The key wholesale products subject to regulation are **unbundled local loop lines, bitstream products, leased lines**, and the associated services. As of 2021, termination rates will be determined directly by the European Commission by way of a **"Delegated Act."** In addition, European and national consumer protection regulations apply. In Germany, for instance, the **Transparency Regulation** came into force on June 1, 2017, the main objective of which is to enhance transparency and cost control with telecommunications services for consumers. In this context, the Bundesnetzagentur introduced a system that enables consumers to measure the bandwidths available on their fixed-network and mobile lines.

In addition to the requirements of telecommunications law, our media products are also subject to special **European and national regulations under media law**, as well as non-sector-specific regulations such as data and consumer protection. These include, in the broader sense, copyright law, regulations concerning the responsibility for published content, requirements in relation to ensuring the protection of minors in the media, and requirements in relation to the content and user interfaces of media distribution platforms. Barring any changes to its shareholder structure on the one hand (the Federal Republic and KfW being its major shareholders), or to the legal situation, or the prevailing opinions of media regulators on the other, it is unlikely that Telekom Deutschland will be granted a license to broadcast radio and television programs.

Operational risks and opportunities

Employees. Our employees play a crucial role in the transformation of Deutsche Telekom. Their skills are a key factor to our business success. The general high demand on the labor market, in particular for specialists in highly relevant areas such as IT, makes it difficult to recruit new employees. An inability to attract and/or retain the necessary experts would have a negative impact on our business in the future.

In 2020, we once again used socially responsible measures to restructure the workforce in the Group, mainly by means of severance payments, phased and dedicated retirement, internal retraining measures, and employment opportunities in public service for civil servants offered by Vivento. We will continue this restructuring in the coming year. If it is not possible to implement the corresponding measures as planned or at all (for example, due to limited interest in severance payments), this may have negative effects on our financial targets. To avoid the risk of high potentials leaving the Group as a result of the staff reduction instruments, we make sure that the arrangement is voluntary on both sides in each individual case.

The right of civil servants to return to Deutsche Telekom also carries risks: When Group entities that employ civil servants are disposed of, it is generally possible to continue to employ them at the Group entity to be sold, provided the civil servant agrees or submits an application to be employed at the respective unit in future. However, there is a risk that they may return to us from a sold entity, for instance after the end of their temporary leave from civil servant status, without the Company being able to offer them jobs. Currently 1,343 civil servants are entitled to return from outside the Group to Deutsche Telekom in this way (as of December 31, 2020).

Risks relating to IT/NT network operations. We have an increasingly complex information/network technology infrastructure, which we constantly expand and upgrade to ensure the best customer experience and consolidate our technology leadership. Outages in the current and also future technical infrastructure cannot be completely ruled out and could in individual cases result in revenue losses or increased costs. After all, our IT/NT resources and structures are the key organizational and technical platform for our operations. The ongoing convergence of IT and NT harbors risks. In order to counter these holistically, our network, innovation, and IT activities are combined under the Board of Management department for Technology and Innovation.

Risks could arise in this area relating to all IT/NT systems and products that require internet access. For instance, faults between newly developed and existing IT/NT systems could cause interruptions to business processes, products, and services, such as smartphones and MagentaTV. In order to avoid the risk of failures, e.g., due to natural disasters or fires, we use technical early warning systems and redundant IT/NT systems. The Computer Emergency Response Team (CERT) at Deutsche Telekom Security is in charge of protecting our business customers' servers. In cloud computing, all data and applications are stored at a data center. Our data centers have security certification and meet strict data protection provisions and the EU regulations. All data relating to companies and private persons is protected from external access. Constant maintenance and automatic updates keep the security precautions up to date at all times. On the basis of a standardized Group-wide business continuity management (BCM) process, we also take organizational and technical measures to prevent damage from occurring or, if we cannot, to mitigate the subsequent effects. We also have insurance cover for insurable risks. SDG 9 FINANCE

Opportunities relating to IT/NT network operations. The utilization of large data volumes (big data) from our networks can improve and speed up decision-making processes by enhancing transparency. It does so by shifting the basis for decisions from hypotheses to facts and, for example, enabling correlations to be recognized.

Our Systems Solutions operating segment covers innovative business areas in the digital transformation of business processes, such as the Internet of Things and cybersecurity. These business areas could develop faster than expected. As a pioneer of the digital transformation, we have an opportunity not only to participate in, but also actively shape, the market trend through a variety projects in the fields of healthcare and mobility solutions. In the ramp-up phase of these new business models based on M2M communication and big data, our partner-oriented approach is a highly promising way of contributing our core competencies – in cloud computing and cybersecurity – to various projects. What is more, we already have initial references in areas of the Internet of Things market, e.g., predictive maintenance. SDG 12 FINANCE

As a technology and development partner for toll collection business in Europe, we already have a strong competitive position. We have earned valuable references in European toll collection projects in Belgium and Austria and through the planned launch of a Europe-wide toll collection system (Toll4Europe). This will help to give us an edge over our competitors.

Risks relating to the existing IT architecture in the United States. T-Mobile US relies upon its systems and networks and the systems and networks of other providers and suppliers, to provide and support services. T-Mobile US' business, like that of most retailers and wireless companies, involves the receipt, storage, and transmission of customers' confidential information, including sensitive personal information, payment card information, and confidential information about their employees and suppliers, as well as other sensitive information about T-Mobile US, such as business plans, transactions, and intellectual property. Cyberattacks, such as denial of service and other malicious attacks, could disrupt T-Mobile US' internal systems, networks, and applications, impair its ability to provide services to customers, and have other adverse effects on its business.

Future viability of the IT architecture in the United States. In order to grow and remain competitive with new and evolving technologies in the industry, T-Mobile US will need to adapt to future changes in technology, continually invest in its network, increase network capacity, enhance existing offerings, and introduce new offerings to address its current and potential customers' changing demands. If T-Mobile US is unable to take advantage of technological developments on a timely basis, then it may experience a decline in demand for its services or face challenges in implementing or evolving its business strategy. Following the business combination with Sprint, T-Mobile US operates and maintains several customer billing systems and will continue to run them until all of Sprint's legacy customers have been successfully migrated to T-Mobile US' existing billing systems. Unexpected difficulties or delays could cause major system or business disruptions.

Procurement. Deutsche Telekom cooperates with a variety of suppliers of technical (information and communication technology) and non-technical products and services. Products and services that might involve a higher risk include software and hardware, network technology components, and all products and services provided directly to end customers.

Supply risks cannot be entirely ruled out. Pandemics, other delivery bottlenecks, price increases, changes in the prevailing economic or political conditions, or suppliers' product strategies may have a negative impact on our business processes and our results. Additional risks may also result from the dependence on individual suppliers or from individual suppliers defaulting. This is especially true for Chinese telecommunications suppliers. We employ organizational, contractual, and procurement strategy measures to counteract such risks. SDG 17 RELATIONSHIPS

Data privacy and data security. Following the successful implementation of the General Data Protection Regulation (GDPR) in 2018 and the harmonization of the increased data protection requirements under the GDPR in the EU and in Germany in 2019, these regulations were adjusted to new developments and further consolidated in 2020. For instance, the GDPR has introduced new procedures such as the Privacy Impact Assessment for assessing and documenting risks in data processing. We have already had such a procedure in place for ten years in the form of the Privacy and Security Assessment (PSA), which is fully digital. But such procedures also need to adapt to modern agile working methods and move with the Group's changing organizational structures and ways of working. That is why, with the PSA@AGIL project, we have updated the procedure and also introduced new roles with explicit data privacy and security responsibility in agile product development. In addition to new ways of working, we have carefully examined technical developments and, for example, provided support within the Group for the service app solution introduced in many European countries, which our customers can use to manage their Deutsche Telekom products and contracts. Furthermore, we have supported the further development of our MagentaTV product, where, for example, we have introduced a privacy dashboard, which enables users to manage and change their data privacy settings. In addition, in collaboration with the Robert Koch Institute, SAP, and other partners, we developed the German coronavirus tracing app (Corona-Warn-App) and the subsequent European solution. Deutsche Telekom played a decisive role in the data privacy concept throughout the development of the app, coordinating between the partners, the Federal Government, and other parties involved. We were thus able to make a substantial contribution to fighting the coronavirus pandemic in Germany and Europe. In accordance with the requirements of the Federal Government, user IDs are stored in a decentralized manner, i.e., on the smartphones of the people you meet. SDG 3 RELATIONSHIPS The GDPR has created a good basis for data processing in the EU, based on a set of uniform rules. It assures Europe of a high level of data protection and, at the same time, will pave the way for new digital business models. However, experience gained so far shows that the intended harmonization is at risk. The regulatory authorities of the member states are called upon to strengthen coherence as part of the consistency mechanism. This relates in particular to positioning on individual data protection issues, but also to divergences in the application of the framework for fines. SDG 16 STRUCTURE

On July 16, 2020, the European Court of Justice issued a landmark judgment (Schrems II). Europe's highest court has addressed the concerns on the level of data protection in the United States and declared the adequacy decision of the EU Commission for the United States (Privacy Shield) void. Since that date, the Privacy Shield has been invalid. The standard contractual clauses on data privacy were confirmed in the ruling because they contain suitable protection mechanisms for data transfer in general. This ensures an adequate level of data protection can be observed by both contracting parties. However, extensive inspection obligations apply for the contracting parties and the data protection authorities to verify that the data protection level is in fact adequate. Extensive technical and legal checks must be carried out for all third-country transfers. Group Privacy is working with all affected Group units to work through the implementation requirements arising from the ruling and the publications of the European Data Protection Board to ensure that the necessary changes in business and contractual relationships can be made. In addition, as a result of the ruling by the EU Commission, new standard contractual clauses have been proposed. The draft stipulates that all agreements with companies in third countries must be amended to take account of these new clauses by the end of 2021. All companies in the EU, but also their contractual partners around the globe, must rise to the significant challenges of this ruling. However, since the ePrivacy Regulation has still not yet been adopted, there is yet another sector-specific regulatory challenge for the telecommunications sector in the EU. As telecommunications providers' data processing options are substantially restricted compared with what is possible under the GDPR, innovative big data and artificial intelligence applications in the field of telecommunications cannot realize the same kind of potential as those of companies that are only subject to the GDPR. It would be a huge stride forward for telecommunication providers if the ePrivacy Regulation, which has been under negotiation at a European level since 2017, were to be adopted and the possibility of processing communication metadata for compatible purposes were to be permitted. This would be an important step towards innovation-friendly regulation while at the same time maintaining a high level of data protection.

IT security continues to pose major challenges. In addition to preventive measures such as integrated security in business processes and measures to raise security awareness among employees, we counter these challenges with increased focus on the analysis of threats and cyber risks. This is where our early warning system comes in: It detects new sources and types of cyberattack, analyzes the behavior of the attackers while maintaining strict data privacy, and identifies new trends in the field of security. Along with the honeypot systems, which simulate vulnerabilities in IT systems, our early warning system includes alerts and analytical tools for spam mails, viruses, and Trojans. We exchange the information we obtain from all these systems with public and private bodies to detect new attack patterns and develop new protection systems.

Cybercrime and industrial espionage are on the rise. We are addressing these risks with comprehensive security concepts. In order to create greater transparency and thus be in a stronger position to tackle these threats, we are relying more and more on partnerships, e.g., with public and private organizations. By means of the Security by Design principle we have made security an integral part of our development process for new products and information systems. In addition, we carry out intensive and obligatory digital security tests.

We are continually striving to accelerate our growth through IT security solutions. To this end, we have combined our security units within Deutsche Telekom Security. We want to leverage this end-to-end security portfolio to secure market shares and score points with security concepts on the back of megatrends like the Internet of Things and Industry 4.0. We are also continuing to gradually expand our partner ecosystem in the area of cybersecurity. SDG 17 RELATIONSHIPS

We provide regular updates on the latest developments in data protection and data security on our website at www.telekom.com/en/corporate-responsibility/data-protection-data-security.

Risks and opportunities arising from brand, communication, and reputation

Negative media reports. An unforeseeable negative media report on our products and services or our corporate activities and responsibilities can have a huge impact on the reputation of our Company and our brand image. Social networks have made it possible that such information and opinions can spread much faster and more widely. Ultimately, negative reports can impact on our revenue and our brand value. In order to avoid this, we engage in a constant, intensive, and constructive dialog, in particular with our customers, the media, and the financial world. For us, the top priority is to take as balanced a view as possible of the interests of all stakeholders and thereby uphold our reputation as a reliable partner.

Sustainability risks and opportunities. For us, comprehensive risk and opportunity management also means considering the opportunities and risks arising from ecological or social aspects or from the management of our Company. To this end, we actively and systematically involve all relevant stakeholders in the process so as to identify current and potential risks and opportunities. In parallel with our ongoing monitoring of ecological, social, and governance issues, we systematically determine our stakeholders' positions on these issues. The key tools we use here are: our stakeholder survey; a document analysis, covering legal texts, studies, and media publications, amongst other things; our involvement in working groups and committees of national and international business associations and social organizations, e.g., GeSI, ETNO, BDI, Bitkom, Econsense, and BAGSO; stakeholder dialog formats organized by us; and our various publications, such as the press review and newsletter. We also integrate the biggest sustainability risks in our internal compliance assessment, thereby recording the associated positioning and development of measures in the various business areas. SDG 17 RELATIONSHIPS

For further information on sustainability, please refer to the section "Corporate responsibility and non-financial statement."

We have identified the following as our main sustainability management issues:

- **Reputation.** How we deal with sustainability issues also entails both opportunities and risks for our reputation. A high level of service quality is one of the most important factors for improving customer perception. Customer satisfaction has been embedded in our Group management as a non-financial performance indicator to underline the importance of this issue. Transparency and reporting help to promote the trust of other external stakeholders in our Group. Our annual and CR reports also serve this purpose. However, issues such as business practices, data privacy, and work standards in the supply chain, conduct in relation to human rights, and ethical conduct in relation to and use of artificial intelligence also entail reputational risks: if our brands, products, or services are connected with such issues in negative media reports, this can cause substantial damage to our reputation. As part of our sustainability management activities, we continuously review such potential risks and take measures to minimize them. This includes systematically incorporating them in the Group's internal compliance management system, so as to determine the relevance of the risks in relation to sustainability issues and their effect on reputation across units. We also ascertain how our products and services make a positive contribution to sustainability in order to enhance our reputation. SDG 16 FINANCE
- **Climate protection.** SDG 13 ENVIRONMENT We pursue an integrated climate strategy, which means focusing not only on the risks that climate change poses for us and our stakeholders, but also on the opportunities it presents. By 2030, ICT products and services will have the potential to save up to seven times as much in CO_2 emissions in other industries as the ICT sector itself generates, even taking into account the expected rebound effects (according to the GeSI Digital for Purpose study). Taking an optimistic view, this could mean a 9 % reduction in global CO_2 emissions by 2030. In addition, investments of around USD 3 trillion in innovative solutions are expected by 2030, which will not only expand the business, but will also support the SDGs. We are supporting this trend by evaluating our product portfolio to identify sustainability benefits. In addition, we want to continuously improve the ratio of the emissions that our products and services save to those generated by our own value chain. According to this figure, the positive CO_2 effects facilitated for our customers in Germany were 610 % higher in 2020 than our own CO_2 emissions (enablement factor of 7.1 to 1).

Climate change risks are already visible in the form of increasingly extreme weather conditions. This is having a direct effect on our stakeholders, e.g., our customers, suppliers, and employees. The risk is assessed in relation to the continuation of operations as part of risk management and is managed at an operational level in the business units. Deutsche Telekom welcomes the targets behind the Task Force on Climate-related Financial Disclosures (TCFD) and is actively working to implement them. In a first step, we conducted a gap analysis on the coverage of TCFD recommendations. In a number of workshops with relevant players from technology, procurement, strategy, and risk management, we defined Deutsche Telekom AG's key climate-related opportunities and risks and gave them an initial weighting. The next step will be to conduct a location analysis, with the example of Germany, of the physical climate risks in various scenarios (business as usual / 4-degree scenario).

Detailed information on this will be published in our 2020 CR report.

We can take further preventive action in this area by also reducing our own CO_2 emissions. For this reason, in 2019 we set ourselves the ambitious target of cutting 90 % of emissions across the Group by 2030 as compared with 2017. Climate protection also carries financial risks, whether from the introduction of levies on CO_2 emissions or increased energy costs, as well as stricter requirements for products, for example in relation to energy efficiency. The measures we are taking to counter these risks include measuring our own energy efficiency and finding ways to improve it. We have a Group-wide program to specifically address our supply chain and we are working to optimize our products and their packaging. In 2020, several of our national companies sourced 100 % of their electricity from renewables (Deutsche Telekom Group in Germany, Magyar Telekom in Hungary, OTE in Greece, as well as T-Mobile Netherlands, T-Systems Iberia, T-Systems India, and all T-Systems and GBS entities in Russia). A further six entities procured almost all of their electricity needs from renewable energies (T-Mobile and T-Systems Austria, T-Systems Nordic, T-Systems Netherlands, T-Systems Brazil, and Hrvatski Telekom). All of these entities are thus actively working to manage the risks from climate change.

- **Suppliers.** SDG 8 RELATIONSHIPS We see more sustainability in our supply chain as an opportunity – for our reputation and our business success. Apart from the general risks associated with our global procurement activities, we can be exposed to country- and supplier-specific risks. These include, for example, the use of child labor, the conscious acceptance of environmental damage, or inadequate local working and safety conditions. We reduce these risks by systematically reviewing our suppliers. We conduct these audits within the scope of the Joint Audit Corporation (JAC). The aim of the JAC is to reduce sustainability risks in our supply chain and to improve ecological and social aspects, including the issue of human rights. As such, the audit is compliant with internationally recognized guidelines and standards, such as the ILO Core Labor Standards, the UN Guiding Principles on Business and Human Rights, and the OECD Guidelines for Multinational Enterprises. Our partnerships with suppliers that comply with international sustainability standards ensure a high level of product quality and reliable procurement. We have a special development program in place to help strategic suppliers introduce business practices that are both socially and ecologically acceptable while remaining economically efficient. This program showed measurable successes again in the reporting period and has three major advantages: It has a positive impact on our suppliers' working conditions, enhances their profitability, and makes the economic relevance of sustainability clear for both sides, i.e., for our suppliers and for the Group alike. For instance, better working conditions at our suppliers reduces the number of work-related accidents as well as the attrition rate. That, in turn, ensures high product quality and increases productivity, while at the same time lowering costs for recruitment and training. Thus, not only are we strengthening our suppliers' profitability and CR performance, we are also significantly reducing identified risks.

Health and environment. Mobile communications, or the electromagnetic fields used in mobile communications, regularly give rise to concerns among the general population about potential health risks. This issue continues to be the subject of public, political, and scientific debate. Acceptance problems among the general public mostly concern mobile communications networks and occasionally the use of mobile terminals such as smartphones, tablets, and laptops. The discussion has intensified repercussions for the build-out of the mobile infrastructure. In the fixed network, this can affect the use of traditional IP and DECT (digital cordless) phones, and devices that use Wi-Fi technology. There is a risk of regulatory interventions, such as tightened thresholds for electromagnetic fields or the implementation of precautionary measures in mobile communications, e.g., amendments to building law, or also the risk of a labeling requirement for handsets.

Over the past few years, recognized expert organizations such as the World Health Organization (WHO) and the International Commission on Non-Ionizing Radiation Protection (ICNIRP) have repeatedly reviewed the current thresholds for mobile communications and confirmed that – if these values are complied with – the use of mobile technology is safe based on current scientific knowledge. Various expert organizations, currently the ICNIRP, regularly review the recommended thresholds on the basis of the latest scientific findings.

We are convinced that mobile communications technology is safe if specific threshold values are complied with. We are supported in this conviction by the assessment of the recognized bodies. Our responsible approach to this issue finds expression in our Group-wide EMF Policy, with which we commit ourselves to more transparency, information, participation, and support of independent mobile communications research, far beyond that which is stipulated by legal requirements. We aim to overcome concerns among the general public by pursuing an objective, scientifically well-founded, and transparent information policy. We thus continue to see it as our duty to continue our trust-based dialog with local authorities and to ensure its successful progress. This particularly applies since our long-standing collaboration with municipalities to expand the mobile network was enshrined in law in 2013. Previously, this collaboration was based on voluntary self-commitments by the network operators. SDG 3 RELATIONSHIPS

Litigation

Major ongoing legal proceedings

Deutsche Telekom is party to proceedings both in and out of court with government agencies, competitors, and other parties. The proceedings listed below are of particular importance from our perspective. If, in extremely rare cases, required disclosures on the significance of individual litigation and anti-trust proceedings are not made, we concluded that these disclosures may seriously undermine the outcome of the relevant proceedings.

Prospectus liability proceedings (third public offering, or DT3). This relates to initially around 2,600 ongoing lawsuits from some 16,000 alleged buyers of T-Shares sold on the basis of the prospectus published on May 26, 2000. The plaintiffs assert that individual figures given in this prospectus were inaccurate or incomplete. The amount in dispute currently totals approximately EUR 78 million plus interest. Some of the actions are also directed at KfW and/or the Federal Republic of Germany as well as the banks that handled the issuances. The Frankfurt/Main Regional Court had issued orders for reference to the Frankfurt/Main Higher Regional Court in accordance with the German Capital Investor Model Proceedings Act (Kapitalanleger-Musterverfahrensgesetz – KapMuG) and has temporarily suspended the initial proceedings. On May 16, 2012, the Frankfurt/Main Higher Regional Court had ruled that there were no material errors in Deutsche Telekom AG's prospectus. In its decision on October 21, 2014, the Federal Court of Justice partly revoked this ruling, determined that there was a mistake in the prospectus, and referred the case back to the Frankfurt/Main Higher Regional Court. On November 30, 2016, the Frankfurt/Main Higher Regional Court ruled that the mistake in the prospectus identified by the Federal Court of Justice could result in liability on the part of Deutsche Telekom AG, although the details of that liability would have to be established in the initial proceedings. Both Deutsche Telekom AG and some of the individual plaintiffs in the model proceedings have brought an appeal before the Federal Court of Justice against this decision. We continue to hold the opinion that there are compelling reasons why Deutsche Telekom AG should not be liable for damages. An adequate contingent liability has been recognized and is shown in the notes to the consolidated financial statements. In the annual financial statements of Deutsche Telekom AG prepared in accordance with German GAAP, adequate provisions for this risk have been recognized.

Claims relating to charges for the shared use of cable ducts. In 2012, Kabel Deutschland Vertrieb und Service GmbH (today Vodafone Kabel Deutschland GmbH (VKDG)) filed a claim against Telekom Deutschland GmbH to reduce the annual charge for the rights to use cable duct capacities in the future and gain a partial refund of the payments made in this connection since 2004. According to VKDG's latest estimates, its claims amounted to around EUR 624 million along with around EUR 9 million for the alleged benefit from additional interest, plus interest in each case. Claims prior to 2009 are now no longer being asserted by VKDG. After the Frankfurt/Main Regional Court had dismissed the complaint in 2013, the Frankfurt/Main Higher Regional Court also rejected the appeal in December 2014. In the ruling dated January 24, 2017, the Federal Court of Justice reversed the appeal ruling and referred the case back to the Frankfurt/Main Higher Regional Court for further consideration. In its ruling dated December 20, 2018, the Frankfurt/Main Higher Regional Court again rejected the appeal and disallowed a further appeal. In similar proceedings, Unitymedia Hessen GmbH & Co. KG, Unitymedia NRW GmbH, and Kabel BW GmbH filed claims against Telekom Deutschland GmbH in January 2013, demanding that it cease charging the plaintiffs more than a specific and precisely stated amount for the shared use of cable ducts. In addition, the plaintiffs are demanding a refund of currently around EUR 570 million plus interest. The claim was dismissed in the first instance by the Cologne Regional Court on October 11, 2016. In its ruling dated March 14, 2018, the Düsseldorf Higher Regional Court rejected the appeal against this decision. In both proceedings, the plaintiffs have lodged a complaint against the non-allowance of appeal with the Federal Court of Justice. At present the financial impact of both these proceedings cannot be assessed with sufficient certainty.

Claim for damages in Malaysia despite an earlier, contrary, legally binding arbitration ruling. Celcom Malaysia Berhad (Celcom) and Technology Resources Industries Berhad are pursuing actions with the state courts in Kuala Lumpur, Malaysia, against eleven defendants in total, including DeTeAsia Holding GmbH, a subsidiary of Deutsche Telekom AG. The plaintiffs are demanding damages and compensation of USD 232 million plus interest. DeTeAsia Holding GmbH had enforced this amount against Celcom in 2005 on the basis of a final arbitral award in its favor. The main proceedings in the court of first instance began in January 2018. Adequate provisions for this risk were recognized.

Patents and licenses. Like many other large telecommunications and internet providers, Deutsche Telekom is exposed to a growing number of intellectual property rights disputes. There is a risk that we may have to pay license fees and/or compensation; we are also exposed to a risk of cease-and-desist orders, for example relating to the sale of a product or the use of a technology.

Further, Deutsche Telekom intends to defend itself and/or pursue its claims vigorously in each of these proceedings.

Proceedings concluded

Arbitration proceedings against T-Mobile Polska S.A. In August 2019, Polish telecommunications provider P4 Sp. z o.o. had initiated arbitration proceedings against T-Mobile Polska S.A. The plaintiff claimed around PLN 400 million (around EUR 93 million) plus interest as payment for its alleged entitlement to retroactive mobile termination rates. The arbitration proceedings filed by P4 Sp. z o.o. were dismissed in a final arbitral award dated December 30, 2020.

Anti-trust proceedings

Like all companies, our Group is subject to anti-trust law. In recent years, we have notably stepped up our compliance efforts in this area too. Nevertheless, Deutsche Telekom and its subsidiaries are from time to time subject to proceedings under competition law or follow-on damage actions under civil law. In the following, we describe material anti-trust proceedings and resulting claims for damages.

Claims for damages against Slovak Telekom following a European Commission decision to impose fines. The European Commission decided on October 15, 2014 that Slovak Telekom had abused its market power on the Slovak broadband market and as a result imposed fines on Slovak Telekom and Deutsche Telekom, which were paid in full in January 2015. Slovak Telekom and Deutsche Telekom challenged the European Commission's decision on December 29, 2014 before the General Court of the European Union. On December 13, 2018, the court partially overturned the European Commission's decision and reduced the fines by a total of EUR 13 million. Despite this positive judgment, on February 21, 2019, Slovak Telekom and Deutsche Telekom filed an appeal with the European Court of Justice against the ruling by the General Court. With this appeal, Slovak Telekom and Deutsche Telekom are seeking, inter alia, to overturn the findings of the European Commission determining Slovak Telekom's behavior as abusive. Following the decision of the European Commission, competitors filed damage actions against Slovak Telekom with the civil court in Bratislava. These claims seek compensation for alleged damages due to Slovak Telekom's abuse of a dominant market position, as determined by the European Commission. At present, two claims totaling EUR 112 million plus interest are still pending. It is currently not possible to estimate the financial impact with sufficient certainty.

Financial risks

Liquidity, credit, currency, interest rate risks

With regard to its assets, liabilities, and planned transactions, our Group is particularly exposed to liquidity risks, credit risks, and the risk of changes in exchange rates and interest rates. We want to contain these risks. Risks with an impact on cash flows are monitored in a standard process and hedged accordingly using derivative and non-derivative hedges. Derivative financial instruments are used solely for hedging and never for speculative purposes. The following risk areas – liquidity, credit, currency, and interest rate risks – are evaluated taking into account all hedges.

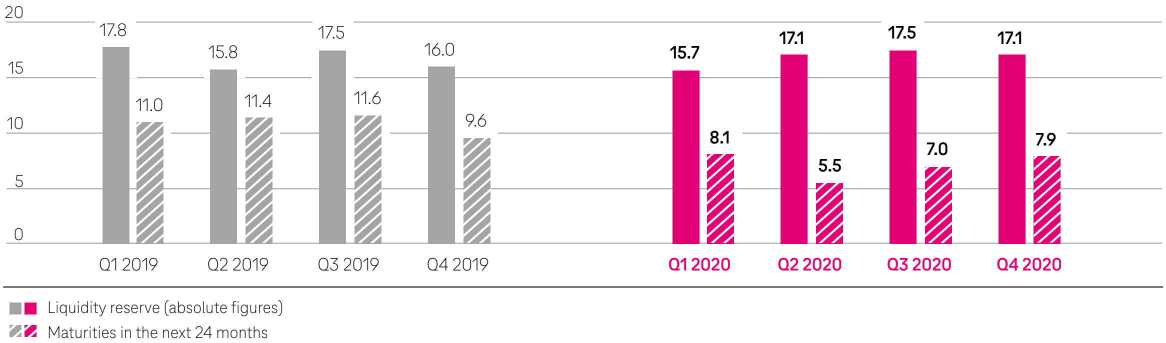
For further information on the risk assessment, please refer to the "Corporate risks" table above.

Liquidity risk. To ensure the Group's and Deutsche Telekom AG's solvency and financial flexibility at all times, we maintain a liquidity reserve in the form of credit lines and cash as part of our liquidity management. Since the successful business combination of T-Mobile US and Sprint, T-Mobile US has pursued its own separate financing and liquidity strategy.

At December 31, 2020, Deutsche Telekom (excluding T-Mobile US) had standardized bilateral credit agreements with 21 banks for a total of EUR 12.6 billion. At all times, our liquidity reserve covered the bonds falling due and long-term loans of Deutsche Telekom (excluding T-Mobile US) for the next 24 months at least (see graphic below). From today's perspective, Deutsche Telekom's (excluding T-Mobile US) access to the international debt capital markets is not jeopardized.

Development of the liquidity reserve (excluding T-Mobile US), maturities in 2019[a]/2020

billions of €



[a] 2019 pro forma figures for Deutsche Telekom (excluding T-Mobile US).

Furthermore, bilateral credit lines with an aggregate total volume of USD 5.5 billion (EUR 4.5 billion) plus a cash balance of USD 10.4 billion (EUR 8.5 billion) were available to T-Mobile US as of December 31, 2020. This liquidity reserve covers T-Mobile US' maturing bonds at all times for at least the next 24 months. From today's perspective, access to the international debt capital markets for T-Mobile US is not jeopardized.

Credit risks. In our operating business and certain banking activities, we are exposed to a credit risk, i.e., the risk that a counterparty will not fulfill its contractual obligations. To keep this credit risk to a minimum, we conclude transactions with regard to financing activities only with counterparties that have at least a credit rating of BBB+/Baa1; we also actively manage limits. In addition, we have concluded collateral agreements for our derivative transactions.

Currency risks. The currency risks result from investments, financing measures, and operations. Risks from foreign-currency fluctuations are hedged if they affect the Group's cash flows. However, foreign-currency risks that do not influence the Group's cash flows (e.g., risks resulting from the translation of assets and liabilities of foreign operations into euros) are not hedged. Deutsche Telekom may nevertheless also hedge these foreign-currency risks under certain circumstances.

Interest rate risks. Our interest rate risks mainly result from financing activities. In addition to the interest rate risk pertaining to variable-interest debt, this also includes the issue of new liabilities. With interest rates still at an all-time low, our risk assessment for a rise in interest rates is unchanged against the prior year. As such, the risk significance in the risk category "Liquidity, credit, currency, interest rate risks" remains at "medium" overall. Interest risks are managed as part of our interest rate management activities. A maximum, variable component is set each year for the debt position in euros; the debt position of T-Mobile US in U.S. dollars primarily comprises fixed-income securities, some of which include issuer cancellation rights. The Board of Management and the Supervisory Board are regularly informed about the situation.

For further information, please refer to Note 41 "Financial instruments and risk management," in the notes to the consolidated financial statements.

Tax risks

We are subject to the applicable tax laws in many different countries. Risks can arise from changes in local taxation laws or case law and different interpretations of existing provisions. These risks can impact both our tax expense and benefit as well as tax receivables and liabilities.

Other financial risks

This section contains information on other financial risks that we consider to be immaterial at present or cannot evaluate based on current knowledge.

Rating risk. As of December 31, 2020, Deutsche Telekom AG's credit rating with Moody's was Baa1 with a negative outlook, while Standard & Poor's rated us BBB with a stable outlook, and Fitch confirmed its current rating of BBB+ with a stable outlook. Standard & Poor's reduced its rating from BBB+ to BBB, as previously announced, upon the closing of the business combination of T-Mobile US and Sprint. Over time, a lower rating is likely to lead to an increase in the cost of debt financing.

Sales of shares by the Federal Republic or KfW Bankengruppe. As of December 31, 2020, the Federal Republic and KfW Bankengruppe jointly held 31.9 % in Deutsche Telekom AG. It is possible that the Federal Republic will continue its policy of privatization and sell further equity interests in a manner designed not to disrupt the capital markets and with the involvement of KfW Bankengruppe. There is a risk that the sale of a significant volume of shares by the Federal Republic or KfW Bankengruppe, or any speculation to this effect, could have a negative impact on the price of the T-Share.

Our CR strategy enhances the value of our Company in the long term, which also has a positive effect of reducing business risks. Investors with a long-term horizon acknowledge this approach. In the capital markets, this is evident, for example, in the proportion of T-Shares held by investors that base their investment decisions, at least in part, on sustainability criteria. As of September 30, 2020, around 13 % of all T-Shares were held by SRI (socially responsible investment) investors, and 9 % were held by investors who manage their funds primarily in accordance with SRI aspects. SDG 8 FINANCE

Impairment of Deutsche Telekom AG's assets. The value of the assets of Deutsche Telekom AG and its subsidiaries is reviewed periodically. In addition to the regular annual measurements, specific impairment tests may be carried out, for example, where changes in the economic, regulatory, business, or political environment suggest that the value of goodwill, intangible assets, property, plant and equipment, investments accounted for using the equity method, or other financial assets might have decreased. These tests may lead to the recognition of impairment losses that do not, however, result in cash outflows. This could impact to a considerable extent on our results, which in turn may negatively affect the T-Share price.

For further information, please refer to the section "Summary of accounting policies – Judgments and estimates" in the notes to the consolidated financial statements.

Other disclosures

Significant events after the reporting period

For information on events after the reporting period, please refer to Note 46 "Events after the reporting period" in the notes to the consolidated financial statements and to the notes to the annual financial statements of Deutsche Telekom AG as of December 31, 2020.

Accounting-related internal control system

Deutsche Telekom AG's internal control system (ICS) is based on the internationally recognized COSO (Committee of Sponsoring Organizations of the Treadway Commission) Internal Control – Integrated Framework, COSO I, as amended on May 14, 2013.

The Audit Committee of the Supervisory Board of Deutsche Telekom AG monitors the effectiveness of the ICS as required by § 107 (3) sentence 2 AktG. The Board of Management is responsible for defining the scope and structure of the ICS at its discretion. Internal Audit is responsible for independently reviewing the functionality and effectiveness of the ICS in the Group and at Deutsche Telekom AG, and, to comply with this task, has comprehensive information, audit, and inspection rights.

The accounting-related ICS comprises the principles, methods, and measures used to ensure appropriate accounting. It is continuously being refined and aims to ensure the consolidated financial statements of Deutsche Telekom are prepared in accordance with the International Financial Reporting Standards (IFRS) as adopted by the European Union, as well as with the regulations under commercial law as set forth in § 315e (1) HGB. Another objective of the accounting-related ICS is the preparation of the annual financial statements of Deutsche Telekom AG and the combined management report in accordance with German GAAP.

It is generally true of any ICS that regardless of how it is specifically structured there can be no absolute guarantee that it will achieve its objectives. Therefore, as regards the accounting-related ICS, there can only ever be relative, but no absolute, certainty that material accounting misstatements can be prevented or detected.

Group Accounting manages the processes of Group accounting and management reporting. Laws, accounting standards, and other pronouncements are continuously analyzed as to whether and to what extent they are relevant and how they impact on financial reporting. The relevant requirements are defined in the Group Accounting Manual, for example, communicated to the relevant units and, together with the financial reporting calendar that is binding throughout the Group, form the basis of the financial reporting process. In addition, supplementary process directives such as the Intercompany Policy, standardized reporting formats, IT systems, as well as IT-based reporting and consolidation processes support the process of uniform and compliant Group accounting. Where necessary, we also draw on the services of external service providers, for example, to measure pension obligations. Group Accounting ensures that these requirements are complied with consistently throughout the Group. The staff involved in the accounting process receive regular training. Deutsche Telekom AG and the Group companies are responsible for ensuring that Group-wide policies and procedures are complied with. The Group companies ensure the compliance and timeliness of their accounting-related processes and systems and, in doing so, are supported and monitored by Group Accounting.

Operational accounting processes at the national and international level are increasingly managed by our shared service centers. Harmonizing the processes enhances their efficiency and quality and, in turn, improves the reliability of the internal ICS. The ICS thus safeguards both the quality of internal processes at the shared service centers and the interfaces to the Group companies by means of adequate controls and an internal certification process.

Internal controls are embedded in the accounting process depending on risk levels. The accounting-related ICS comprises both preventive and detective controls, which include:

- IT-based and manual matching
- The segregation of functions
- The dual-checking principle
- Monitoring controls
- General IT checks such as access management in IT systems, and change management

We have implemented a standardized process throughout the Group for monitoring the effectiveness of the accounting-related ICS. This process systematically focuses on risks of possible misstatements in the consolidated financial statements. At the beginning of the year, specific accounts and accounting-related process steps are selected based on risk factors. They are then reviewed for effectiveness in the course of the year. If control weaknesses are found, they are analyzed and assessed, particularly in terms of their impact on the consolidated financial statements and the combined management report. Material control weaknesses, the action plans for eradicating them, and ongoing progress are reported to the Board of Management and additionally to the Audit Committee of the Supervisory Board of Deutsche Telekom AG. In order to ensure a high-quality accounting-related ICS, Internal Audit is closely involved in all stages of the process.

Corporate Governance Statement in accordance with §§ 289f, 315d HGB

The Corporate Governance Statement in accordance with § 289f and § 315d HGB forms part of the combined management report.

> The Declaration of Conformity can be found on Deutsche Telekom AG's website: www.telekom.com/en/investor-relations/management-and-corporate-governance

Legal structure of the Group

Deutsche Telekom AG, Bonn, is the parent of the Deutsche Telekom Group. Its shares are traded on the Frankfurt/Main Stock Exchange as well as on other stock exchanges.

> For information on the composition of capital stock in accordance with § 289a (1) HGB and § 315a HGB of direct and indirect equity investments, please refer to Note 19 "Shareholders' equity" in the notes to the consolidated financial statements and to the notes to the annual financial statements of Deutsche Telekom AG as of December 31, 2020.

Shareholders' equity

Each share entitles the holder to one vote. These voting rights are restricted, however, in relation to treasury shares (at December 31, 2020: around 18 million in total).

Treasury shares. The amount of issued capital assigned to treasury shares was approximately EUR 46 million at December 31, 2020. This equates to 0.4 % of the capital stock. 18,002,303 treasury shares were held at December 31, 2020.

> For information on the treasury shares in accordance with § 160 (1) No. 2 AktG, please refer to Note 8 in the annual financial statements of Deutsche Telekom AG as of December 31, 2020 and to Note 19 "Shareholders' equity" in the notes to the consolidated financial statements.

The shareholders' meeting resolved on May 25, 2016 to authorize the Board of Management to purchase shares in the Company by May 24, 2021, with the amount of share capital accounted for by these shares totaling up to EUR 1,179,302,878.72, provided the shares to be purchased on the basis of this authorization in conjunction with the other shares of the Company that the Company has already purchased and still possesses or are to be assigned to it under § 71d and § 71e AktG do not at any time account for more than 10 % of the Company's share capital. Moreover, the requirements under § 71 (2) sentences 2 and 3 AktG must be complied with. Shares shall not be purchased for the purpose of trading in treasury shares. This authorization may be exercised in full or in part. The purchase can be carried out in partial tranches spread over various purchase dates within the authorization period until the maximum purchase volume is reached. Dependent Group companies of Deutsche Telekom AG within the meaning of § 17 AktG or third parties acting for the account of Deutsche Telekom AG or for the account of dependent Group companies of Deutsche Telekom AG within the meaning of § 17 AktG are also entitled to purchase the shares. The shares are purchased through the stock exchange in adherence to the principle of equal treatment (§ 53a AktG). Shares can instead also be purchased by means of a public purchase or share exchange offer addressed to all shareholders, which, subject to a subsequently approved exclusion of the right to offer shares, must also comply with the principle of equal treatment.

The shares may be used for one or several of the purposes permitted by the authorization granted by the shareholders' meeting on May 25, 2016 under item 6 on the agenda. The shares may also be used for purposes involving an exclusion of subscription rights. They may also be sold on the stock market or by way of an offer to all shareholders, or withdrawn. The shares may also be used to fulfill the rights of Board of Management members to receive shares in Deutsche Telekom AG, which the Supervisory Board has granted to these members as part of the arrangements governing the compensation of the Board of Management, on the basis of a decision by the Supervisory Board to this effect.

Under the resolution of the shareholders' meeting on May 25, 2016, the Board of Management is also authorized to acquire the shares through the use of equity derivatives.

On the basis of the authorization by the shareholders' meeting on May 25, 2016 described above and corresponding authorizations by the shareholders' meeting on May 12, 2011 and May 24, 2012, 110 thousand shares were acquired in June 2011, 206 thousand shares in September 2011, and 268 thousand shares in January 2013. The total volumes amounted to EUR 2,762 thousand in the 2011 financial year, and EUR 2,394 thousand in the 2013 financial year (excluding transaction costs). This increased the number of treasury shares by 316 thousand and 268 thousand, respectively. Further, 90 thousand shares and 860 thousand shares were acquired in September and October 2015, respectively, for an aggregate amount of EUR 14,787 thousand (excluding transaction costs); these acquisitions increased the number of treasury shares by 950 thousand.

No treasury shares were acquired in the reporting period.

As part of the Share Matching Plan, 2 thousand treasury shares were transferred free of charge to the custody accounts of eligible participants in 2012 and a further 2 thousand in 2013. A further 90 thousand treasury shares were transferred free of charge in the 2014 financial year. An additional 140 thousand treasury shares were transferred in 2015. In the 2016 financial year, 232 thousand treasury shares were transferred, 300 thousand treasury shares were transferred in the 2017 financial year, and 312 thousand in the 2018 financial year. In the 2019 financial year, 448 thousand treasury shares were transferred to the custody accounts of eligible participants. Transfers of treasury shares to the custody accounts of employees of Deutsche Telekom AG are free of charge. In cases where treasury shares are transferred to the custody accounts of employees of other Group companies, the costs have been transferred at fair value to the respective Group company since the 2016 financial year.

In all months of the reporting year with the exception of March and August, treasury shares (523 thousand in total) were reallocated and transferred to the custody accounts of eligible participants of the Share Matching Plan. As of December 31, 2020, disposals of treasury shares resulting from the transfers in the reporting period accounted for 0.01 %, or EUR 1,338 thousand, of share capital. Gains on disposal arising from transfers of treasury shares amounted to EUR 7,426 thousand. Transfers of treasury shares increased retained earnings by EUR 36 thousand and capital reserves by EUR 6,052 thousand. In the reporting year, 266 thousand treasury shares with a fair value of EUR 3,885 thousand were billed to other Group companies.

As part of the acquisition of VoiceStream Wireless Corp., Bellevue, and Powertel, Inc., Bellevue, in 2001, Deutsche Telekom AG issued new shares from authorized capital to a trustee, for the benefit of holders of warrants, options, and conversion rights, among others. These options or conversion rights expired in full in the 2013 financial year. As a result, the trustee no longer had any obligation to fulfill any claims in accordance with the purpose of the deposit. The trust relationship was terminated at the start of 2016 and the deposited shares were transferred free of charge to a custody account of Deutsche Telekom AG. The previously deposited shares are accounted for in the same way as treasury shares in accordance with § 272 (1a) HGB. On the basis of authorization by the shareholders' meeting on May 25, 2016, the treasury shares acquired free of charge may be used for the same purposes as the treasury shares acquired for a consideration. In the reporting year, 558 thousand previously deposited shares were reallocated for issue to eligible participants of the Share Matching Plan (prior year: 61 thousand shares).

Authorized capital and contingent capital. The shareholders' meeting on May 31, 2017 authorized the Board of Management to increase the share capital with the approval of the Supervisory Board by up to EUR 3,600,000,000 by issuing up to 1,406,250,000 no par value registered shares against cash and/or non-cash contributions in the period ending May 30, 2022. This authorization may be exercised in full or on one or more occasions in partial amounts. The Board of Management is authorized, subject to the approval of the Supervisory Board, to exclude residual amounts from shareholders' subscription rights. Furthermore, the Board of Management is authorized, subject to the approval of the Supervisory Board, to disapply shareholders' subscription rights in the event of capital increases against non-cash contributions when issuing new shares for business combinations or acquisitions of companies, parts thereof, or interests in companies, including increasing existing investment holdings, or other assets eligible for contribution for such acquisitions, including receivables from the Company. However, the value of the new shares for which shareholders' subscription rights have been disapplied on the basis of this authorization – together with the value of the shares or conversion and/or option rights or obligations under bonds issued or sold since May 31, 2017 subject to the disapplication of subscription rights – must not exceed 20 % of the total share capital; the latter is defined as the amount existing as of May 31, 2017, upon entry of the authorization, or upon the issue of the new shares, whichever amount is lowest. If the issue or sale is carried out in analogous or mutatis mutandis application of § 186 (3) sentence 4 AktG, this shall also constitute the disapplication of subscription rights. Further, the Board of Management is authorized, subject to the approval of the Supervisory Board, to determine the further content of share rights and the conditions under which shares are issued **(2017 authorized capital)**. The 2017 authorized capital was entered into the commercial register on July 11, 2017.

As of December 31, 2020, the share capital was contingently increased by up to EUR 1,200,000,000, comprising up to 468,750,000 no par value shares **(2018 contingent capital)**. The contingent capital increase will be implemented only to the extent that

a. the holders or creditors of bonds with warrants, convertible bonds, profit participation rights, and/or participating bonds (or combinations of these instruments) with options or conversion rights, which are issued or guaranteed by Deutsche Telekom AG or its direct or indirect majority holdings by May 16, 2023, on the basis of the authorization resolution granted by the shareholders' meeting on May 17, 2018, make use of their option and/or conversion rights or
b. those obligated as a result of bonds with warrants, convertible bonds, profit participation rights, and/or participating bonds (or combinations of these instruments), which are issued or guaranteed by Deutsche Telekom AG or its direct or indirect majority holdings by May 16, 2023, on the basis of the authorization resolution granted by the shareholders' meeting on May 17, 2018, fulfill their option or conversion obligations (including in the event that, in exercising a repayment option when the final due date of the bond is reached, Deutsche Telekom AG grants shares in Deutsche Telekom AG completely or partially in lieu of payment of the amount due)

and other forms of fulfillment are not used. The new shares shall participate in profits starting at the beginning of the financial year in which they are issued as the result of the exercise of any option or conversion rights or the fulfillment of any option or conversion obligations. The Supervisory Board is authorized to amend § 5 (3) of the Articles of Incorporation of Deutsche Telekom in accordance with the particular usage of the contingent capital and after the expiry of all the option or conversion periods.

Main agreements including a change of control clause

The main agreements entered into by Deutsche Telekom AG that include a clause in the event of a change of control principally relate to bilateral credit lines and several loan agreements. In the event of a change of control, the individual lenders have the right to terminate the credit line and, if necessary, serve notice or demand repayment of the loans. A change of control is assumed when a third party, which can also be a group acting jointly, acquires control over Deutsche Telekom AG.

On November 2, 2016, Deutsche Telekom AG signed a change agreement to the shareholder agreement with the Greek government from May 14, 2008 on Hellenic Telecommunications Organization S.A., Athens, Greece (OTE). Under this agreement, the Greek government is, under certain circumstances, entitled to acquire all shares in OTE from Deutsche Telekom AG as soon as one (or more) person(s), with the exception of the Federal Republic of Germany, either directly or indirectly acquire(s) 35 % of the voting rights of Deutsche Telekom AG.

In the master agreement establishing the procurement joint venture BuyIn in Belgium, Deutsche Telekom AG and Orange S.A. (formerly France Télécom S.A.)/Atlas Services Belgium S.A. (a subsidiary of Orange S.A.) agreed that if Deutsche Telekom or Orange comes under the controlling influence of a third party or if a third party that is not wholly owned by the Orange group of companies acquires shares in Atlas Services Belgium S.A., the respective other party (Orange and Atlas Services Belgium S.A. only jointly) may terminate the master agreement with immediate effect.

Changes in the consolidated group

61 German and 364 foreign subsidiaries are fully consolidated in Deutsche Telekom's consolidated financial statements (December 31, 2019: 61 and 206). 15 associates (December 31, 2019: 10) and 9 joint ventures (December 31, 2019: 7) are also included using the equity method.

The principal subsidiaries of Deutsche Telekom AG are listed in the section "Summary of accounting policies – Principal subsidiaries" in the notes to the consolidated financial statements.

Business combinations

T-Mobile US and Sprint combined their two businesses effective April 1, 2020 to form the "all-new," larger T-Mobile US. The business combination gave T-Mobile US a more comprehensive spectrum portfolio. On December 1, 2020, T-Mobile Netherlands acquired the Dutch MVNO and SIM provider Simpel. This acquisition secures mobile market shares, creates synergies, and makes us more competitive in the consumer market.

For further information, please refer to the section "Summary of accounting policies – Changes in the composition of the Group and other transactions" in the notes to the consolidated financial statements.

Compensation report

The “Compensation report” details the compensation system underlying Board of Management compensation as well as the specific remuneration received by the individual members of the Board of Management. It takes into consideration the requirements of the German Commercial Code taking account of the provisions of German Accounting Standard No. 17 (GAS 17), the recommendations of the German Corporate Governance Code (GCGC) as amended on February 7, 2017, and the International Financial Reporting Standards (IFRS).

Changes in the composition of the Board of Management and contract extensions. Dr. Thomas Kremer’s term of office ended as scheduled on March 31, 2020. The Board of Management department for Data Privacy, Legal Affairs and Compliance headed by Dr. Kremer was dissolved effective January 1, 2020 and its constituent units were assigned to the Finance; Human Resources and Legal Affairs; and Technology and Innovation Board of Management departments. Until his departure, Dr. Kremer supported the transition to the new structures as part of a designated mandate. Dr. Dirk Wössner informed the Supervisory Board that he did not intend to extend his service contract beyond its scheduled expiration date at the end of 2020. Dr. Wössner resigned from his position on the Board of Management with effect from October 31, 2020. The Supervisory Board appointed Srini Gopalan to succeed Dr. Wössner as the Board of Management member for Germany. Srini Gopalan moved from the Europe Board of Management department to the Germany Board department effective November 1, 2020. Dominique Leroy, Srini Gopalan’s successor as the Board of Management member responsible for Europe, was appointed by the Supervisory Board also effective November 1, 2020. By resolution of the Supervisory Board of Deutsche Telekom AG of December 16, 2020, Claudia Nemat was reappointed as the Board of Management member for Technology and Innovation for the period from October 1, 2021 to September 30, 2026.

Compensation of the Board of Management

Basis of Board of Management compensation. The current Board of Management compensation system was adopted by the Supervisory Board on February 24, 2010. The shareholders’ meeting of Deutsche Telekom AG on May 3, 2010 approved this system. The compensation of Board of Management members comprises various components. Under the terms of their service contracts, members of the Board of Management are entitled to an annual fixed remuneration and annual variable performance-based remuneration (Variable I), a long-term variable remuneration component (Variable II), as well as fringe benefits and deferred benefits based on a company pension entitlement. The Supervisory Board defines the structure of the compensation system for the Board of Management and reviews this structure and the appropriateness of compensation at regular intervals. It is ensured that Board of Management compensation is oriented toward the sustained development of the Company and that there is a multi-year measurement base for the variable components. Sideline employment generally requires prior approval. Generally, no additional compensation is paid for being a member of the management or supervisory board of other Group entities.

On December 16, 2020, the Supervisory Board resolved on the key features of a new compensation system which takes into account the updates to the 2020 German Corporate Governance Code and the amendments to the German Stock Corporation Act (ARUG II, the Act Implementing the Second Shareholder Rights Directive). This compensation system will be submitted for vote at the shareholders’ meeting of Deutsche Telekom AG on April 1, 2021 and presented in detail in the invitation to the 2021 shareholders’ meeting. The rules of the current compensation system are described further on in this “Compensation report.” As each of the compensation components are presented below, the annotation “ | **Planned change in 2021:**” signifies elements that will differ under the new compensation system, which is still to be voted on, from the current system described here. Readers of this “Compensation report” should therefore be able to see at a glance which changes are planned.

Compensation of the Board of Management

Non-performance-based compensation components			Performance-based compensation components			
Basic remuneration Twelve monthly payments	**Fringe benefits** Company car ▪ Driver service ▪ Insurance coverage ▪ Non-cash benefits	**Pension commitments** Since 2009: defined contribution plans	**Variable I** One-year variable, performance-based remuneration for the current financial year. Obligatory personal investment: **share deferral**	**Share Matching Plan** After a lock-up period of four years the Company matches each deferred share with one T-Share.	**Variable II** Four-year long-term variable performance-based remuneration. Composed of four equally weighted KPIs.	**Bonus for extraordinary performance** The Supervisory Board can pay a bonus for extraordinary performance at its discretion.

Non-performance-based compensation components

Basic remuneration

The fixed annual remuneration is determined for all Board of Management members based on market conditions in accordance with the requirements of stock corporation law and is paid on a monthly basis. In the event of temporary incapacity for work caused by illness, accident, or any other reason for which the respective Board of Management member is not responsible, the fixed basic remuneration continues to be paid. The continued payment of remuneration ends at the latest after an uninterrupted period of absence of six months, or for a maximum of three months following the end of the month in which the Board of Management member's permanent incapacity for work is established.

Fringe benefits

In accordance with market-oriented and corporate standards, the Company grants all members of the Board of Management additional benefits under the terms of their service contracts, some of which are viewed as non-cash benefits and taxed accordingly. This mainly includes being furnished with a company car and accident and liability insurance, and reimbursements in connection with maintaining a second household.

Pension commitments

New pension commitment. Since 2009, all Board members have been granted a company pension in the form of a defined contribution plan. Under this arrangement, the Board member receives a one-time lump sum payout upon entering retirement. A contribution is paid into the Board member's pension account for each year of service at an interest rate corresponding to market levels. Annual additions to the pension account have no effect on cash or cash equivalents. The cash outflow is only effective upon the Board member's retirement. As a rule, the date of retirement is the beneficiary's 62nd birthday. The amount to be provided annually is individualized and decoupled from other compensation components. The exact definition of the contribution is based on a comparison with peer companies that are suitable for benchmarking and also offer defined contribution plans. The contributions for Birgit Bohle, Srini Gopalan, Dr. Christian P. Illek, Dr. Thomas Kremer, Thorsten Langheim, Claudia Nemat, and Dr. Dirk Wössner amount to EUR 250,000 each for each year of service rendered.

Legacy pension commitment. As the longest-serving Board member, CEO Timotheus Höttges is the only current Board member to still benefit from a legacy pension commitment under the company pension plan. Benefits from the company pension plan are in direct relation to the beneficiary's annual salary. The Board of Management members receive company pension benefits based on a fixed percentage of their last fixed annual salary for each year of service rendered prior to their date of retirement. The pension payments may be in the form of a life-long retirement pension upon reaching the age of 62 or in the form of an early retirement pension upon reaching the age of 60. Opting for the early retirement pension scheme is connected with actuarial deductions. The company pension is calculated by multiplying a basic percentage rate of 5 % by the number of years of service as a member of the Board of Management. After ten years of service, the maximum pension level of 50 % of the last fixed annual remuneration is attained. Following Timotheus Höttges' reappointment to the Board of Management and the adjustment to his basic remuneration, the Supervisory Board decided to dynamically increase his pension entitlements accrued up to December 31, 2018 by 2.4 % per year using the basic remuneration valid up to December 31, 2018 as the measurement base. Future increases in his compensation will thus not lead to higher pension payments.

The pension payments to be made upon retirement increase dynamically, at a rate of 1 % per year. In addition, the pension agreements include arrangements for pensions for surviving dependents in the form of entitlements for widows/widowers and orphans. In specifically provided exceptional cases, entitlement to a widow's/widower's pension is excluded. The standard criteria for eligibility in the pension arrangements are in line with market conditions. In the event of a permanent incapacity for work (invalidity), the beneficiary is also entitled to the pension credit accrued.

Pension substitute. A "pension substitute" was agreed with Adel Al-Saleh in lieu of a pension commitment due to his U.S. citizenship. The same applies to the new Board of Management member, Dominique Leroy. The arrangement provides for an annual payment of EUR 250,000 for each full year of service rendered and is reported in the tables under fringe benefits. In determining the amount, the Supervisory Board oriented itself to the level of the contributions for those Board members who have received a contribution-based benefit promise (new pension commitment).

> **Planned change in 2021:** Under the new compensation system, new members appointed to the Board of Management after its introduction will no longer receive pension commitments.

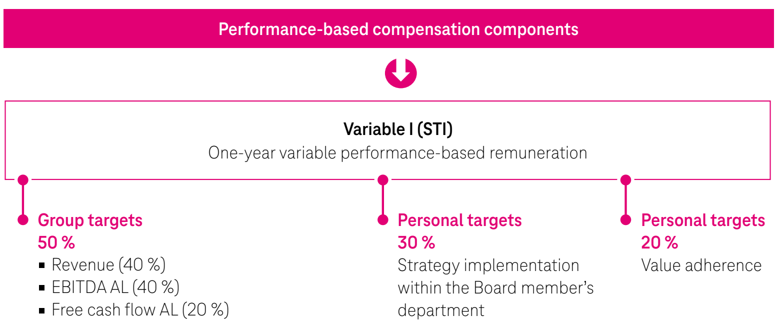
Service cost and defined benefit obligations for each member of the Board of Management with a pension commitment are shown in the following table:

€	Service cost 2020	Defined benefit obligation (DBO) Dec. 31, 2020	Service cost 2019	Defined benefit obligation (DBO) Dec. 31, 2019
Birgit Bohle	321,623	682,824	307,304	329,515
Srini Gopalan	303,269	1,318,968	295,590	964,557
Timotheus Höttges	473,974	20,429,377	417,067	18,595,908
Dr. Christian P. Illek	263,774	1,687,449	262,191	1,377,980
Dr. Thomas Kremer (until March 31, 2020)	62,500	2,139,166	247,664	2,076,666
Thorsten Langheim	279,423	582,911	275,986	287,194
Claudia Nemat	289,561	3,261,930	281,885	2,851,583
Dr. Dirk Wössner (until October 31, 2020)	297,545	900,303	289,418	619,879

Performance-based compensation components

The variable remuneration of the members of the Board of Management is mainly divided into Variables I and II. Variable I contains both short-term and long-term components consisting of the realization of budget figures for specific performance indicators, strategic/functional targets, and adherence to the Group's Guiding Principles. The payment amount of Variable I is tied to an obligation to invest in shares of Deutsche Telekom AG, which results in a further inflow of shares after four years under the current Share Matching Plan. Variable II is oriented solely toward the long term. This ensures that the variable remuneration is oriented toward the sustained development of the Company and that there is a predominantly long-term incentive effect. The variable compensation elements include clear upper limits, while the amount of compensation is capped overall. The final component of performance-based compensation comprises an option for the Supervisory Board to award a bonus for extraordinary performance. In the event of temporary incapacity for work caused by illness, accident, or any other reason for which the respective Board of Management member is not responsible, claims to variable remuneration are reduced pro rata in line with the uninterrupted period of absence; the uninterrupted period of absence must be more than one month in duration.

Variable I

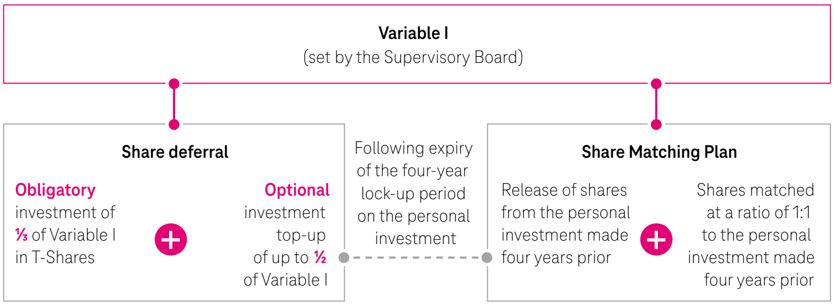


The annual variable remuneration of Board of Management members is based on the achievement of targets set by the Supervisory Board of Deutsche Telekom AG for each member of the Board of Management at the beginning of the financial year. The set of targets is composed of corporate targets (50 %) related to the unadjusted values – adapted for target-relevant factors – for revenue, EBITDA after leases, and free cash flow after leases, as well as personal targets for the individual members of the Board of Management. The three Group targets are weighted in relation to each other at 40/40/20. The personal targets consist of targets oriented toward the sustained success of the Company concerning the implementation of the strategy in the member's respective department (30 %) and value adherence (adherence to Guiding Principles), which is an indicator of compliance with value orientation and accounts for 20 %. The agreement on targets and the level of target achievement for the respective financial year are determined by the plenary session of the Supervisory Board. Levels of target achievement exceeding 100 % are capped at 150 % of the award amount. Any higher levels of target achievement will not be taken into consideration. To ensure the long-term incentive effect and orientation toward the sustained development of the Company, a third of the variable remuneration set by the plenary session of the Supervisory Board must be invested in shares of Deutsche Telekom AG; these shares must be held by the respective Board member for a period of at least four years.

Planned change in 2021: The new compensation system will also incorporate an existing ESG target into short-term variable remuneration. Additionally, the individual target parameters for strategy implementation and value adherence will be taken into account in the form of a performance factor that can be expressed as a value between 0.8 and 1.2. The performance factor is applied after the level of target achievement for Group and ESG targets has been determined. With the application of the performance factor, a target achievement level of between 0 % and 180 % is possible.

Share Matching Plan

Share deferral and the Share Matching Plan



In the 2020 financial year, the Board of Management members, as described above, were contractually obliged to invest a third of Variable I in shares of Deutsche Telekom AG. The Supervisory Board made an offer to the Board members to increase the obligatory personal investment in 2020 to up to 50 % of the Variable I payout. Deutsche Telekom AG will grant one additional share for every share acquired as part of the Board of Management member's aforementioned personal investment (Share Matching Plan) on expiration of the four-year lock-up period, provided they are still a member of the Board of Management.

Disclosures are required not only of the total expense related to share-based remuneration from matching shares in the 2020 financial year and the fair value of the matched shares at their grant date, but also of the number of entitlements to matching shares and their development in the current financial year.

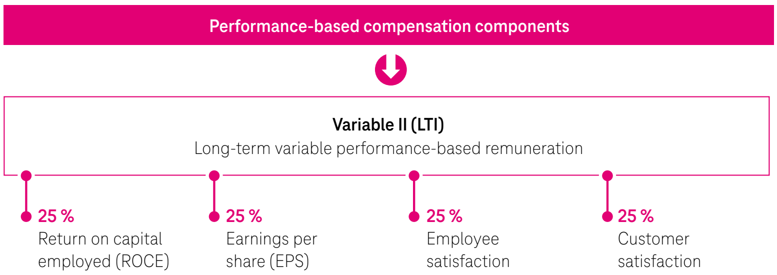
The fair value of the matching shares at grant date shown in the following table does not represent a component of remuneration for the Board of Management members in 2020. It is an imputed value of the entitlements to matching shares determined on the basis of relevant accounting policies. Here, the fair value equates to the share price at grant date less an expected dividend markdown. The following table is based on expected target achievement for the 2020 financial year and thus on the estimated amount of the personal investment to be made by the respective Board of Management member to establish his or her entitlements to matching shares. The final number of entitlements to matching shares identified for the 2020 financial year may be higher or lower than the amounts estimated here.

The total share-based remuneration expense for entitlements to matching shares from 2015 to 2020 to be recognized for the financial years 2019 and 2020 pursuant to IFRS 2 is included in the two last columns of the table.

	Number of entitlements granted to matching shares since 2010 at the beginning of the financial year	Number of new entitlements to matching shares granted in 2020	Number of shares transferred in 2020 as part of the Share Matching Plan	Fair value of the entitlements to matching shares at grant date €	Cumulative total share-based remuneration expense in 2020 for matching shares for the years 2016 through 2020 €	Cumulative total share-based remuneration expense in 2019 for matching shares for the years 2015 through 2019 €
Adel Al-Saleh	53,100	21,845	0	291,412	194,984	120,780
Birgit Bohle	19,151	17,800	0	237,452	105,520	36,983
Srini Gopalan	69,740	21,845	0	291,412	237,132	167,268
Timotheus Höttges	423,174	58,253	38,969	777,095	856,400	683,151
Dr. Christian P. Illek	102,681	21,845	11,121	291,412	276,113	258,459
Dr. Thomas Kremer (until March 31, 2020)	142,813	0	43,991	0	(84,603)	253,751
Thorsten Langheim	23,503	21,845	0	291,412	138,309	45,387
Dominique Leroy (since November 1, 2020)	0	4,037	0	46,062	1,777	0
Claudia Nemat	187,904	21,845	18,120	291,412	307,351	297,804
Dr. Dirk Wössner (until October 31, 2020)	44,800	0	10,559	0	(9,910)	100,570

By December 31, 2020, Deutsche Telekom AG had acquired 565,596 shares for the purpose of awarding matching shares to Board of Management members as part of the Share Matching Plan. In 2020, shares were once again transferred from the Share Matching Plan for Board of Management members to individual members of the Board of Management. In total, 122,760 shares (2019: 55,146) were transferred to Board of Management members in 2020; of this total, 54,550 shares were transferred to Board of Management members who were no longer serving on the Board at the transfer date.

Variable II



Variable II

The exclusively long-term-oriented Variable II is measured based on the fulfillment of four equally weighted performance parameters (return on capital employed (ROCE), earnings per share (EPS), customer satisfaction, and employee satisfaction). All four parameters are collected on a Group-wide basis. Each parameter determines a quarter of the award amount. Levels of target achievement exceeding 100 % are capped at 150 % of the award amount. The measurement period is four years, with the measurement being based on average target achievement across the four years planned at the time the tranche was determined. The award amount is decoupled from other remuneration components and is set for each member of the Board of Management individually.

> **Planned change in 2021:** Variable II will remain as described here. However, Variable II will be supplemented by a share-based component. The individual amount granted to each Board of Management member will be translated into phantom shares and thus additionally linked to the development of the share price. The payment is then made by translating the phantom shares into a cash amount. Total payments are capped at 200 % of the target amount.

Bonus for extraordinary performance

At its discretion and after due consideration, the Supervisory Board may also reward extraordinary performance by individual or all Board of Management members in the form of a special bonus.

Arrangements in the event of termination of a position on the Board of Management. Service contracts for members of the Board of Management concluded since the 2009 financial year include a severance cap in case of premature termination without good cause allowing a compensation payment that is limited to a maximum of two years' remuneration (severance cap) and may not exceed the remuneration due for the remaining term of the service contract.

> **Planned change in 2021:** In the future, compensation paid in connection with a post-contractual prohibition of competition will be deducted from the severance payment.

The service contracts for members of the Board of Management at Deutsche Telekom AG do not include any benefits in the event of the termination of a position on the Board of Management as a result of a change of control.

Board of Management member service contracts generally stipulate a post-contractual prohibition of competition. Pursuant to these provisions, members of the Board of Management are prohibited from rendering services to or on behalf of a competitor for the duration of one year following their departure. As compensation for this restricted period, they receive either a payment of 50 % of the last fixed annual remuneration and 50 % of the most recent Variable I on the basis of 100 % target achievement, or 100 % of the last fixed annual remuneration.

Service contracts for members of the Board of Management concluded since the 2020 financial year contain extensive clawback provisions entitling Deutsche Telekom to reclaim Variable I and Variable II payments if, within three years of determining the variable remuneration, either part or all of the payment is deemed to have been made wrongly.

Board of Management compensation for the 2020 financial year. In reliance on legal requirements and other guidelines, a total of EUR 24.1 million (2019: EUR 23.3 million) is reported in the following table as total compensation for the 2020 financial year for the members of the Board of Management. The Board of Management compensation comprises the fixed annual remuneration as well as other fringe benefits, non-cash benefits and remuneration in kind, short-term variable remuneration (Variable I), fully earned tranches of long-term variable remuneration (Variable II), a bonus for extraordinary performance, and the fair value of the matching shares. This was calculated on the basis of the estimated amount of Variable I at the grant date and the resulting number of entitlements to matching shares. Compensation also includes the bonus for extraordinary performance described in the "Compensation report" and the sign-on bonus for a new Board of Management member.

Total compensation. The compensation of the Board of Management is shown in detail in the following table:

€		Non-performance-based compensation		Performance-based compensation			Total compensation
		Fixed annual remuneration	Other remuneration	One-year variable remuneration (Variable I)	Long-term variable performance-based remuneration (Variable II and bonus for extraordinary performance)	Long-term variable performance-based remuneration (fair value of matching shares)	
Adel Al-Saleh	2020	900,000	273,078[a]	863,555	0	291,412	**2,328,045**
	2019	900,000	322,776	771,525	0	270,987	**2,265,288**
Birgit Bohle	2020	700,000	15,891	731,313	0	237,452	**1,684,656**
	2019	700,000	272,367	699,600	0	220,811	**1,892,778**
Srini Gopalan	2020	900,000	19,746	916,421	627,000	291,412	**2,754,579**
	2019	700,000	20,137	723,800	0	220,811	**1,664,748**
Timotheus Höttges	2020	1,500,000	65,066	2,494,800	2,129,880[b]	777,095	**6,966,841**
	2019	1,500,000	60,111	2,334,600	1,435,940	722,632	**6,053,283**
Dr. Christian P. Illek	2020	900,000	34,175	925,655	627,000	291,412	**2,778,242**
	2019	900,000	34,540	895,725	588,500	270,987	**2,689,752**
Dr. Thomas Kremer	2020	175,000	17,392	178,063	509,438	0	**879,893**
(until March 31, 2020)	2019	700,000	63,546	704,550	588,500	220,811	**2,277,407**
Thorsten Langheim	2020	900,000	14,273	915,975	0	291,412	**2,121,660**
	2019	900,000	17,657	839,700	0	270,987	**2,028,344**
Dominique Leroy	2020	150,000	151,766[c]	112,500	0	46,062	**460,328**
(since November 1, 2020)	2019	0	0	0	0	0	**0**
Claudia Nemat	2020	900,000	78,882	907,200	769,500	291,412	**2,946,994**
	2019	900,000	78,586	845,775	722,250	270,987	**2,817,598**
Dr. Dirk Wössner	2020	583,333	20,637	622,875	0	0	**1,226,845**
(until October 31, 2020)	2019	700,000	23,466	696,850	0	220,811	**1,641,127**
	2020	**7,608,333**	**625,840**	**8,668,357**	**4,662,818**	**2,517,669**	**24,148,083**
	2019	**7,900,000**	**893,186**	**8,512,125**	**3,335,190**	**2,689,824**	**23,330,325**

[a] Other fringe benefits for Adel Al-Saleh include a "pension substitute" in the amount of EUR 250,000 to be paid annually in lieu of a German pension commitment (please also refer to the previous section entitled "Pension commitments").

[b] This figure includes a one-time bonus for extraordinary performance in the amount of EUR 600,000 granted for the performance of activities in connection with the successful finalization of the business combination of T-Mobile US and Sprint.

[c] This amount includes a one-time sign-on bonus of EUR 150,000 to compensate for all financial disadvantages resulting from the move to Deutsche Telekom.

The amounts shown in the "Long-term variable performance-based remuneration (Variable II)" column had been pledged to the eligible Board of Management members in the 2017 financial year.

No member of the Board of Management received benefits or corresponding commitments from a third party for his or her activity as a Board of Management member during the past financial year.

Former members of the Board of Management. A total of EUR 8.5 million (2019: EUR 8.8 million) was included for payments to and entitlements for former members of the Board of Management as well as any surviving dependents.

Provisions (measured in accordance with IAS 19) totaling EUR 223.9 million (December 31, 2019: EUR 213.4 million) were recognized for current pensions and vested rights to pensions for this group of persons and their surviving dependents.

Other. The Company has not granted any advances or loans to current or former Board of Management members, nor were any other financial obligations to the benefit of this group of people entered into.

Table view in accordance with the requirements of the German Corporate Governance Code

The following tables are based on model tables 1 and 2 recommended by the German Corporate Governance Code (GCGC) as amended on February 7, 2017, which present the total compensation granted for the reporting year and the remuneration components allocated.

Benefits granted for the reporting year

Compensation of the Board of Management

€	Timotheus Höttges				Adel Al-Saleh			
	Function: Chairman of the Board of Management (CEO) since Jan. 1, 2014				Function: T-Systems since Jan. 1, 2018			
	2019	2020	2020 (min.)	2020 (max.)	2019	2020	2020 (min.)	2020 (max.)
Fixed remuneration	1,500,000	1,500,000	1,500,000	1,500,000	900,000	900,000	900,000	900,000
Fringe benefits	60,111	65,066	65,066	65,066	322,776	273,078[a]	273,078[a]	273,078[a]
Total fixed annual remuneration	**1,560,111**	**1,565,066**	**1,565,066**	**1,565,066**	**1,222,776**	**1,173,078**	**1,173,078**	**1,173,078**
One-year variable remuneration	1,800,000	1,800,000	0	2,700,000	675,000	675,000	0	1,012,500
Multi-year variable remuneration	**2,722,632**	**3,377,095**	**600,000**	**6,300,000**	**945,987**	**966,412**	**0**	**2,025,000**
Of which: 2019 Variable II (4-year term)	2,000,000				675,000			
Of which: 2020 Variable II (4-year term)		2,000,000	0	3,000,000		675,000	0	1,012,500
Of which: 2019 Share Matching Plan (4-year term)	722,632				270,987			
Of which: 2020 Share Matching Plan (4-year term)		777,095	0	2,700,000		291,412	0	1,012,500
Of which: bonus for extraordinary performance	0	600,000[b]	600,000[b]	600,000[b]	0	0	0	0
Total	**6,082,743**	**6,742,161**	**2,165,066**	**10,565,066**	**2,843,763**	**2,814,490**	**1,173,078**	**4,210,578**
Service cost	417,067	473,974	473,974	473,974	0	0	0	0
Total compensation	**6,499,810**	**7,216,135**	**2,639,040**	**11,039,040**	**2,843,763**	**2,814,490**	**1,173,078**	**4,210,578**

[a] Other fringe benefits for Adel Al-Saleh include a "pension substitute" in the amount of EUR 250,000 to be paid annually in lieu of a German pension commitment (please also refer to the previous section entitled "Pension commitments."

[b] The bonus for extraordinary performance was granted for the performance of activities in connection with the successful finalization of the business combination of T-Mobile US and Sprint.

€	Birgit Bohle				Srini Gopalan			
	Function: Human Resources and Legal Affairs since Jan. 1, 2019				Function: Germany since Jan. 1, 2017			
	2019	2020	2020 (min.)	2020 (max.)	2019	2020	2020 (min.)	2020 (max.)
Fixed remuneration	700,000	700,000	700,000	700,000	700,000	900,000	900,000	900,000
Fringe benefits	272,367	15,891	15,891	15,891	20,137	19,746	19,746	19,746
Total fixed annual remuneration	**972,367**	**715,891**	**715,891**	**715,891**	**720,137**	**919,746**	**919,746**	**919,746**
One-year variable remuneration	550,000	550,000	0	825,000	550,000	675,000	0	1,012,500
Multi-year variable remuneration	**770,811**	**787,452**	**0**	**1,650,000**	**770,811**	**966,412**	**0**	**2,025,000**
Of which: 2019 Variable II (4-year term)	550,000				550,000			
Of which: 2020 Variable II (4-year term)		550,000	0	825,000		675,000	0	1,012,500
Of which: 2019 Share Matching Plan (4-year term)	220,811				220,811			
Of which: 2020 Share Matching Plan (4-year term)		237,452	0	825,000		291,412	0	1,012,500
Of which: bonus for extraordinary performance	0	0	0	0	0	0	0	0
Total	**2,293,178**	**2,053,343**	**715,891**	**3,190,891**	**2,040,948**	**2,561,158**	**919,746**	**3,957,246**
Service cost	307,304	321,623	321,623	321,623	295,590	303,269	303,269	303,269
Total compensation	**2,600,482**	**2,374,966**	**1,037,514**	**3,512,514**	**2,336,538**	**2,864,427**	**1,223,015**	**4,260,515**

€	Dr. Christian P. Illek Function: Finance (CFO) since Jan. 1, 2019				Dr. Thomas Kremer Function: Data Privacy, Legal Affairs and Compliance until Mar. 31, 2020			
	2019	2020	2020 (min.)	2020 (max.)	2019	2020	2020 (min.)	2020 (max.)
Fixed remuneration	900,000	900,000	900,000	900,000	700,000	175,000	175,000	175,000
Fringe benefits	34,540	34,175	34,175	34,175	63,546	17,392	17,392	17,392
Total fixed annual remuneration	**934,540**	**934,175**	**934,175**	**934,175**	**763,546**	**192,392**	**192,392**	**192,392**
One-year variable remuneration	675,000	675,000	0	1,012,500	550,000	137,500	0	206,250
Multi-year variable remuneration	**945,987**	**966,412**	**0**	**2,025,000**	**770,811**	**34,375**	**0**	**51,563**
Of which: 2019 Variable II (4-year term)	675,000				550,000			
Of which: 2020 Variable II (4-year term)		675,000	0	1,012,500		34,375	0	51,563
Of which: 2019 Share Matching Plan (4-year term)	270,987				220,811			
Of which: 2020 Share Matching Plan (4-year term)		291,412	0	1,012,500		0	0	0
Of which: bonus for extraordinary performance	0	0	0	0	0	0	0	0
Total	**2,555,527**	**2,575,587**	**934,175**	**3,971,675**	**2,084,357**	**364,267**	**192,392**	**450,205**
Service cost	262,191	263,774	263,774	263,774	247,664	62,500	62,500	62,500
Total compensation	**2,817,718**	**2,839,361**	**1,197,949**	**4,235,449**	**2,332,021**	**426,767**	**254,892**	**512,705**

€	Thorsten Langheim Function: USA and Group Development since Jan. 1, 2019				Dominique Leroy Function: Europe since Nov. 1, 2020			
	2019	2020	2020 (min.)	2020 (max.)	2019	2020	2020 (min.)	2020 (max.)
Fixed remuneration	900,000	900,000	900,000	900,000	0	150,000	150,000	150,000
Fringe benefits	17,657	14,273	14,273	14,273	0	151,766[a]	151,766[a]	151,766[a]
Total fixed annual remuneration	**917,657**	**914,273**	**914,273**	**914,273**	**0**	**301,766**	**301,766**	**301,766**
One-year variable remuneration	675,000	675,000	0	1,012,500	0	112,500	0	168,750
Multi-year variable remuneration	**945,987**	**966,412**	**0**	**2,025,000**	**0**	**158,562**	**0**	**337,500**
Of which: 2019 Variable II (4-year term)	675,000							
Of which: 2020 Variable II (4-year term)		675,000	0	1,012,500	0	112,500	0	168,750
Of which: 2019 Share Matching Plan (4-year term)	270,987							
Of which: 2020 Share Matching Plan (4-year term)		291,412	0	1,012,500	0	46,062	0	168,750
Of which: bonus for extraordinary performance	0	0	0	0	0	0	0	0
Total	**2,538,644**	**2,555,685**	**914,273**	**3,951,773**	**0**	**572,828**	**301,766**	**808,016**
Service cost	275,986	279,423	279,423	279,423	0	0	0	0
Total compensation	**2,814,630**	**2,835,108**	**1,193,696**	**4,231,196**	**0**	**572,828**	**301,766**	**808,016**

[a] This amount includes a one-time sign-on bonus of EUR 150,000 to compensate for all financial disadvantages resulting from the move to Deutsche Telekom.

€	Claudia Nemat				Dr. Dirk Wössner			
	Function: Technology and Innovation since Oct. 1, 2011				Function: Germany until Oct. 31, 2020			
	2019	2020	2020 (min.)	2020 (max.)	2019	2020	2020 (min.)	2020 (max.)
Fixed remuneration	900,000	900,000	900,000	900,000	700,000	583,333	583,333	583,333
Fringe benefits	78,586	78,882	78,882	78,882	23,466	20,637	20,637	20,637
Total fixed annual remuneration	**978,586**	**978,882**	**978,882**	**978,882**	**723,466**	**603,970**	**603,970**	**603,970**
One-year variable remuneration	675,000	675,000	0	1,012,500	550,000	458,333	0	687,500
Multi-year variable remuneration	**945,987**	**966,412**	**0**	**2,025,000**	**770,811**	**0**	**0**	**0**
Of which: 2019 Variable II (4-year term)	675,000				550,000			
Of which: 2020 Variable II (4-year term)		675,000	0	1,012,500		0	0	0
Of which: 2019 Share Matching Plan (4-year term)	270,987				220,811			
Of which: 2020 Share Matching Plan (4-year term)		291,412	0	1,012,500		0	0	0
Of which: bonus for extraordinary performance	0	0	0	0	0	0	0	0
Total	**2,599,573**	**2,620,294**	**978,882**	**4,016,382**	**2,044,277**	**1,062,303**	**603,970**	**1,291,470**
Service cost	281,885	289,561	289,561	289,561	289,418	297,545	297,545	297,545
Total compensation	**2,881,458**	**2,909,855**	**1,268,443**	**4,305,943**	**2,333,695**	**1,359,848**	**901,515**	**1,589,015**

Benefits allocated for the reporting year

The following table does not contain the target values, but the actual benefits allocated for 2020 for one- and multi-year variable remuneration components. There is another difference between the following table and the table of benefits granted with regard to the presentation of the Share Matching Plan: The figures for the Share Matching Plan disclosed in the following table show the value of the benefits allocated applicable under German tax law at the time of transfer of the matching shares, whereas the above table of benefits granted shows the fair values of remuneration at the grant date.

Compensation of the Board of Management

€	Timotheus Höttges		Adel Al-Saleh	
	Function: Chairman of the Board of Management (CEO) since Jan. 1, 2014		Function: T-Systems since Jan. 1, 2018	
	2019	2020	2019	2020
Fixed remuneration	1,500,000	1,500,000	900,000	900,000
Fringe benefits	60,111	65,066	272,776	323,078[a]
Total fixed annual remuneration	**1,560,111**	**1,565,066**	**1,172,776**	**1,223,078**
One-year variable remuneration	2,334,600	2,494,800	771,525	863,555
Multi-year variable remuneration	**1,822,707**	**2,721,235**	**0**	**0**
Of which: Variable II (4-year term) [b]	1,435,940	1,529,880	0	0
Of which: Share Matching Plan (4-year term) [c]	386,767	591,355	0	0
Of which: bonus for extraordinary performance	0	600,000[d]	0	0
Other	0	0	0	0
Total	**5,717,418**	**6,781,101**	**1,944,301**	**2,086,633**
Service cost	417,067	473,974	0	0
Total compensation	**6,134,485**	**7,255,075**	**1,944,301**	**2,086,633**

[a] Other fringe benefits for Adel Al-Saleh include a “pension substitute” in the amount of EUR 250,000 to be paid annually in lieu of a German pension commitment (please also refer to the previous section entitled “Pension commitments”) and a retroactive increase of EUR 50,000 to the flat-rate reimbursement made in the prior year in connection with maintaining a second household.

[b] Variable II as shown in the column for 2020 relates to the payment of the 2017 tranche; the figure in the column for 2019 relates to the payment of the 2016 tranche (please also refer to the previous section “Variable II”).

[c] The Share Matching Plan relates to the non-cash benefit arising from the inflow of the matching shares, with the corresponding personal investment having been made in 2015 or 2016.

[d] The bonus for extraordinary performance was granted for the performance of activities in connection with the successful finalization of the business combination of T-Mobile US and Sprint.

€	Birgit Bohle Function: Human Resources and Legal Affairs since Jan. 1, 2019		Srini Gopalan Function: Europe since Jan. 1, 2017	
	2019	2020	2019	2020
Fixed remuneration	700,000	700,000	700,000	900,000
Fringe benefits	272,367	15,891	20,137	19,746
Total fixed annual remuneration	**972,367**	**715,891**	**720,137**	**919,746**
One-year variable remuneration	699,600	731,313	723,800	916,421
Multi-year variable remuneration	**0**	**0**	**0**	**627,000**
Of which: Variable II (4-year term) [a]	0	0	0	627,000
Of which: Share Matching Plan (4-year term) [b]	0	0	0	0
Of which: bonus for extraordinary performance	0	0	0	0
Other	0	0	0	0
Total	**1,671,967**	**1,447,204**	**1,443,937**	**2,463,167**
Service cost	307,304	321,623	295,590	303,269
Total compensation	**1,979,271**	**1,768,827**	**1,739,527**	**2,766,436**

[a] Variable II as shown in the column for 2020 relates to the payment of the 2017 tranche; the figure in the column for 2019 relates to the payment of the 2016 tranche (please also refer to the previous section "Variable II").
[b] The Share Matching Plan relates to the non-cash benefit arising from the inflow of the matching shares, with the corresponding personal investment having been made in 2015 or 2016.

€	Dr. Christian P. Illek Function: Finance (CFO) since Jan. 1, 2019		Dr. Thomas Kremer Function: Data Privacy, Legal Affairs and Compliance until Mar. 31, 2020	
	2019	2020	2019	2020
Fixed remuneration	900,000	900,000	700,000	175,000
Fringe benefits	34,540	34,175	63,546	17,392
Total fixed annual remuneration	**934,540**	**934,175**	**763,546**	**192,392**
One-year variable remuneration	895,725	925,655	704,550	178,063
Multi-year variable remuneration	**588,500**	**769,516**	**784,761**	**1,059,989**
Of which: Variable II (4-year term) [a]	588,500	627,000	588,500	509,438
Of which: Share Matching Plan (4-year term) [b]	0	142,516	196,261	550,551
Of which: bonus for extraordinary performance	0	0	0	0
Other	0	0	0	0
Total	**2,418,765**	**2,629,346**	**2,252,857**	**1,430,444**
Service cost	262,191	263,774	247,664	62,500
Total compensation	**2,680,956**	**2,893,120**	**2,500,521**	**1,492,944**

[a] Variable II as shown in the column for 2020 relates to the payment of the 2017 tranche; the figure in the column for 2019 relates to the payment of the 2016 tranche (please also refer to the previous section "Variable II").
[b] The Share Matching Plan relates to the non-cash benefit arising from the inflow of the matching shares, with the corresponding personal investment having been made in 2015 or 2016.

€	Thorsten Langheim Function: USA and Group Development since Jan. 1, 2019		Dominique Leroy Function: Europe since Nov. 1, 2020	
	2019	2020	2019	2020
Fixed remuneration	900,000	900,000	0	150,000
Fringe benefits	17,657	14,273	0	151,766[a]
Total fixed annual remuneration	**917,657**	**914,273**	**0**	**301,766**
One-year variable remuneration	839,700	915,975	0	112,500
Multi-year variable remuneration	**0**	**0**	**0**	**0**
Of which: Variable II (4-year term) [b]	0	0	0	0
Of which: Share Matching Plan (4-year term) [c]	0	0	0	0
Of which: bonus for extraordinary performance	0	0	0	0
Other	0	0	0	0
Total	**1,757,357**	**1,830,248**	**0**	**414,266**
Service cost	275,986	279,423	0	0
Total compensation	**2,033,343**	**2,109,671**	**0**	**414,266**

[a] This amount includes a one-time sign-on bonus of EUR 150,000 to compensate for all financial disadvantages resulting from the move to Deutsche Telekom.
[b] Variable II as shown in the column for 2020 relates to the payment of the 2017 tranche; the figure in the column for 2019 relates to the payment of the 2016 tranche (please also refer to the previous section "Variable II").
[c] The Share Matching Plan relates to the non-cash benefit arising from the inflow of the matching shares, with the corresponding personal investment having been made in 2015 or 2016.

€	Claudia Nemat		Dr. Dirk Wössner	
	Function: Technology and Innovation since Oct. 1, 2011		Function: Germany until Oct. 31, 2020	
	2019	2020	2019	2020
Fixed remuneration	900,000	900,000	700,000	583,333
Fringe benefits	78,586	78,882	23,466	20,637
Total fixed annual remuneration	**978,586**	**978,882**	**723,466**	**603,970**
One-year variable remuneration	845,775	907,200	696,850	622,875
Multi-year variable remuneration	**973,641**	**1,044,480**	**0**	**138,270**
Of which: Variable II (4-year term) [a]	722,250	769,500	0	0
Of which: Share Matching Plan (4-year term) [b]	251,391	274,980	0	138,270
Of which: bonus for extraordinary performance	0	0	0	0
Other	0	0	0	0
Total	**2,798,002**	**2,930,562**	**1,420,316**	**1,365,115**
Service cost	281,885	289,561	289,418	297,545
Total compensation	**3,079,887**	**3,220,123**	**1,709,734**	**1,662,660**

[a] Variable II as shown in the column for 2020 relates to the payment of the 2017 tranche; the figure in the column for 2019 relates to the payment of the 2016 tranche (please also refer to the previous section “Variable II”).

[b] The Share Matching Plan relates to the non-cash benefit arising from the inflow of the matching shares, with the corresponding personal investment having been made in 2015 or 2016.

New compensation system from 2021

A detailed presentation of the new compensation system, the key features of which were adopted by the Supervisory Board of Deutsche Telekom AG on December 16, 2020 and which will be submitted for vote at the shareholders’ meeting on April 1, 2021, is included with the invitation to the 2021 shareholders’ meeting. The planned changes to the compensation system highlighted in this “Compensation report” do not constitute comprehensive information and merely serve to illustrate the areas in which the Supervisory Board has modified the current compensation system.

Compensation of the Supervisory Board

The compensation received by the members of the Supervisory Board is specified under § 13 of the Articles of Incorporation of Deutsche Telekom AG. Under the compensation system applicable for the 2020 financial year, members of the Supervisory Board receive fixed annual compensation of EUR 70,000.00.

The Chairman of the Supervisory Board receives a further EUR 70,000.00 and the Deputy Chairman EUR 35,000.00. Members of the Supervisory Board also receive compensation as follows for activities on Supervisory Board committees:

a. The Chairperson of the Audit Committee receives EUR 80,000.00, ordinary members of the Audit Committee EUR 40,000.00.
b. The Chairperson of the General Committee receives EUR 70,000.00, ordinary members of the General Committee EUR 30,000.00.
c. The Chairperson of the Nomination Committee receives EUR 25,000.00, ordinary members of the Nomination Committee EUR 12,500.00.
d. The Chairperson of any other committee receives EUR 40,000.00, ordinary members of any other committee EUR 25,000.00.

Chairpersonship and membership of the Mediation Committee are not remunerated.

Members of the Supervisory Board receive an attendance fee amounting to EUR 1,000.00 for each meeting of the Supervisory Board or its committees that they have attended. The Company reimburses value-added tax payable on remuneration and expenses.

The total compensation of the members of the Supervisory Board in 2020 amounted to EUR 3,043,250.00 (plus VAT).

The Company has not granted any advances or loans to current or former Supervisory Board members, nor were any other financial obligations to the benefit of this group of people entered into.

The compensation of the individual members of the Supervisory Board for 2020 is as follows:

€ Member of the Supervisory Board	Fixed remuneration	Meeting attendance fee	Total
Bednarski, Josef[a] (until April 30, 2020)	55,000.00	5,000.00	60,000.00
Dr. Bösinger, Rolf	152,500.00	35,000.00	187,500.00
Dr. Bräunig, Günther	120,000.00	17,000.00	137,000.00
Chatzidis, Odysseus D.	99,166.67	17,000.00	116,166.67
Greve, Constantin	115,833.33	17,000.00	132,833.33
Hinrichs, Lars	95,000.00	16,000.00	111,000.00
Dr. Jung, Helga	95,000.00	14,000.00	109,000.00
Prof. Dr. Kaschke, Michael	110,000.00	17,000.00	127,000.00
Koch, Nicole[b]	95,000.00	16,000.00	111,000.00
Kollmann, Dagmar P.	187,500.00	25,000.00	212,500.00
Kreusel, Petra Steffi[c]	110,000.00	18,000.00	128,000.00
Krüger, Harald	74,166.67	14,000.00	88,166.67
Prof. Dr. Lehner, Ulrich[d] (Chairman)	300,000.00	36,000.00	336,000.00
Kerstin Marx[e] (since May 1, 2020)	110,000.00	31,000.00	141,000.00
Sauerland, Frank[f] (Deputy Chairman since March 27, 2020)	163,750.00	28,000.00	191,750.00
Schröder, Lothar[g] (Deputy Chairman until March 26, 2020)	142,500.00	19,000.00	161,500.00
Seelemann-Wandtke, Nicole	115,833.33	19,000.00	134,833.33
Spoo, Sibylle	135,000.00	17,000.00	152,000.00
Streibich, Karl-Heinz	135,000.00	19,000.00	154,000.00
Suckale, Margret	120,000.00	21,000.00	141,000.00
Topel, Karin	95,000.00	16,000.00	111,000.00
	2,626,250.00	**417,000.00**	**3,043,250.00**

[a] In addition to remuneration for his activities as a member of the Supervisory Board of Deutsche Telekom AG, Josef Bednarski also received other remuneration amounting to EUR 3,000.00 in the 2020 financial year (member of the Data Privacy Advisory Board).

[b] In addition to remuneration for her activities as a member of the Supervisory Board of Deutsche Telekom AG, Nicole Koch also received other remuneration amounting to EUR 4,500.00 (including meeting attendance fees) in the 2020 financial year (for her mandate as member of the supervisory board of Deutsche Telekom Privatkunden-Vertrieb GmbH).

[c] In addition to remuneration for her activities as a member of the Supervisory Board of Deutsche Telekom AG, Petra Steffi Kreusel also received other remuneration amounting to EUR 8,833.33 (including meeting attendance fees) in the 2020 financial year (EUR 7,500.00 for her mandate as member of the supervisory board of T-Systems International GmbH until June 30, 2020 and EUR 1,333.33 for her mandate as member of the supervisory board of Deutsche Telekom Business Solutions GmbH since July 1, 2020).

[d] In addition to remuneration for his activities as a member of the Supervisory Board of Deutsche Telekom AG, Prof. Ulrich Lehner also received other remuneration amounting to EUR 9,000.00 in the 2020 financial year (member of the Data Privacy Advisory Board).

[e] In addition to remuneration for her activities as a member of the Supervisory Board of Deutsche Telekom AG, Kerstin Marx also received other remuneration amounting to EUR 7,083.33 (including meeting attendance fees) in the 2020 financial year (EUR 6,000.00 for her mandate as member of the supervisory board of T-Systems International GmbH until June 30, 2020 and EUR 1,083.33 for her mandate as member of the supervisory board of Deutsche Telekom Business Solutions GmbH since July 1, 2020).

[f] In addition to remuneration for his activities as a member of the Supervisory Board of Deutsche Telekom AG, Frank Sauerland also received other remuneration amounting to EUR 19.000,00 (including meeting attendance fees) in the 2020 financial year (for his mandate as member of the supervisory board of Telekom Deutschland GmbH).

[g] In addition to remuneration for his activities as a member of the Supervisory Board of Deutsche Telekom AG, Lothar Schröder also received other remuneration amounting to EUR 32,230.00 (including meeting attendance fees) in the 2020 financial year (EUR 20,230.00 for his mandate as member of the supervisory board of Deutsche Telekom Services Europe SE and EUR 12,000.00 as Chairman of the Data Privacy Advisory Board).

Share ownership by members of the Board of Management and the Supervisory Board

Members of the Board of Management and Supervisory Board of Deutsche Telekom AG were reported to have purchased and transferred 353,569 shares (2019: 278,574) and sold 90,215 shares (2019: 68.930) under the Share Matching Plan in the course of 2020. Total direct or indirect holdings in the Company or associated financial instruments by members of the Board of Management and the Supervisory Board do not exceed 1 % of the shares issued by the Company.