

Combined management report

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Introductory remarks


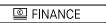
This report combines the management report of the Deutsche Telekom Group, comprising Deutsche Telekom AG and its consolidated subsidiaries, and the management report of Deutsche Telekom AG.

The structure and content of the report follow the internal **management approach** of Deutsche Telekom AG. The GD Towers business entity, which operated the cell tower business in Germany and Austria and was assigned to the Group Development operating segment, was recognized as a discontinued operation in the consolidated financial statements from the third quarter of 2022 until its sale on February 1, 2023. By contrast, we use the management approach for the presentation in the combined management report, i.e., the financial performance indicators presented in the results of operations still include the value contributions from GD Towers up to and including January 2023.

For further information on the sale and the presentation of GD Towers according to the management approach, please refer to the sections [“Group organization”](#) and [“Management of the Group.”](#)

The recommendations of the German Corporate Governance Code (GCGC) in the amended version published in the Federal Gazette on June 27, 2022 require, among other disclosures, information on the **internal control system** and the **risk and opportunity management system** that go beyond the legal requirements for the management report and are therefore excluded from the substantive audit of the management report by the independent auditor (information extraneous to the management report). This information is included in paragraphs clearly separated from the information that has to be audited, and is designated with a footnote.

For further information, please refer to the section [“Governance and other disclosures.”](#)

In the reporting on our corporate responsibility activities, we also explain the ways in which we contribute to achieving the UN Sustainability Development Goals (SDGs), which have been set as part of the 2030 Agenda. To clearly highlight the contribution our products, services, and activities make towards the individual sustainability development goals and our value chain, we have marked the relevant passages with the respective **SDG** and **value contribution symbols** (illustrative example:  **SDG 3**  **FINANCE**). This is also information extraneous to the management report and is excluded from the auditor's substantive audit.

For further information on the SDGs and our value contributions, please refer to the section [“Combined non-financial statement.”](#)

In addition, our Annual Report (PDF and online) includes **references** and **links** to websites with additional information not contained in the Annual Report. These references and links are purely of a supplementary nature and are only intended to simplify access to this information. Please note that this information is not part of the combined management report and is therefore also excluded from the auditor's substantive audit.

Group organization

Business activities

With 252 million mobile customers, 25 million fixed-network lines, and 22 million broadband customers, we are one of the leading integrated telecommunications companies worldwide. We provide fixed-network/broadband, mobile, internet, and internet-based TV products and services for consumers, and information and communication technology (ICT) solutions for business and corporate customers. We have an international focus and are represented in more than 50 countries. With some 200 thousand employees worldwide (as of December 31, 2023), we generated revenue of EUR 112.0 billion in the 2023 financial year. 77.0 % of the Group's net revenue is generated outside of Germany.

Our ambition is to become the Leading Digital Telco. Only if Deutsche Telekom is digitalized in all areas, can the success of the last few years continue. With our footprint in Europe and the United States, we are ideally positioned for this. Our core business, i.e., the operation and sale of networks and lines, remains the basis.

For further information on our Leading Digital Telco vision, please refer to the section [“Group strategy.”](#)

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). Our 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. Drawing on a global infrastructure of data centers and networks, we operate 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**.

For further information about our Guiding Principles, please refer to the section “Employees.”

Our **identity** defines our corporate purpose and describes what we at Deutsche Telekom stand for: We want to be a sustainably growing company that not only delights its customers, creates value for its investors, and in which employees enjoy their work, but also one that is environmentally friendly and fosters a democratic and inclusive society. Our network is fast, reliable, secure, and should be easily accessible for everyone. In addition, it has been operated throughout the Group with electricity from 100 % renewable sources since 2021. But, 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 also what the new brand claim, which we introduced in the reporting year, stands for: T – Connecting your world. With our No Hate Speech campaign, we are actively pushing for greater digital democracy. 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. We want everyone to #TAKEPART as is summarized in one short purpose statement: We won't stop until everyone is connected.

Segment structure

Our financial reporting aligns with our Group strategy and 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 a tailored service and product portfolio that is designed to be innovative while at the same time secure and simple. The bundling of our sales and service business within Sales & Service places a further focus on customer experience and on customer satisfaction. The Wholesale business delivers wholesale telecommunication services for third-party telecommunications companies. The build-out of the mobile and fixed networks in Germany is managed by the Technology business unit.

Our **United States** operating segment combines all mobile activities in the U.S. market. T-Mobile US provides service, devices, and accessories across its flagship brands. In addition, it sells devices to dealers and other third-party distributors for resale. It provides wireless communications services through a variety of service plan options to U.S. domestic customers, including plans marketed to businesses. T-Mobile US also offers a wide selection of wireless devices, including smartphones, wearables, tablets, home broadband routers, and other mobile communication devices that are manufactured by various suppliers. In addition to its wireless communications services, it offers High Speed Internet utilizing its nationwide 5G network. It also provides products that are complementary to its wireless communications services, including device protection and wireline communication services. On May 1, 2023, T-Mobile US closed the sale of its Wireline Business.

Our **Europe** operating segment comprises all fixed-network and mobile operations of the national companies in Greece, Hungary, Poland, the Czech Republic, Croatia, Slovakia, Austria, North Macedonia, and Montenegro. In these countries, we are an integrated provider of telecommunications services. In Romania, our focus is on mobile communications. Besides traditional B2C fixed-network and mobile business, most of our national companies also offer ICT solutions for business customers.

Our **Systems Solutions** operating segment offers B2B IT services in the core market of Western Europe under the T-Systems brand. T-Systems primarily addresses the IT growth areas of advisory, cloud services, and digitalization with a corresponding portfolio of products and solutions. We consider data sovereignty and security solutions to be the most attractive growth areas in the IT market, which is why we include them as integral components of our portfolio, enhanced by strategic partnerships. The services penetrate deep into the value chains of selected industries (automotive, healthcare, public sector, and transportation). As part of our transformation program, we have been working since 2018 to realign both our organization and our workflows, and make adjustments to our capacities. We now comprise four portfolio areas: Cloud, Digital, Security (in close collaboration with Deutsche Telekom Security), and Advisory (together with Detecon as an advisory partner). In addition, our Road User Services business unit offers road toll systems.

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. In this context, we sold 51.0 % of the shares in the cell tower business companies in Germany and Austria (GD Towers) on February 1, 2023. The investment management group Deutsche Telekom Capital Partners; Comfort Charge, which is a provider of e-mobility charging infrastructure; and the Group functions of Mergers & Acquisitions and strategic Portfolio Management are also assigned to Group Development.

Group Headquarters & Group Services comprises all Group units that cannot be allocated directly to one of the operating segments, as well as our Board of Management department Technology and Innovation, which unites the cross-segment technology, innovation, IT, and security functions of our Germany, Europe, and Systems Solutions operating segments. As the organization that sets the direction and provides impetus, 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. Vivento is in charge of securing external employment opportunities for employees, predominantly in the public sector. Further units are Group Supply Services for our real estate management and our strategic procurement, and Telekom MobilitySolutions, which is a full-service provider for fleet management and mobility services.

Changes to the segment and organizational structure in 2023

Sale of GD Towers. On July 13, 2022, Deutsche Telekom agreed to sell a 51.0 % stake in the cell tower business companies in Germany and Austria (GD Towers), which were assigned to the Group Development operating segment, to DigitalBridge and Brookfield. After all necessary regulatory approvals had been duly granted and all other closing conditions met, the transaction was closed on February 1, 2023. The sale price is based on an enterprise value of EUR 17.5 billion. The total gain on deconsolidation resulting from the sale amounts to EUR 15.9 billion, of which EUR 12.9 billion is included in profit/loss from discontinued operation as other operating income in the consolidated income statement as of the deconsolidation date. As Deutsche Telekom has largely leased back the sold passive network infrastructure in Germany and Austria under a sale and leaseback transaction, a further EUR 3.0 billion will be recognized pro rata in subsequent periods. Overall, right-of-use assets were recognized in the amount of EUR 2.0 billion and lease liabilities in the amount of EUR 5.0 billion. The transaction resulted in cash proceeds of EUR 10.7 billion. The stake retained by Deutsche Telekom of 49.0 % has been included in the consolidated financial statements using the equity method since February 1, 2023.

For further information on the sale of the GD tower companies, please refer to the section [“Changes in the composition of the Group and other transactions”](#) in the consolidated financial statements.

Sale of the U.S. Wireline Business. On September 6, 2022, T-Mobile US reached an agreement with Cogent Infrastructure (Cogent) on the sale of T-Mobile US' fiber-optic-based Wireline Business. Under the agreement, Cogent will take over all shares in the entity that holds all of the assets and liabilities related to the former Sprint's fiber-optic-based wireline network. The transaction was consummated on May 1, 2023. All necessary regulatory approvals had been duly granted and all other closing conditions met. The sale price was USD 1 and was subject to customary adjustments laid down in the purchase agreement. The cash proceeds received upon completion of the transaction amounted to USD 14 million (EUR 13 million). The loss on deconsolidation resulting from the sale amounted to EUR 4 million. In addition, upon completion of the transaction, T-Mobile US undertook to enter into a separate agreement on IP transit services, according to which T-Mobile US will pay a total of USD 0.7 billion (around EUR 0.6 billion) to Cogent in agreed installments over subsequent periods. In connection with the payment obligations entered into as part of the transaction, total liabilities of EUR 0.7 billion had already been recognized in the 2022 financial year. As a result of the concluded sales agreement, the assets and liabilities of the Wireline Business were reported in the consolidated statement of financial position as “held for sale” from September 30, 2022 up until their sale on May 1, 2023.

(Expected) changes to the segment and organizational structure in 2024

Agreement on the acquisition of Ka'ena in the United States. On March 9, 2023, T-Mobile US entered into a Merger and Unit Purchase Agreement for the acquisition of 100 % of the outstanding equity of Ka'ena Corporation and its subsidiaries including, among others, Mint Mobile, for a maximum purchase price of USD 1.35 billion to be paid out 39 % in cash and 61 % in shares of T-Mobile US common stock. Ka'ena Corporation is one of the wholesale partners of T-Mobile US, offering wireless telecommunications services to customers. The purchase price is variable dependent upon specified performance indicators of Ka'ena during certain periods before and after closing and consists of an upfront payment at deal close, subject to certain agreed-upon adjustments, and a variable earnout payable 24 months after the close of the transaction. The upfront payment is expected to be a revised amount of around USD 1.2 billion (before working capital adjustments). The transaction is subject to approval by the authorities as well as other customary closing conditions and is expected to close around the end of the first quarter of 2024.

Transactions with no changes to the segment and organizational structure

Transfer of T-Mobile US shares to SoftBank. On December 28, 2023, in accordance with the supplementary agreement from February 20, 2020 (Letter Agreement) closed between T-Mobile US, SoftBank, and Deutsche Telekom in the course of the Sprint Merger, T-Mobile US issued 48,751,557 shares of common stock in T-Mobile US to SoftBank. The condition of the Letter Agreement that the volume-weighted price of T-Mobile US ordinary shares reach or exceed USD 149.35 (after adjusting for the first cash dividend by T-Mobile US) for 45 days was satisfied on December 22, 2023. The issue of the shares to SoftBank reduced Deutsche Telekom's ownership stake in T-Mobile US to 50.6 % as of December 31, 2023. The shares issued to SoftBank are subject to the proxy agreement between SoftBank and Deutsche Telekom.

End of T-Mobile US' share buy-back program from September 2022. T-Mobile US repurchased a total of around 98.8 million shares under the 2022 share buy-back program at a price of USD 14.0 billion (EUR 13.2 billion). The budget was therefore fully exhausted by the end of September 2023.

T-Mobile US' shareholder return program from September 2023. On September 6, 2023, T-Mobile US announced a shareholder return program of up to USD 19 billion that will run from October 1, 2023 through December 31, 2024. The program consists of further share buy-backs totaling around USD 15.25 billion, as well as dividends totaling around USD 3.75 billion to be paid out on a quarterly basis. The amount available for share buy-backs will be reduced by the amount of any dividends approved. On September 25, 2023, the T-Mobile US Board of Directors declared an initial cash dividend of USD 0.65 per share, which was paid out on December 15, 2023 to the shareholders registered as of close of business on December 1, 2023. EUR 0.4 billion of the cash dividend was attributable to Deutsche Telekom's stake and EUR 0.3 billion to non-controlling interests in T-Mobile US. In the 2023 financial year, T-Mobile US bought back 15.5 million shares with a total volume of USD 2.2 billion (EUR 2.0 billion) under its share buy-back program.

Group strategy

Leading Digital Telco – our vision

Since 2021, our Group strategy has been determined by our **vision** of becoming the Leading Digital Telco by 2030. Because few if any industries face change on the same scale as the telecommunications industry. Digitalization is the central catalyst for the key trends in this regard, from increasing volumes of data traffic and the attendant demand for high-performing networks, to highly individualized and context-sensitive digital products and services with immediate availability through self-service and cloud-based as-a-service models. We are seeing companies from other industries pushing onto the market with lean, software-defined production models. Providers such as Google, Microsoft, and Amazon Web Services are expanding into the global connectivity field and increasingly providing network functions in their cloud environments. CPaaS (communications platform as a service) companies offer user-friendly communications services on their own communications platforms – without having their own networks. They provide developers and business customers with standard telecommunications services (calls, text messages) and new network functions through standardized application programming interfaces (APIs). This shifts access to end customers in the B2B segment from telecommunications providers to the CPaaS companies.  

We at Deutsche Telekom take up digitalization as the primary driver of significant changes in our ecosystem and correspondingly also in our strategic alignment. For us, this means continuing to invest non-stop in our networks and making digital participation possible for all. Because building and operating convergent networks, in which fixed-network and mobile services interact perfectly, remains the core of our strategy. But it also means continuing to digitalize. Whether it involves our products and services, market approach, production, or processes, we ourselves must also become more digital. Accordingly, we want to evolve from a traditional telecommunications provider into a software company that sells telecommunications services. Only if we are digitalized in all areas, can the success of the last few years continue. The result will be a Deutsche Telekom that can adapt faster and more flexibly to changing market conditions.

In the Western tech-sphere, we are already well positioned to reach our **goals** on our journey to realizing our Leading Digital Telco vision: our key performance indicators at the end of the 2023 financial year confirm that Deutsche Telekom remains Europe's leading telecommunications company. No other telecommunications company has a comparable footprint with its own networks in Europe and the United States. We see ourselves as a global enterprise with a considerable presence in Europe, European roots and values, and an extremely strong business in the United States. However, our Group strategy does not aim to micromanage all local units, but to provide a strategic framework and to utilize local strengths such as networks and competitive standing. Our T-Mobile US business in the United States in particular has operated under this decentralized approach for many years enjoying considerable success with its Un-carrier initiatives. Because our Group-wide strategic goals are clear: we want to align ourselves long-term with the needs of our customers and transform ourselves into a digital company, harnessing the synergies within our Group, to hold our own against new competitors and continue our growth course.

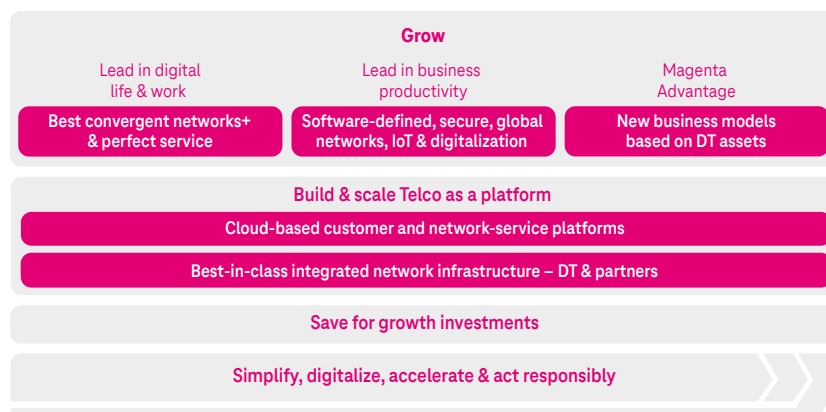
Our growth ambitions and **success metrics** measured using key performance indicators remain unchanged. The success of our strategy can be seen in our long-term competitiveness and as such is reflected in the established key financial figures: at our last 2021 Capital Markets Day, we set an annual growth target (Group CAGR) of 1 to 2 % for revenue and 3 to 5 % for adjusted EBITDA AL until 2024. Our next Capital Markets Day is scheduled for 2024.

For further information on our financial ambition levels through 2024, please refer to the section "[Finance strategy](#)."

Our management-relevant performance indicators are defined in the section “[Management of the Group](#)”; the results achieved in the financial year are reported in the section “[Development of business in the Group](#).” For our expectations through 2025, please refer to the “[Forecast](#).” We provide an in-depth look at our sustainability strategy and targets in the “[Combined non-financial statement](#).”

Our ambition to grow continuously is based on three strategic **areas of operation**, each with its own action plan: “Lead in digital life & work,” “Lead in business productivity,” and “Magenta Advantage.” Building and operating the best convergent networks – “Build & scale Telco as a platform” – remains the core of our strategy and is an important driver for our growth course. The two supporting areas of operation, “Save for growth investments” and “Simplify, digitalize, accelerate & act responsibly,” provide the guidelines for our actions and activities.

Group strategy: Leading Digital Telco vision



In the following, we describe the areas of operation of our strategy that continue to apply, and the results achieved in the 2023 financial year.

Strategic areas of operation

Lead in digital life & work: Best convergent networks+ & perfect service

Our aspiration is to offer customers the best network experience, anytime, anyplace – whether at home or at work, our network should work seamlessly and across all technologies. That's why we market fixed-network and mobile communications in **convergent products** (fixed-mobile convergence (FMC)). Successfully so: at the end of the reporting year, the number of customers subscribing to FMC or comparable offerings in our Germany and Europe operating segments had increased to 13.8 million. To continue on this path of growth, we work continuously to improve our convergent portfolio and make our customer offerings more attractive. Take, for example, the Telekom loyalty bonus program in 2023, which aimed to win over our existing fixed-network customers also as mobile customers.

For further information on the development of our customer figures, please refer to the section “[Development of business in the operating segments](#).”

In pursuit of our goal to become the Leading Digital Telco, we want to offer more than simply the best connectivity: what really counts for us is the **network experience**. For this reason, we offer our customers additional services that turn our network leadership aspiration into a first-hand experience. We reached further milestones in this regard in the reporting year. Our MagentaTV product has been expanded throughout our entire European footprint to aggregate linear television with extensive features on the one hand, and provide access to content from the biggest video-on-demand providers on the other. In 2023, we continued our efforts to further enhance the TV experience: for instance, in Germany, we will broadcast every match of the UEFA EURO 2024 soccer championships, including pre- and post-match coverage. We also initiated measures to benefit from the abolition of the “Nebenkostenprivileg” in Germany. This meant housing companies were previously able to pass on cable TV and internet service fees as ancillary rental costs to tenants. The change in the law allows tenants to conclude their own contracts with TV providers as of July 1, 2024. We are addressing this new customer group, to which we previously had no direct access, with attractive offers to switch to MagentaTV. Our national companies in Europe further rolled out the Android-based TV platform with a Deutsche Telekom-specific user interface to deliver an even more personalized user experience (2023: Croatia and Montenegro). The addition of 205 thousand TV customers in Germany and around 152 thousand in our national companies in Europe shows that we are on the right track.

Perfect **customer service**, supported by digitalization, continues to be another powerful lever to help set us apart from the competition. That is why we offer our customers a huge array of service tools, such as a digital home service (phone or on-site advice on all home network issues), our digital assistant, our callback service, or switching advice. In addition, we place great importance on finding a quick solution to our customers' issues. In 2023, we increased our first-call resolution rate again, i.e., the customer issues we resolve directly at the first point of contact (69.0 %; 2022: 56.1 %). In addition, we further developed the OneApp platform for a digital sales and service experience in our European national companies and in Germany. The OneApp platform not only improves the customer experience (e.g., by setting up and managing the router or monitoring internet usage behavior in the home network via the app), it also enables us to monetize our offerings (e.g., our Magenta Moments loyalty program and in-app coupons, upselling of fixed-network/fiber-optic contracts). Our ratings validate our efforts in this regard. For instance, in the Connect service tests our overall score is "very good" for our hotline and "outstanding" for our service app in Germany and Austria, (issue 10/2023). We are also the best-in-class provider as rated by Chip magazine in its mobile, DSL and fixed network, TV streaming, and hosting tests. Focus Money magazine awarded our Shops the Service King award for the seventh consecutive time in its Deutschland Test Study 2023. In the United States, too, we are reaping the rewards of our focus on customer-centricity: numerous surveys rank T-Mobile US ahead of its competitors for service quality (e.g., the J.D. Power study "Wireless Customer Care Mobile Network Operator Performance" rated T-Mobile US the mobile carrier with the best customer service in the United States for the 12th time in succession).

We measure **customer satisfaction** using the globally recognized TRI*M method. We use the results of this non-financial 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, this indicator (excluding T-Mobile US) came in at 76.2 points versus an adjusted value of 75.0 points at the start of the year (both determined on a comparable basis). The values achieved in particular for our Germany and Systems Solutions operating segments, as well as across most of the Europe operating segment, put us in a leading position relative to the respective benchmarks. With the exception of the Europe operating segment, where our goal is to post slight improvements in some areas, we plan to maintain these positions for 2024. In 2021, we added the Net Promoter Score (NPS) as a further metric. NPS measures the ratio of enthusiastic customers (promoters) to unhappy customers (detractors). For example, a score of 10 means that the share of promoters exceeds the share of detractors by 10 percentage points. We improved our NPS in all of our operating segments with consumer operations (Germany, United States, Europe) over the course of the reporting year. For example, our NPS in Germany was up by 4 points. In the United States, we not only defended our top NPS score but even improved it further against the prior year. This success is largely down to the various measures we have been pushing in recent months, like topping up data volume at the beginning of June 2023 for existing postpaid customers who use our Young rate plans in Germany.

Lead in business productivity: Software-defined, secure, global networks, IoT & digitalization

In the reporting year, we maintained our market-leading position (in terms of revenue) as a provider of telecommunications services for **business customers** in the Germany operating segment and posted growth slightly above the prior-year level. As a trusted partner, we drive forward the digitalization of our customers based on global, secure connectivity, flexible software-based networks, and end-to-end security solutions. And in future, these activities will increasingly be based on integrated offerings (combining fixed network, mobile communications, and IT) and further strengthen our portfolio in the IT environment. The MagentaBusiness Collaboration product family, for example, already combines flexible communications solutions and tools for collaborative work in a seamless overall solution. In 2022, we introduced, among other products, the Microsoft Teams | X solution, which we further expanded in 2023: the mobile add-on for Microsoft Teams enables customers to integrate their existing mobile phone number in Microsoft Teams for even smoother collaboration. However, integrated offerings also require digitalization expertise beyond connectivity (e.g., presales, integration), since small and medium-sized enterprises in particular are increasingly looking for solutions from a single source. In the reporting year, we continued to post organic growth in IT revenue from business customers in our Germany operating segment. Our national companies in Europe also recorded substantial growth in revenue with business customers across all areas (mobile, fixed network, IT). Growth was strongest in the Europe operating segment, where our IT solutions business posted a revenue increase of 6.7 %. Demand for our productivity, cloud, and security solution portfolio continued to grow in 2023.

Going forward, we want to remain the partner of choice for multinational corporations with cross-border **connectivity needs**, and to this end are investing in robust, global fixed-network and mobile connectivity and providing a one-stop shop for connectivity through the orchestration of our own networks and those of our partners. We already entered into a strategic partnership with the software company Teridion in 2022, which enables us to offer our business customers improved secure connectivity to network their locations across the globe. The partnership and related investment in Teridion by Deutsche Telekom underlines how important the issue of software-based networks is for us. In the medium term, we want to respond to changing customer needs with fully cloud-based, modular network services and dynamically adapt our networks. APIs will even make it possible in future to automatically manage individual network parameters in real time. To this end, over the coming years we plan to radically overhaul our own network and IT landscape, transforming it into a modular, software-defined production environment with integration capabilities for customized app and IT landscapes. We made the first network APIs commercially available in the reporting year: under the brand Magenta Business API, we offer developers and business customers easy access to communication APIs and new network APIs.

As major topics like the **Internet of Things (IoT)** and **cybersecurity** become more relevant, security and network solutions (network, IT, and cloud computing) are beginning to merge into highly secure, end-to-end solutions. Security functions which were once purchased separately are increasingly becoming part of the connectivity product or of security solutions, like new-generation firewalls that are already integrated into some SD-WAN solutions, and Secure Access Service Edge (SASE) suites that deliver SD-WAN in combination with cloud and application security from a single source. We will continue to develop the core elements of our B2B portfolio, comprising our Multiprotocol Label Switching (MPLS) solutions and SD-WAN products, holistically, taking account of network and security aspects. Security is an integral component of every one of our products and services (e.g., campus networks, IoT) – and that goes for every link in the communication chain: from the user via the terminal equipment, Wi-Fi/mobile communications/LAN, through to access and corporate networks, transport networks, and data centers. “Security by Design” is our goal here – from development and operation to management of the network services by us and our customers. Since 2022, we have bundled Deutsche Telekom Security and the security business in Germany, Austria, Switzerland, Hungary, and Slovakia under the Germany operating segment to bring security and network solutions closer together from an organizational perspective.

IT business for **corporate customers** is moving away from traditional IT outsourcing services towards new cloud-based services and digital solutions. The vision of our Systems Solutions operating segment is to become the “leading European vertical full-service IT player.” The vision concentrates in particular on the DACH region, where we are already a leading IT service provider (in terms of revenue). Our strategic focus is on fulfilling the core customer requirements of digitalization: advisory, cloud services, and digital solutions. For selected industries (automotive, healthcare, public sector, and public transport), we additionally offer industry-specific solutions. We are increasingly making use of AI, too, to help improve customer solutions and internal processes. We already handed greater autonomy and entrepreneurial responsibility to our portfolio units in 2022, with the goal of scaling the respective business significantly faster and accelerating growth. We rely increasingly on partnerships to support us in this regard and are also expanding nearshoring and offshoring capacities.

Magenta Advantage: New business models based on DT capabilities

In our core business, we apply strategic measures to create special assets and capabilities, including, for example, 252.2 million mobile customers, 8.6 million TV customers, and access to the largest companies in the world across industries. We call the edge we can achieve through these assets and capabilities Magenta Advantage. We want to use this advantage in a targeted way to develop new, digital business models to complement our core business. For example, we would like to further leverage our digital reach and brand strength advantage in a more targeted manner to make exclusive offers from partners available to our customers, to reward their loyalty and – where possible – to generate additional revenue. In 2023, we began to reap the first rewards of our loyalty program Magenta Moments, which has its own section in the MeinMagenta/OneApp in Germany and our national companies in Europe. Since the start of 2023, we have delighted more than 4.7 million customers in Germany (since its launch even more than 5.3 million customers) with exclusive offerings from partners such as booking.com, Rituals, Netflix, Disney+, and Octopus Energy. Overall in 2023, we enabled more than 170 moments for our customers with external partnerships, Telekom Highlights, competitions, and priority tickets for music events. Roll-out in our national companies began in the third quarter of 2023, and the program is now running in five countries. We have since won around 2 million users in these regions and enabled over 1 million transactions. Our network of active partnerships already extends to over 500 national and international brands such as Booking, Flixbus, and Wolt. The approach is paying off: customer satisfaction, measured using NPS, is higher among Magenta Moments users than among non-users. In the future, we plan to build up further capabilities for data analysis and segmentation and continuously improve the personalization of our offers. The core of our brand promise, “Reliability, security, and trust,” remains the same and protecting our customers’ data and privacy is our top priority. On top of this, we also use our Magenta Advantage to invest locally in digital business models. Examples of these are the online delivery service Box and the payment service Payzy in Greece.

Build and scale telco as a platform

Our growth areas are based on our networks and our technology, which together form the core of our value creation. That is why we are systematically building out and interlinking our fixed and mobile networks because our strategic goal is to offer our customers the fastest possible connection at top quality, anytime, anyplace. Group-wide, in 2023, we invested more than EUR 16 billion (not including spectrum investment) primarily in building and operating networks, with EUR 5.7 billion of this figure spent in Germany alone. This makes us the biggest single investor among all of our German competitors. In pursuit of outstanding quality and an even quicker and more efficient network build-out, we are also striking out in new directions, for example, with the use of AI to ensure infrastructure is built out in line with demand and to increase automation in infrastructure planning and construction. Integrated management improves the capacity utilization of our infrastructure and increases efficiency in operations and maintenance.

Fiber optic-based **fixed networks** are the basis for integrated network experiences. As a consequence, we are working flat out to build out our fixed-network infrastructure with state-of-the-art optical fiber. In the reporting year, we invested more than EUR 2.5 billion in building out our fiber-optic infrastructure in Germany – significantly more than any other competitor. We increased the number of broadband customers in the Europe operating segment by 4.6 % compared with the end of 2022 to 7.0 million. A total of 9.1 million households (coverage of around 35 %) in the footprint of our European national companies have access to our high-performance fiber-optic network. In Germany, we made fiber-optic lines (FTTH) available to more than 2.5 million more households and companies by the end of 2023. In 2024, we want to maintain the same high build-out pace and give around 2.5 million new households access to fiber. This will put us on target to meet our own goal of making more than 10 million fiber-optic lines available by the end of 2024. By 2030, every household and every business in Germany is to have a fiber-optic line. Our aspiration is for Telekom Deutschland to build the majority of these. To this end, we are expanding our team and hired more than 2,000 additional fiber-optic experts and technicians in the reporting year. We also established our own civil engineering company in 2023 (Deutsche Telekom Tiefbau GmbH) to address the pressing need for civil engineering capacities on the market. The company is a wholly-owned subsidiary of Telekom Deutschland and will focus on connecting homes. It is set to hire around 230 employees through the end of 2024. In addition, we have agreed partnerships with other companies that will contribute to our strategic goals (e.g., collaboration with Glasfaser Ruhr, with the city of Münster's public utility company Stadtwerke Münster, and with 179 cities and municipalities in the gigabit region of Stuttgart in Germany). But urban centers are not the only ones to benefit from the network build-out: we also plan to cover a total of 8 million households in rural areas with optical fiber by 2030. The fiber-optic build-out companies GlasfaserPlus and Glasfaser NordWest are set to add a further 5 million households overall to this target. **SDG 10** **STRUCTURE** We also rely on cooperations in our national companies in Europe to help drive forward the fiber-optic build-out (e.g., Alpen Glasfaser in Austria, Vectra in Poland). But our competitors also need to play their part. Deutsche Telekom is building out the network on the basis of open access. The new networks are open for use by competitors. **SDG 9** **RELATIONSHIPS**

The positive response shows that our efforts are paying off. We received further awards in 2023: Deutsche Telekom has been voted #1 by Connect readers in Germany (04/2023) in several categories including best Fixed Network Operator. Funke Mediengruppe's consumer magazine Imtest (09/2023 issue) rates Deutsche Telekom "very good" in its broadband and fixed network test in Germany. The trade magazine Connect rates Deutsche Telekom best-in-class for its fixed network in Germany (07/2023 issue) and Austria (08/2023 issue). Magenta in Austria is ranked best overall B2B internet provider in the ÖGVS consumer study. And our Austrian network wins fastest fixed-network internet in Austria in the 2023 Ookla® Speedtest Award.

In **mobile communications**, we set ourselves apart from our competitors with the multi-network-test-winning quality of our network. With **5G**, we are creating a highly reliable mobile network with extremely low latency and high data throughput. Over 80,000 antennas now transmit 5G across Germany. As of the end of 2023, over 10,000 of these antennas in more than 800 towns, cities, and communities were using the fast 5G spectrum in the 3.6 GHz band. By the end of 2023, 95.9 % of the population of Germany was already covered by our 5G network. By the end of 2025, 5G is set to cover 90 % of Germany, reaching 99 % of the population. We additionally want to offer 5G standalone for consumers in 2024. Deutsche Telekom's business customers already use this technology with functions like network slicing, e.g., for live TV broadcasts or in 5G campus networks for industry and research. As of the end of 2023, our national companies covered on average 67.2 % of the population in our European footprint with 5G. T-Mobile US' 5G network covered around 98 % of the U.S. population at the end of the reporting year, with over 300 million people benefiting from Ultra Capacity 5G.

We regularly top the independent network tests: Connect readers (2023) rate Deutsche Telekom best in the categories Mobile Network Operator and Network Operator Prepaid Cards, while our secondary brand congstar wins the category Mobile Communications Provider. T-Mobile US' mobile network has once again been awarded best-in-class with regards to speed in the Ookla® Speedtest Global Index and the Umlaut Audit Report (07/2023). Our national companies in Greece, Croatia, the Czech Republic, and Austria, too, receive Ookla and Umlaut awards for both the fastest and best mobile networks.

Our strategic goal is to be able to use the **best-in-class integrated network infrastructure** for our products and services. That is why we are complementing our own infrastructure with that of strategic partners, while also considering alternative access networks (e.g., satellites or high-altitude platform systems, HAPS). T-Mobile US and SpaceX already announced joint plans in 2022 that will enable our U.S. subsidiary to bring cell phone connectivity to its customers in parts of the United States previously without cell tower coverage using SpaceX's Starlink satellites. With this technology, T-Mobile US is planning to provide coverage for text messages and participating messaging apps, practically everywhere in the United States, Puerto Rico, and territorial waters. The next step for the two companies will be to drive forward the build-out of voice and data coverage. In the future, satellite communication will be used to enhance classic terrestrial IoT networks (NB-IoT, LTE-M, 4G, and 5G), an area that Deutsche Telekom IoT is working on in collaboration with specialists Intelsat and Skylo.

The delivery of connectivity and services based on our own and our partners' infrastructure is reliant on technology- and domain-agnostic orchestration capabilities. These are found in a separate technical control layer above the actual infrastructure, which allows us to manage the "network of networks." We are modernizing our NT/IT architecture to ensure the necessary orchestration capabilities are in place. Our focus is on leveraging the full potential of network automation, cloudification, and disaggregation to make our production considerably faster, more flexible, and more cost-efficient. Disaggregation, or the separation of hardware and software, makes it possible to add new suppliers. We made significant progress in respect of the Open Radio Access Network in the reporting year. One big change is that components from various different technology suppliers are now interoperable, and the first such antenna system has been transmitting in the commercial network since December 2023, providing coverage to areas of New Brandenburg. Nokia and Fujitsu supply the necessary technology components. Today, around 80 to 90 % of all suppliers in our infrastructure are large, traditional companies. Going forward, we want to take into consideration even more smaller, innovative suppliers, enabling us to integrate innovations into our networks more quickly and flexibly and thus also making them available to our customers.

We are adapting our production platform to meet the customer needs of the future, by building **cloud-based, scalable, modular platforms** and opening up access to selected parts of these platforms to third parties (e.g., service providers and app developers) via open interfaces (APIs). Our goal is to make connectivity, services, and data (e.g., location data, connection conditions, and user behavior) combinable with new applications as needed. The benefits of this architecture include shorter development cycles, faster exploitation of revenue potential, more automated and significantly more cost-effective production, scalability across business units and borders, and a substantially better customer experience by virtue of personalized digital interactions.

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 cost discipline, we generate the funds we need to finance this investment and safeguard our competitiveness. For us, the goal of becoming Leading Digital Telco also means being the leading telecommunications provider in terms of efficiency. At Group Headquarters & Group Services, for instance, we have raised our efficiency ambitions and introduced further steps to reduce costs in the coming years. But above all it is digitalization that is key to further enhancing cost efficiency throughout our entire value chain: from the customer interface, to our production processes, through to the management of our own infrastructure and supply chains. We will therefore systematically continue on this path of cost transformation.

We manage our **investment portfolio** with the aim of enhancing value. We believe that this means realizing value when the conditions are attractive. We completed the sale of GD Towers on February 1, 2023 and used the funds from the sale as planned to increase our stake in T-Mobile US, as well as for other measures. On April 5, 2023, in the course of the 2022 share buy-back program, our ownership stake in T-Mobile US reached 50.2 %, thus passing the threshold for a majority stake. Taking the treasury shares held by T-Mobile US into account, our ownership stake in T-Mobile US was 50.6 % as of December 31, 2023. In early 2024, Deutsche Telekom began selling a portion of its T-Mobile US share portfolio on the market, without jeopardizing its own majority ownership position in T-Mobile US.

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 simple rate plans, like MagentaTV MegaStream, and intuitive products. To this end, we continually work to make improvements, such as to our TV voice control, which we are set to roll out to further markets outside of Germany. Going forward, we want to significantly further reduce product complexity. Our ambition is for our services to be available around the clock via a single click. Thanks to an IP migration which has been successfully concluded, we can now remotely perform setup and maintenance work to the line in increasingly more households – depending on the router. The technical provisioning of 95 out of 100 broadband lines is already successful on the first attempt. Second, we want our internal operation to be as efficient as possible, i.e., in terms of time and costs. We are making promising progress with the introduction of greater agility into our IT activities. For example, since 2020 we have increased the development speed for new software or software-driven products in Germany and Europe by around 40 %. Today, our average time to release for purely software-based adaptations is around 2.0 months in Germany (e.g., personal customer dialog for consumers, digital order management for business customers) and around 1.0 months in Europe. At the 2021 Capital Markets Day, we set ourselves the goal of reducing time to release to 1 month in Europe and 2 months in Germany by 2024. We had almost achieved this goal by the end of 2023. Above and beyond this, we will continue to scrutinize our organization, processes, and decision-making procedures and further optimize them in future, wherever possible.

The **digitalization** of our core business is helping us to improve customer experience and increase our efficiency. Our sales and service apps are now firmly established in Germany and Europe as key digital customer interfaces. They help us monetize our product portfolio through up- and cross-selling, and bring down costs by reducing service cases through self-service and preventive maintenance. In our European national companies, around 71 % of customers use our service app. In Germany, the figure stands at 52 % following migration to the OneApp platform (2022: 42 %). In connection with the migration, the collection of app-specific metrics (e.g., app penetration) was harmonized in Germany to ensure Europe-wide comparability within the Group. Beyond this, we encourage the use of our digital assistant, which is integrated into our OneApp, for advice and measure the number of interactions. Our German digital assistant is called Frag Magenta (ask magenta). Artificial intelligence (AI) enables it to learn automatically and improve its competence at responding to customer inquiries. Our customers in Germany can now express requests using natural language, i.e., their own words, to communicate with the Frag Magenta chatbot. Since early December 2023, customers can also chat with our video avatar, Max, to find the answers they need. This innovative step puts us at the forefront in terms of customer service in Europe. Another factor that plays into an outstanding and, above all, personalized experience is a 360° view of our customers across all channels, both online and offline. Magenta View is our front-end platform for all employees with direct customer contact, delivering all necessary customer data from a single source. At the end of the reporting year, around 50,000 employees in Germany were benefiting from Magenta View. Long term, our plan is to digitalize virtually all value creation stages in their entirety. To this end, we are systematically expanding our expertise in innovative technologies like AI. Data-based analyses are already helping us to maintain our hardware more proactively, understand customer needs better, and manage our networks more efficiently.

However, simplicity and digitalization also call for new **skills and a cultural change**. In 2023, we focused our learning offerings, the Explorer Journeys, specifically to future issues. With these programs, we want to prepare as many employees as possible for the skills that will be required in the future. A key focus in this regard was on teaching people more about AI. We also continued to offer Journeys on software development, data analytics, digital marketing, user experience, and other topics. Since introducing the Explorer Journeys globally in 2021, around 21,000 employees have taken part in the range of courses. With a digital learning rate of around 73 % (share of learning hours over digital media), digital learning is firmly established as a learning tool at Deutsche Telekom. Over 164,000 employees can take advantage of a whole range of digital and state-of-the-art learning offerings provided on the intelligent learning platform Percipio, dubbed the “Netflix of learning,” and through the integration of education platforms such as Coursera, a provider of digital further-training courses offered by top-ranking universities. Since 2021, we have also been enabling our employees to increase their participation in the Company’s success through the share program Shares2You. In the reporting year, 38,637 employees took advantage of the program. That our efforts are paying off is validated by our employee satisfaction levels: the question on Mood/Satisfaction remains at a very high level of 78 % (2022: 81 %).

For further information about our People Strategy, please refer to the section “Employees.”

In parallel, we fulfill our **responsibility** to society by systematically aligning our core business processes with the principle of sustainability. We revised and further refined our sustainability strategy in 2022: climate protection, circular economy, diversity and team performance, as well as digital responsibility and participation are our four key action areas. In addition to our goal of climate neutrality along our entire value chain at the latest by 2040, we added another interim goal and ambition level in 2023: we want to cut emissions along our value chain by 55 % by 2030, and by as much as 90 % by 2040. Our climate goal complies with SBTi requirements. In addition, we want to be 100 % circular by 2030 in terms of terminal equipment and network technology. We have taken back over 4.9 million devices in Germany and Europe either to refurbish or to send them directly for recycling, so that we and our customers actively help conserve resources and protect the climate. We are also tackling the issues of climate protection and circular economy with our suppliers, e.g., in tender conditions. In 2023, we pressed ahead with the implementation of the Act on Corporate Due Diligence in Supply Chains (Lieferkettensorgfaltspflichtengesetz – LkSG). We introduced a sustainability standard for our packaging back in 2020, removing single-use plastics in favor of recyclable materials and environmentally friendly colorings. All new Telekom-branded (or T-branded) devices and more than two thirds of the new packaging for smartphones that we source from our suppliers meet these criteria. Since 2021, 100 % of our electricity requirements for all Group units have been met from renewable sources. We plan to become twice as energy efficient by 2024, based on the data volume in the network in relation to the power consumed in this context. To help us achieve this goal, we are decommissioning legacy platforms – including PSTN, migrating to more efficient technology – such as the switch from 3G to 5G, using highly efficient data centers, and deploying AI. From a long-term perspective, we will also achieve savings from the migration from copper to fiber-optic technology. These measures will enable us to maintain stable power consumption in Germany and Europe through 2024, despite rapidly rising data volumes, growing numbers of active network components, and the further densification of our networks. Above and beyond this, we are supporting a responsible approach to digitalization. Under the motto “No hate speech,” Deutsche Telekom is supporting, for example, projects for media literacy in society and against cyberbullying. We also take our social responsibility seriously when it comes to natural disasters, whether with free phone calls and data traffic after the earthquakes in Turkey, Syria, and Morocco, for example, or emergency aid after the forest fires and hurricanes in the United States.

For further information on our sustainability strategy, please refer to the section “Combined non-financial statement.”

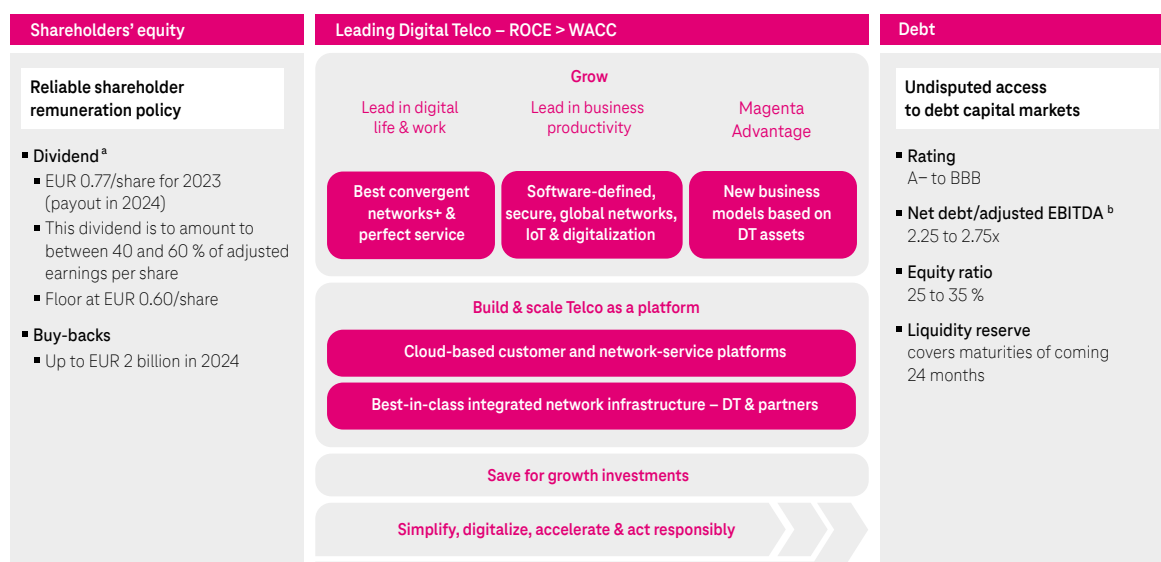
Our strategy is summarized in the following ambitions:

- We want to be a **leader** in terms of digital living and working, and in 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.
- We want to better utilize our existing assets and skills not only in our core business, but also to **develop** new, **digital business models (Magenta Advantage)**.
- The key technical driver for our growth areas is telco as a platform: the **best integrated network infrastructure** – provided by us and by partners – as well as cloud-based customer and network-service platforms. The basis for this is and remains our ongoing commitment to building out the fiber-optic and 5G networks.
- We promote continued growth 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 societal 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.

Finance strategy

We announced our finance strategy for the years 2021 through 2024 at the Capital Markets Day in May 2021. For investors, Deutsche Telekom continues to pursue an attractive and reliable finance strategy. We will present our plans for the coming years at the Capital Markets Day scheduled for 2024.

Our finance strategy through 2024



^a Subject to approval by the relevant bodies and the fulfillment of other legal requirements.

^b Deviation from the target range for a short period as a result of the business combination of T-Mobile US and Sprint until year-end 2024.

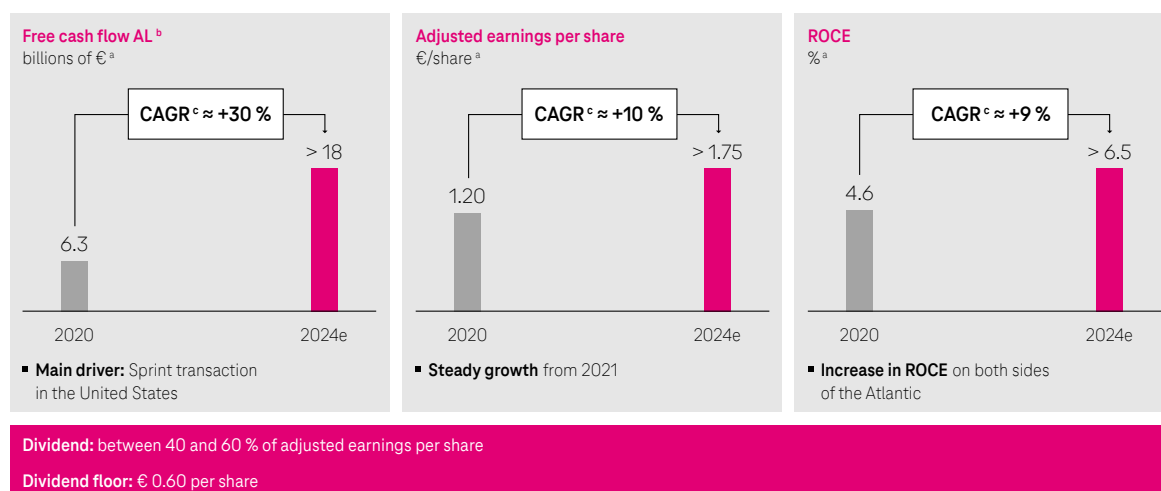
Part of our finance strategy is to achieve our target financial ratios – relative debt (ratio of net debt to adjusted EBITDA) and equity ratio – along with a liquidity reserve that covers our maturities of the coming 24 months at least. With these clear statements we intend to maintain our rating in 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. Starting from the 2021 financial year, the amount of the dividend is based on a dividend payout ratio of 40 to 60 % of adjusted earnings per share, with a lower limit fixed at EUR 0.60 per dividend-bearing share. For the 2023 financial year, as announced in November 2023, we propose a dividend of EUR 0.77 for each dividend-bearing share. This equates to 48 % of adjusted earnings per share. We thus offer our shareholders both an attractive return and planning reliability. As in previous years the dividend for the 2023 financial year will once again be paid out without deduction of capital gains tax.

At the 2021 Capital Markets Day, Deutsche Telekom AG's Board of Management had also announced that it would take share buy-backs into consideration in the future. In November 2023, we announced that we will buy back shares in Deutsche Telekom AG in 2024 up to a total purchase price of EUR 2 billion under a share buy-back program. The buy-back commenced on January 3, 2024 and will be carried out in several tranches through December 31, 2024. The purpose of the share buy-back is to recoup part of the dilution effect from Deutsche Telekom AG's 2021 capital increase. The repurchased shares will therefore be canceled.

Total capital expenditure is also to remain high in the next few years, in line with our finance strategy. 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, mainly on our accelerated fiber-optic build-out. The finance strategy supports the transformation of our Group into the Leading Digital 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 profitable revenue growth on a sustainable basis, on the other.

2021 Capital Markets Day: Ambition level^a up to 2024



^a Our ambition level was determined in the 2020 financial year based on the average U.S. dollar exchange rate at the time of USD 1.14 as well as a constant composition of the Group.

^b Before dividend payments and spectrum investment.

^c Compound annual growth rate.

We expect revenue to increase by an average of 1 to 2 % per year and adjusted EBITDA AL by an average of 3 to 5 %. Based on the results generated in the period from 2021 to 2023, as well as our forecast for 2024, we believe we are on the right path to achieve these targets. We aim to continue growing sustainably throughout 2024.

For further information on the expected business development, please refer to the section "Forecast."

In order to set and achieve our strategic goals more effectively, we pursue a Group-wide, value-oriented performance management approach, which we explain in the following section.

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, deleveraging, responsible staff restructuring, and new investment in a positive and sustainable 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.

Performance management system

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

		2023	2022	2021	2020	2019
Net revenue ^a	billions of €	112.0	114.4	107.8	100.1	80.5
Service revenue ^a	billions of €	92.9	92.0	83.2	78.1	n.a.
EBITDA AL (adjusted for special factors)	billions of €	40.5	40.2	37.3	35.0	24.7
Profit (loss) from operations (EBIT)	billions of €	33.8	16.2	13.1	12.8	9.5
Earnings per share (adjusted for special factors)	€	1.60	1.83	1.22	1.20	1.04
ROCE	%	9.0	4.5	4.1	4.6	5.1
Free cash flow AL (before dividend payments and spectrum investment) ^b	billions of €	16.1	11.5	8.8	6.3	7.0
Cash capex (before spectrum investment)	billions of €	(16.6)	(21.0)	(18.0)	(17.0)	(13.1)
Rating (Standard & Poor's, Fitch)		BBB+, BBB+	BBB, BBB+	BBB, BBB+	BBB, BBB+	BBB+
Rating (Moody's)		Baa1	Baa1	Baa1	Baa1	Baa1

^a The prior-year comparatives up to and including 2020 were adjusted retrospectively to take account of changes to the principal/agent policy regarding the recognition of gross and net revenues as of the third quarter of 2022.

^b Before interest payments for zero-coupon bonds and before termination of forward-payer swaps at T-Mobile US (both in 2020).

Broader definition of service revenue. Since January 1, 2023, service revenue additionally includes certain software revenues generated with ICT business in the Systems Solutions and Europe operating segments, as well as in the Group Headquarters & Group Services segment. Comparative figures for the prior years were adjusted retrospectively up to and including 2021.

Presentation of GD Towers according to the management approach. The sale of the GD Towers business entity was consummated on February 1, 2023, and GD Towers has not been part of the Group since that date. The GD Towers business entity had been recognized in the consolidated financial statements as a discontinued operation from the third quarter of 2022 until its sale. By contrast, we use the management approach for the presentation in the combined management report, i.e., the financial performance indicators presented in the results of operations still include the value contributions from GD Towers up to and including January 2023. Please refer to the following table for a breakdown of these performance indicators according to the management approach into the amounts recognized in the consolidated income statement:

millions of €									
	2023	Of which: continuing operations	Of which: discontinued operation	2022	Of which: continuing operations	Of which: discontinued operation	2021	Of which: continuing operations	Of which: discontinued operation
Net revenue	111,985	111,970	15	114,413	114,197	216	107,811	107,610	201
Service revenue	92,919	92,923	(4)	91,988	92,006	(18)	83,201	83,218	(18)
EBITDA	57,777	44,772	13,004	43,986	43,049	937	40,539	39,671	868
Depreciation of right-of-use assets	(4,810)	(4,810)	0	(6,507)	(6,406)	(101)	(5,547)	(5,348)	(199)
Interest expenses on recognized lease liabilities	(1,806)	(1,801)	(5)	(1,489)	(1,452)	(37)	(1,099)	(1,074)	(25)
EBITDA AL	51,160	38,161	12,999	35,989	35,191	798	33,893	33,249	644
Special factors affecting EBITDA AL	10,663	(2,264)	12,927	(4,219)	(4,213)	(6)	(3,437)	(3,432)	(5)
EBITDA AL (adjusted for special factors)	40,497	40,424	73	40,208	39,404	804	37,330	36,681	649
Depreciation, amortization and impairment losses	(23,975)	(23,975)	0	(27,827)	(27,635)	(192)	(27,482)	(27,091)	(391)
Profit (loss) from operations (EBIT)	33,802	20,798	13,004	16,159	15,414	745	13,057	12,580	477
Profit (loss) from financial activities	(8,845)	(8,829)	(16)	(4,455)	(4,437)	(18)	(5,139)	(4,953)	(186)
Profit before income taxes	24,957	11,968	12,989	11,703	10,977	727	7,918	7,628	290
Earnings per share (basic and diluted) €	3.57	0.82	2.75	1.61	1.52	0.09	0.87	0.82	0.04
Adjusted earnings per share (basic and diluted) €	1.60	1.59	0.01	1.83	1.72	0.10	1.22	1.17	0.04

The gain on deconsolidation resulting from the sale of GD Towers amounted to EUR 12.9 billion and is included in EBITDA and the associated performance indicators. In the consolidated income statement, the amount is recognized under profit/loss from discontinued operation as other operating income.

For further information on the sale of GD Towers, please refer to the section [“Group organization.”](#)

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. **Service revenue** essentially comprises high-value – i.e., predictable and/or recurring – revenues from Deutsche Telekom's core activities. Service revenue is the revenues that are generated by services (i.e., revenue from fixed and mobile network voice calls – incoming and outgoing calls – as well as data services) plus roaming revenue, monthly basic charges and visitor revenue, as well as revenue generated from the ICT business. Service revenue also includes revenues earned in connection with premium services for customers, such as reinsurance for device insurance policies and extended warranties. Service revenue is an important indicator for the successful implementation of the growth strategy of the Group.

We measure our operating earnings performance on the basis of **adjusted EBITDA AL**, i.e., EBITDA adjusted for depreciation of right-of-use assets, for interest expenses on recognized lease liabilities, and for special factors. And EBITDA is calculated as **EBIT** (profit/loss from operations) before depreciation, amortization and impairment losses on intangible assets, property, plant and equipment, and right-of-use assets. Both metrics indicate the short-term operational performance and the success of individual business areas. 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 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 further inclusion of unadjusted EBIT/EBITDA AL as performance indicators means special factors are also taken into account. This promotes a holistic view of our expenses. 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.

For the calculation of EBITDA AL, EBIT, and net profit/loss adjusted for special factors, please refer to the section [“Development of business in the Group.”](#)

Adjusted earnings per share is calculated as adjusted net profit divided by the time-weighted number of all ordinary shares outstanding, which is determined by deducting the weighted average number of treasury shares held by Deutsche Telekom AG.

Profitability

We have incorporated sustainable growth in enterprise value into our medium-term aims and implemented it as a separate key performance indicator (KPI) 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 consolidated 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. To this is added operating working capital, calculated from trade receivables, inventories, and trade and other payables. The figure for other provisions is deducted as no return target exists for this.

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 their issuer according to uniform criteria. The assessment of creditworthiness by ratings agencies affects access to the capital markets and to the international finance markets, and refinancing 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

		2023	2022	2021	2020	2019
Customer satisfaction (TRI*M index) ^a		76.2	76.0	73.4	72.2	67.3
Employee satisfaction (engagement score) ^b		76	78	77	4.0	4.0
Energy consumption ^{c, d}	GWh	12,241	13,253	13,323	12,843	9,324
Of which: excluding T-Mobile US	GWh	4,567	4,704	n.a.	n.a.	n.a.
CO ₂ emissions (Scope 1 and 2) ^{d, e}	kt CO ₂ e	217	233	247	2,512	1,797
Of which: excluding T-Mobile US	kt CO ₂ e	171	179	n.a.	n.a.	n.a.
Fixed-network and mobile customers						
Mobile customers ^f	millions	252.2	245.4	248.2	241.5	184.0
Fixed-network lines	millions	25.4	25.3	26.1	27.4	27.5
Broadband customers ^g	millions	22.0	21.4	21.6	21.7	21.0
Systems Solutions						
Order entry ^{h, i}	millions of €	3,628	3,952	3,876	4,564	4,740

^a Excluding T-Mobile US.

^b In 2021, we changed from a scale of 1 to 5 for the engagement score (previously the "commitment index") to a scale of 0 to 100.

^c Energy consumption, mainly: electricity, fuel, other fossil fuels, district heating for buildings.

^d Information for 2019 and 2020 was taken from the non-financial statements for the years in question, which were reviewed in the form of a limited assurance engagement. At the time, this information was not part of the statutory audit of Deutsche Telekom's combined management report and consolidated financial statements.

^e Calculated according to the market-based method of the Greenhouse Gas Protocol.

^f Including T-Mobile US wholesale customers.



^g Excluding wholesale.

^h Order entry for the 2019 financial year was adjusted retrospectively in connection with the realignment of the B2B telecommunications business.



ⁱ Order entry for the 2021 financial year was adjusted retrospectively in connection with the reassignment of the security business.

We believe that 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 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 significance of customer retention/satisfaction for our operating business, the performance of Board of Management members and eligible managers is now also being tracked and incentivized by means of the long-term variable remuneration (Long-Term Incentive Plan). This KPI, as one of four target parameters, has been relevant for Variable II since 2010, as well as for the Long-Term Incentive Plan which was launched in 2015, and in which the Board of Management has participated since 2021. 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 value. This allows Board members and eligible managers to benefit from the development of customer retention/satisfaction.

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 pursue open dialog and productive exchange with our employees. New working models and state-of-the-art communication options, as well as regular employee surveys, help us to accomplish this. The main feedback tools which the Group uses to assess **employee satisfaction** are the employee survey, as of late carried out every two years, and the half-yearly pulse survey (both excluding T-Mobile US). The employee survey was not carried out in the reporting year on account of a change in service provider, and has instead been rescheduled for 2024. In our Company, we measure the employee satisfaction performance indicator using the **engagement score** – derived from the results of the last survey.   In view of the major significance of employee satisfaction for the success of the Company, the performance of Board of Management members and eligible managers is now also being tracked and incentivized by means of the long-term variable remuneration (Long-Term Incentive Plan). Employee feedback, as one of four target parameters, has been relevant for Variable II since 2010, as well as for the Long-Term Incentive Plan which was launched in 2015, and in which the Board of Management has participated since 2021. This allows Board of Management members and eligible managers to benefit from the development of employee satisfaction.

For further information about employee satisfaction, please refer to the section "[Employees](#)."

Climate change and the destruction of the environment are existential threats to the world. Companies must therefore significantly increase their energy and resource efficiency and restrict their absolute energy consumption. This issue is ever more relevant for providers of information and communications technology (ICT). There is a general expectation on the ICT sector to continue building out the telecommunications network while, at the very least, keeping basic consumption stable in the medium term or even reducing it going forward. Deutsche Telekom records ESG data and performance indicators (environmental, social, and governance), which are used first and foremost to calculate our Group-wide ESG KPIs, on the basis of which we measure and manage our CR performance. Given the major significance of two ESG targets, the performance of Board of Management members has also been tracked and incentivized by means of the annual variable remuneration since 2021. Since 2022, this has also applied for our managers (excluding T-Mobile US) and all employees not covered by collective agreements in Germany. The non-financial performance indicator **energy consumption** is a record of the energy consumed in connection with the operation of our actual business model. We constantly monitor progress regarding our medium-term goal to reduce energy consumption (by 2024 compared with 2020, excluding T-Mobile US), and can make adjustments where necessary. To this end, we invest in measures and programs to conserve energy from all sources. At the same time, this goal plays into how we optimize and innovate for our future infrastructure, and calls for the use of innovative technology components. In living up to our responsibility to conserve resources and protect the climate, we also run various initiatives that aim to reduce the CO₂ emissions generated as part of our business activities. These initiatives include the sustained use of 100 % green electricity since 2021, optimizing power consumption in our buildings, and gradually transitioning our Group fleet vehicles from fossil fuels to zero- or low-emission power sources. We started gradually transitioning all company cars in Germany to these power sources in 2023.   We measure our progress with reducing our carbon footprint on the basis of the **CO₂ emissions** (Scope 1 and 2) non-financial performance indicator. In the United States, we are forging ahead with the highly intensive build-out of our 5G network, in particular in rural areas. This initially drives up power consumption. T-Mobile US, like the Group as a whole, has covered 100 % of its electricity requirements from renewable energy sources since 2021. There are fluctuations in T-Mobile US' Scope 1 carbon footprint owing to unforeseeable natural disasters and the associated temporary use of equipment such as diesel generators to restore and back up damaged network infrastructure. Consideration must be given to the special national situation in this key market, which is why the decision was taken not to include T-Mobile US in these two non-financial performance indicators in respect of short-term variable remuneration. This step ensures that the right incentives are set for the Board of Management toward the sustainable development of the business, while at the same time safeguarding the stability of network operations. The same applies for our Board members, executives, and all employees in Germany not covered by collective agreements. The annual ambition for the performance indicators "energy consumption" and "CO₂ emissions" will continue to be set, managed, and reported for the entire Group as before, including a target value for T-Mobile US.

For further information on these and other ESG KPIs, please refer to the section "[Combined non-financial statement](#)."

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 is 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 (one SIM card equals one customer) 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.

Performance indicators at Deutsche Telekom AG

Net income is the financial performance indicator of greatest relevance for Deutsche Telekom AG and is used to pay out the dividend to shareholders.

Development of the economic environment and impact on our business activities and key performance indicators

The macroeconomic challenges currently facing society, politics, and business are multi-faceted. The global economy continues to be beset by the challenges of relatively high interest rates and dampened growth prospects. Tougher financing conditions, weak trade growth, and diminished business and consumer confidence are negatively impacting the economic outlook. Growing geopolitical tensions are further contributing to increased uncertainty about the economic outlook.

The impact on Deutsche Telekom's business activities and performance indicators in the reporting year stems primarily from higher energy, producer, and consumer prices, construction costs, and interest rates compared with the 2022 financial year.

We are aware that, in view of the current developments, it is only possible to extrapolate past experience to the future to a limited extent. We continue to address these challenges and consider them in our business decisions in the course of developing measures to mitigate the risks. For instance, interest rate risks are countered by reducing the variable-interest debt portfolio. With respect to energy supply, Deutsche Telekom's national companies pursue different procurement strategies, e.g., by concluding power purchase agreements, to balance long-term supply reliability and appropriate prices.

For further information on the economic situation overall, please refer to the section "[The economic environment](#)." For more information on global economic developments and the associated business risks, please refer to the section "[Risk and opportunity management](#)."

The economic environment

Macroeconomic development

Following a strong start to the year, the global economy lost momentum in summer 2023. The International Monetary Fund (IMF) puts the global growth rate in 2023 at 3.1 %, down from 3.5 % in 2022. This slowdown is largely due to the flagging recovery from the coronavirus pandemic, Russia's war against Ukraine, and tighter monetary policy and financial framework conditions. A further adverse factor is the restrained economic development in China caused mainly by debt in the nation's real estate sector. The tighter monetary policy and declining commodity prices dampened the buoyancy of consumer prices in the United States and the eurozone in the reporting year.

There were contrasting trends in the economies in our core markets in the reporting year. In the United States, the economic situation developed better than had been anticipated at the start of the year. There was a marked increase in both consumer spending and capital investments, the latter most likely due in part to the recent introduction of subsidies in the semiconductor industry and in the area of transformation technologies.

By contrast, the European economy stagnated with a weak outlook. The industrial sector in particular suffered from rising interest rates, weak global demand, and diminished price competitiveness caused by the appreciation of the euro. This also resulted in more companies filing for insolvency in 2023. In the construction industry, demand for construction services has dropped markedly due to significantly worse financing conditions and sharp rises in construction costs. Consumer spending was also a weak point for the economy. Economic output declined in our European core countries of Germany, Hungary, the Czech Republic, and Austria in 2023, while the remaining core countries of Greece, Romania, Poland, Croatia, and Slovakia posted positive economic growth, benefiting in part from the EU's Recovery and Resilience Facility. The magazine "The Economist" rated Greece the top-performing economy of 2023. The IMF also praised the Greek economy's positive development, highlighting the country's progress with the digital transformation.

In Germany, the Bitkom-ifo-Digitalindex, calculated on the basis of the business situation and expectations, decreased over the course of the reporting year. The business climate in the IT and telecommunication sector stood at plus 9.8 points in December 2023. The ICT industry thus remains at a significantly higher level than the economy as a whole: the ifo-Geschäftsklima Deutschland indicator was at minus 11.2 points in December 2023.

Cooling inflation and falling prices on the global energy markets could lead to moderate economic recovery in the coming year. Progress with the digital transformation and new trends in artificial intelligence could stimulate growth in productivity in the medium term. However, significant downside risks continue to weigh on the economic outlook.

For further information about the risks and opportunities relating to the macroeconomic environment, please refer to the section "[Risk and opportunity management](#)."

The following table shows the gross domestic product (GDP) growth rate trends and the change in harmonized consumer prices in our most important markets.

%						
	GDP for 2021 compared with 2020	GDP for 2022 compared with 2021	GDP estimate for 2023 compared with 2022	Consumer prices for 2021 compared with 2020	Consumer prices for 2022 compared with 2021	Consumer prices estimate for 2023 compared with 2022
Germany	3.2	1.8	(0.3)	3.2	8.7	6.2
United States	5.8	1.9	2.5	4.7	8.0	4.2
Greece	8.4	5.6	2.4	0.6	9.3	4.3
Romania	5.7	4.6	2.2	4.1	12.0	9.8
Hungary	7.1	4.6	(0.7)	5.2	15.3	17.2
Poland	6.9	5.3	0.2	5.2	13.2	11.1
Czech Republic	3.6	2.4	(0.4)	3.3	14.8	12.2
Croatia	13.8	6.3	2.6	2.7	10.7	8.1
Slovakia	4.8	1.8	1.3	2.8	12.1	10.8
Austria	4.2	4.8	(0.5)	2.8	8.6	7.7

Source: Eurostat, European Commission, national authorities. Last revised: January 15, 2024.

Telecommunications market

Demand for high-speed broadband – over the fixed and mobile networks – remains high. According to a study by the consulting company Arthur D. Little, in 2023 the average mobile data consumption per user in Europe was 16 GB/month, an increase of 23 % year-on-year. The study estimates this figure will rise to 76 GB/month by 2030. Average household data consumption in Europe over the fixed network was 265 GB/month in 2023, a year-on-year increase of 18 %, and is expected to rise to 912 GB/month by 2030. Video content and social media usage are the primary drivers of data consumption, paired with a growing share of higher-resolution content and the trend for live sports streaming.

The global telecommunications market is set to grow further. According to estimates by the market research company Analysys Mason, global revenue from telecommunications services grew in 2023 by 3.3 % year-on-year. Revenue growth from conventional telecommunications services is mainly driven by higher spending on data services. Analysys Mason expects the build-out of fiber-optic networks and the growing demand for faster broadband lines to drive up average spend per user for fixed-network lines, especially in North America and Western Europe. Analysys Mason also expects revenue growth in the North American mobile market to remain consistently higher than in Europe over the coming years.

The telecommunications industry continues to be characterized by intense competition. Consumers benefit from a greater range of products to choose from. In the fixed network, established telecommunications companies are competing intensively with cable network operators, city network operators, and resellers, who predominantly make use of regulated wholesale products. Financial investors are involved in building out regional and supra-regional fiber-optic networks. In addition, internet companies offering OTT communication services are also further intensifying the competitive pressure. Moreover, three or four mobile network operators operate in each of our markets using their own network infrastructure. On top of this, we are seeing mobile virtual network operators (MVNOs) becoming established in many markets using the network infrastructure of traditional mobile network operators.

In view of these developments, the question is whether the intense regulation of telecommunications markets in the EU is still justified. In October 2023, following an exploratory consultation on the future of the telecommunications sector, the European Commission announced its plans for regulation in the form of the Digital Networks Act. The Commission wants to reform the regulatory framework to strengthen competition and investment power in the European telecommunications sector, and plans to publish a white paper containing detailed proposals at the end of February 2024.

Germany

In January 2024, the industry association Bitkom estimated that total revenue in the telecommunications industry in Germany had increased by 1.7 % year-on-year to EUR 72.1 billion in the reporting year. Revenue in the area of telecommunications equipment grew by 4.4 % and in telecommunications services by 1.9 %, while revenues from terminal equipment were set to decline by 0.7 %.

The industry association VATM estimated an increase of 0.5 % year-on-year in the number of broadband lines in Germany by the end of 2023 to 37.0 million lines. High-bandwidth lines are increasingly marketed in cable and VDSL/vectoring networks. The drive to build out modern fiber-optic networks continues: in addition to established telecommunications companies, public utility companies, municipalities, and special purpose associations, as well as investor-driven network operators, are increasingly active. The growing availability of high bandwidths in Germany and the large choice of HD content and video-on-demand services are stimulating sustained customer growth in IPTV business. Providers are recording growth in broadband revenue driven by rising customer numbers in addition to higher revenues per customer for broadband products and triple-play bundles comprising telephony, a broadband line, and TV service. The trend to use convergent product bundles comprising fixed-network and mobile offerings (FMC) also continued.

According to VATM, service revenue in the German mobile communications market increased slightly by 1.0 % compared with 2022, driven mainly by the uninterrupted upswing in data usage, which grew by 22.1 %. Regulatory effects and sustained price and competitive pressure offset the additional demand for data. Mobile data usage continues to increase strongly on the back of growing use of products such as mobile video apps. Connected devices like smartwatches and fitness trackers (wearables) are growing in popularity. Alongside established apps for IP messaging and social networks, etc., new apps for tracking fitness, vital, and health data or using mobile payment services are also gaining traction and pushing up demand for high-speed mobile broadband, large data volumes, and extra SIM cards 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

To meet the ongoing demand for faster networks in 2023, U.S. broadband providers continued to expand their network capacities with further wireless and fiber deployments.

T-Mobile US announced that at the end of the fourth quarter of 2023 its network now covered more than 300 million Americans with its Ultra Capacity 5G. Competitor Verizon said by mid-2023 more than 200 million people in the United States had access to Verizon 5G Ultra Wideband. And AT&T said its 5G network served nearly 288 million people in the United States.

Fixed Wireless Access (FWA), providing high-speed internet to homes and businesses, remained the primary technology driving fixed broadband growth, putting the United States at the forefront of FWA development. Wireless providers have used FWA to enter the fixed broadband market, while fixed internet service providers with access to 5G spectrum use FWA to complement broadband access in locations where fiber access networks are not present. In the United States, FWA has also been used to help bridge the digital divide in rural locations where laying fiber is not economical. T-Mobile US and Verizon are leading the FWA expansion, with T-Mobile US announcing 4.8 million fixed broadband customers at the end of the fourth quarter of 2023 and Verizon featuring around 3 million customers at the end of the same quarter.

Fiber-to-the-home (FTTH) deployments saw a record year, with the number of FTTH homes passed and being marketed to consumers in the United States growing 13 % in 2023 to 78 million homes. Fiber deployments are expected to further expand with the support of the federal Broadband Equity Access and Deployment Program (BEAD). The BEAD program provides USD 42.45 billion to fund primarily fiber-based broadband expansion projects in unserved and underserved areas of the United States. Planning grants have been awarded to states around the country and further distributions are ahead in 2024.

Carriers in the United States are continuing to evaluate options for a shift in communications network architecture from closed proprietary interfaces toward Open Radio Access Network (Open RAN) deployment. AT&T on December 4, 2023, announced it plans to lead the United States in commercial scale Open RAN deployment through a collaboration with Swedish vendor Ericsson. AT&T said its spend could approach roughly USD 14 billion over the 5-year term with Ericsson. The news was seen as a potentially big boost for Open RAN technology.

The U.S. regulator for the telecommunications sector, the Federal Communications Commission (FCC), in 2023 began a proceeding to reintroduce net neutrality regulations along the lines of the 2015 regulations. The agency is expected to issue final regulations in 2024, following a public consultation.

Europe

In the reporting year, the telecommunications markets in our segment continued to feel the adverse effects of world events, and in particular geopolitical tensions. Inflation drove up energy and producer prices in early 2023, while financing conditions for private households and businesses deteriorated on the back of higher interest rates, putting overall economic demand under further pressure. The inflation-induced changes in consumer prices lost momentum in the countries of our segment over the course of the year, but remain at a comparatively high level. This resulted in numerous telecommunications companies adapting their rate plans in agreement with the local regulatory authority to offset rising costs, leading to customers making economies in their selection of telecommunications products. Nevertheless, demand for broadband and TV services remained high. This is also reflected in Analysys Mason's figures for the fixed-network business (excluding systems solutions) for the first half of 2023: the business grew, driven in particular by the sharp increase in broadband business, by around 4 %. This offset the decline in revenues from voice telephony. TV and mobile business also performed better than in the prior year.

The market players in our European footprint focused their acquisition activities in the reporting year on becoming providers of convergent product bundles comprising fixed-network and mobile services (FMC). In countries such as Greece and Poland, the integration continued to progress during the reporting year. One year after the respective takeovers of Nova and Wind in Greece and Play and UPC in Poland, legal mergers took place in both countries and the brands were streamlined (leaving just the Nova brand in Greece and Play in Poland). In Hungary, following a slew of acquisitions, the ICT group 4iG shifted its focus to the operational and brand-specific integration of the entire portfolio. The acquisitions in the prior year are causing the competitive situation to intensify in many countries, but especially Greece. In terms of the acquisition of spectrum licenses, there was only limited activity on the markets in the reporting year. However, the activities of the cell tower businesses picked up pace.

Convergent product bundles are now established in our markets and consistently post high growth rates. According to Analysys Mason, the number of FMC customers continued to grow year-on-year in the first half of 2023 by around 6 % and revenues by around 7 %. At the end of 2023, year-on-year growth in this area had reached double digits in our national companies. Integrated convenience packages such as MagentaOne remained one of the most popular options among our customers, which had a positive impact on customer satisfaction and reduced churn rates significantly compared to individual products. In the reporting year, competitors increasingly moved towards value- and customer-oriented FMC offerings. In Hungary, the ICT group 4iG became a fully-fledged convergent provider due to the acquisition of Vodafone Hungary and UPC Hungary, and plans to launch its new FMC offering "One" in 2024. In Greece, the United Group completed its takeover of Wind Hellas, and bundled Wind and Nova services to create a convergent operator. This made the company the second largest competitor for fixed-network and pay-TV services.

Subscription-based streaming services continue to gain in relevance in the markets of our segment. For example, SkyShowtime – a joint venture of Paramount Global and Comcast – completed its roll-out in our markets in 2023. This international portfolio comprises Netflix, Disney+, HBOmax, and SkyShowtime, and is competing against local services with varying positions of strength, depending on the market. Services providing local content, such as Voyo in Slovakia and the Czech Republic, reported strong customer growth, while other services, like RTL+ in Hungary, have struggled to gain traction. Most of these local providers deliver a broader mix of content combining local and international TV movies and series with sports programming, etc. While this type of portfolio composition fundamentally poses a higher risk of substituting traditional pay-TV business, the risk is (still) at a manageable level. Despite this, the appeal of this business model is evidenced by the year-on-year growth: according to Analysys Mason, revenues with streaming services in Europe and the customer base both posted further strong growth as of the end of the first half of 2023.

In 2023, the European telecommunications market was dominated by technological advances, regulatory changes, cybersecurity concerns, competition, remote working requirements, a focus on sustainability and green initiatives, supply chain challenges, and increased inflationary pressure. Over the course of the year, the B2B business adapted to these changing economic circumstances. Influenced by the European Commission's Green Deal, the telecommunications sector will take on a central role as strategic partner and bolster Europe's ability to build towards greater resilience. In 2023, the European markets continued their rapid adoption of technologies such as 5G, competitive broadband networks, and digital services like software defined networks, cybersecurity, and cloud computing, laying the foundation for the digital and green transformation. As 5G connectivity, edge computing, artificial intelligence, and data-driven processes become ever more reliable, businesses of all sizes are being spurred to deploy secure multi-access edge computing and secure private networks to enhance their competitiveness on the market and strengthen their strategic independence.

Systems Solutions

In the IT industry, the revenue volume that can be addressed by our Systems Solutions operating segment in our core market of Western Europe under the T-Systems brand increased by 4.6 % in the reporting year to EUR 187 billion. Companies continue to invest in digital solutions.

In Germany, in terms of IT services, demand has grown further for public cloud services and cybersecurity services, as has the importance of digitalization (including Industry 4.0). The security market in Western Europe addressed by T-Systems grew by 10.4 % in 2023. The health sector also developed positively, posting double-digit growth rates in areas including electronic patient files, digital health innovations, and the healthcare cloud in Germany. By contrast, growth slowed in the market segments for traditional IT infrastructure and SAP services.

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, Microsoft Azure, and Google Cloud. Prices were eroded further by providers of services that are delivered primarily offshore (e.g., Tata Consultancy Services, Infosys, Wipro).

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 still subject to extensive regulation in our fixed-network and mobile businesses in 2023.

Regulation

Ongoing court case on the approval under merger control law for the joint venture Glasfaser NordWest. On September 12, 2023, the Federal Court of Justice admitted the appeal filed by the Bundeskartellamt and Telekom Deutschland against the Düsseldorf Higher Regional Court's decision dated September 22, 2021. The Düsseldorf Higher Regional Court had decided to reverse the Bundeskartellamt's approval under merger control law of the joint venture Glasfaser NordWest. Telekom Deutschland and EWE had established the joint venture Glasfaser NordWest in 2020 to bring fast internet to up to 1.5 million households and business locations. The September 12, 2023 decision now paves the way for the Federal Court of Justice to open a legal review into the reversal of the approval. The joint venture can continue building out FTTH until the Bundeskartellamt decides otherwise.

Bundesnetzagentur's regulatory procedures based on the decision on access regulation including FTTB/H network access.

On the basis of the Bundesnetzagentur's decision of July 21, 2022 on the regulation of access to Deutsche Telekom's copper and fiber-optic network, the following procedures on the reference offer for active access to FTTB/H networks, civil engineering infrastructure, as well as on charges for access to civil engineering infrastructure, were opened in 2023: In July 2023, Telekom Deutschland proposed a draft reference offer for civil engineering infrastructure and, in October 2023, submitted a rate application for the corresponding services. The procedure on the reference offer for active FTTB/H services is also under way. The commitment agreements for VDSL and FTTB/H agreed until the end of 2031 had already passed the extended review conducted by the Bundesnetzagentur in 2022.

Awarding of spectrum

At the multi-band auction in Croatia, which began with a bidding phase on January 17, 2023, Hrvatski Telekom secured an above-average package of spectrum, comprising the largest share of spectrum (2x 105 MHz), for around EUR 135 million. In Poland, the bidding phase for the 3,400 to 3,800 MHz band award ended on October 18, 2023. T-Mobile Polska purchased 100 MHz of this spectrum for around EUR 111 million, securing one of the two spectrum blocks with the fewest technical constraints.

The Austrian regulatory authority RTR has begun the procedure to award 26 GHz millimeter wave spectrum. It also plans to award residual frequencies in the 3,400 to 3,800 MHz band from the 2019 auction in the same procedure. A public consultation on the tender conditions is under way. RTR expects the bidding process to start in the first quarter of 2024. In Poland, the award procedure for the 700 MHz band and, if applicable, for spectrum in the 26 GHz band could also potentially begin in 2024. In the Czech Republic, the procedure to extend the 900/1,800 MHz GSM license, which expires in 2024, is expected to begin at the start of 2024. In Slovakia meanwhile, the procedure (auction) to re-award spectrum in the 900 MHz and 2,100 MHz bands announced for the end of 2023 is at stake following calls by several parties to re-examine the auction conditions.

In Germany, the regulatory authority Bundesnetzagentur launched a public consultation on September 13, 2023, following which it intends to extend the usage rights – which expire at the end of 2025 – for the 800 MHz, 1,800 MHz (partial), and 2,600 MHz mobile frequencies and therefore not award them by way of an auction for the time being. The extension periods under discussion are for five or eight years.

In the United States, the U.S. regulator for the telecommunications sector, the Federal Communications Commission (FCC), did not hold any spectrum auctions in 2023. The FCC's spectrum auction authority expired on March 9, 2023 and has yet to be reauthorized by the U.S. Congress. The U.S. Congress passed a narrow bill – the "5G Sale Act" – that gives the FCC the temporary authority to assign licenses purchased in the 2022 2.5 GHz spectrum auction. The law took effect on December 19, 2023 and provides the FCC with 90 days to process the license assignments. At Auction 108 in September 2022, T-Mobile U.S. acquired spectrum for around USD 0.3 billion (EUR 0.3 billion). The allocation of the licenses was delayed on account of the expiry of the FCC's authority, but is now expected in the first quarter of 2024.

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	Planned award procedures
Austria	Started	Q1 2024	26 GHz/3,400–3,800 MHz (residual spectrum)	Auction (eSMRA ^a)
Poland	Q1 2024		700 MHz	Auction or tender procedure ^b , details and timeline tbd
Poland	Q1 2024		26 GHz	Details and timeline tbd
Slovakia	Q1 2024 ^c	Q1 2024 ^c	900/2,100 MHz	New award procedure (auction)
Czech Republic	Q1 2024	Q1 2024	900/1,800 MHz	Extension procedure

^a Enhanced simultaneous (electronic) multi-round auction (eSMRA) with ascending, parallel bids for all available frequency bands.

^b Tender procedure (beauty contest auction) offering a competitive selection process for assigning scarce frequencies.

^c Currently, the terms and conditions of the auction are being reviewed and as a result postponement is under discussion.

Agreements on spectrum licenses

On August 8, 2022, T-Mobile US entered into agreements with **Channel 51 License** and **LB License** for the acquisition of spectrum in the 600 MHz band in exchange for total cash consideration of USD 3.5 billion (EUR 3.2 billion). On March 30, 2023, the contractual parties further agreed that the transaction be divided into two separate tranches. The transfer of the licenses in accordance with the agreements is subject to regulatory approvals and certain other customary closing conditions. The Federal Communications Commission (FCC) approved the first tranche of the license transfer on December 29, 2023. T-Mobile US expects the first tranche to be concluded in the second quarter of 2024, and the second tranche in late 2024/early 2025.

On July 1, 2020, T-Mobile US and **DISH Network Corporation** (DISH) reached an agreement on the sale of spectrum licenses, under which DISH agreed to purchase certain 800 MHz spectrum licenses from T-Mobile US for USD 3.6 billion (EUR 3.3 billion). The transaction is subject to approval by the FCC. On October 15, 2023, T-Mobile US and DISH modified the agreement to include, among other changes, a non-refundable extension fee of USD 0.1 billion (EUR 0.1 billion) which DISH paid to T-Mobile US on October 25, 2023, as well as the requirement that the purchase of the spectrum licenses must be finalized by April 1, 2024. The extension fee is fully creditable against the purchase price provided DISH exercises its option to purchase the spectrum by this date. If DISH does not purchase the spectrum licenses, T-Mobile US is obligated to put the licenses up for sale at auction. Should bidding not reach the defined minimum purchase price of USD 3.6 billion, T-Mobile US would be released from its obligation to sell the licenses.

On September 12, 2023, T-Mobile US agreed with U.S. cable network operator **Comcast** to acquire spectrum in the 600 MHz band in exchange for total cash consideration of between USD 1.2 billion and USD 3.3 billion (EUR 1.1 billion and EUR 3.0 billion). The final purchase price will be determined at the time the parties make the required transfer filings with the FCC once it is decided which spectrum Comcast intends to sell. The transaction is expected to close in the first half of 2028, pending approval from the FCC. At the same time, T-Mobile US and Comcast have agreed exclusive leasing arrangements. The leasing rights for T-Mobile US will apply for at least two years, even if Comcast elects to remove some of its licenses from the purchase agreement.

Development of business in the Group

Statement of the Board of Management on business development in 2023

Bonn, February 13, 2024

Deutsche Telekom remained reliable, strong, and successful amid the challenging geopolitical and macro-economic environment in 2023. These attributes are what makes us stand out, since our goal is to bring people together – and that's why "Connecting your world" has been our worldwide claim since summer 2023. Independent tests confirm that we have the best network and the best service in many of our markets. It is not by accident that Brand Finance ranks us as the most valuable brand in Europe in its brand ranking. And our strategy of sustainable corporate governance is also paying off on the capital market: our share price rose to more than EUR 20 at the start of 2023 and continued its upward trend at the start of 2024.

Our T is shining brightly. Deutsche Telekom is part of society. We take our responsibility seriously, well beyond our customer relationships: We provide stability to others, by supporting refugees, rebuilding infrastructure after natural disasters, taking an active stance against online hate speech, or supporting the Special Olympics. Our position at Deutsche Telekom is clear: We are inclusive. We give a voice to everyone. And that is truly the source of our pride as a Company.

We met our key corporate targets in 2023. We closed significant transactions, in particular the sale of GD Towers, and we secured a majority stake in T-Mobile US. We achieved our annual build-out targets. In the United States, we once again recorded strong growth in customer numbers, especially in postpaid. In Europe and Germany, our integrated offers continue to enjoy strong demand. This is also reflected in our key financials: We raised our guidance for adjusted EBITDA AL and free cash flow AL (before spectrum) for the 2023 financial year, for the former, several times over the course of the year. Net revenue decreased by 2.1 % to EUR 112.0 billion, mainly due to exchange rate effects. In organic terms, however, revenue increased slightly. High-value service revenue also increased slightly to EUR 92.9 billion.

Adjusted EBITDA AL grew to EUR 40.5 billion. The main reason for this increase is sound operational development and further enhanced cost efficiency. EBIT increased significantly to EUR 33.8 billion, mainly due to the gain on deconsolidation from the sale of GD Towers.

Loss from financial activities increased, primarily due to a lower share of profit/loss of associates and joint ventures accounted for using the equity method following an impairment loss on our stake in GD Towers. This impairment loss was due entirely to higher discount rates due to macroeconomic developments in the reporting year. By contrast, the business outlook for GD Towers improved slightly. Finance costs were negatively impacted, partly by the sale and leaseback of passive network infrastructure in Germany and Austria in connection with the sale of GD Towers. Adjusted net profit decreased accordingly to EUR 7.9 billion. Adjusted earnings per share fell to EUR 1.60.

ROCE increased significantly year-on-year to 9.0 %. This was due to significant growth in net operating profit after taxes (NOPAT), while the average amount of net operating assets (NOA) remained almost constant over the year. This was mainly down to the sale of GD Towers.

Net debt decreased from EUR 142.4 billion to EUR 132.3 billion. This was in large part due to the strong increase in free cash flow (before dividend payments and spectrum investment) and the cash proceeds resulting from the sale of GD Towers. By contrast, net debt was increased mainly by the share buy-back program at T-Mobile US, additions of lease liabilities and right-of-use assets, and our dividend payments.

The trends in the industry, in particular on the European telecommunications markets, remain challenging due to ongoing 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 and our technology. In 2023, we made Group-wide investments (before spectrum) of EUR 16.6 billion. As expected, the largely completed network integration in connection with the business combination with Sprint in the United States in particular had a positive impact on cash capex. In Europe, we remained focused on the parallel build-out of our broadband and mobile infrastructure (optical fiber and 5G). Including the spectrum payments, this figure was EUR 17.9 billion in the reporting year. Our free cash flow AL (before dividend payments and spectrum investment) thus increased by 40.7 % to EUR 16.1 billion. We are therefore still a solid investment-grade company with access to the international capital markets. The rating agency Standard & Poor's even raised our long-term rating in May 2023, and all three major rating agencies also raised their ratings of T-Mobile US in spring 2023.

As communicated at our [Capital Markets Day](#) in May 2021, we want to underpin our strong starting position going forwards with solid financial growth rates. We will present our plans for the coming years at the Capital Markets Day scheduled for 2024. We pursue a sustainable dividend policy for our shareholders. For the 2023 financial year, we propose a dividend of EUR 0.77 for each 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. We started our announced 2024 share buy-back program with a total volume of up to EUR 2 billion on January 3, 2024.

Following a weak stock market year in 2022, the stock markets were dominated by buoyant share prices in 2023. Growth in the European telecommunications sector was clearly more restrained: The industry's barometer, the Dow Jones STOXX® Europe 600 Telecommunications, rose just 8.1 % by the end of 2023. By contrast, the T-Share closed 2023 up substantially by 16.6 %. On a total return basis, it was up by as much as 20.3 %.

Our goal is firmly in our sights: We want to become the Leading Digital Telco. To this end, we will continue to systematically transform ourselves into a simple, digital, and in every way agile company, harnessing the synergies within our Group to hold our own against competitors and continue our success of the last few years. The aim of building and operating the best convergent networks remains at the core of our strategy and is an important driver for our growth areas. In the process, we align ourselves long-term with the needs of our customers and put people at the heart of everything we do. Because we won't stop until everyone can #takepart.

Notes on the management approach

Presentation of GD Towers. The sale of the GD Towers business entity was consummated on February 1, 2023, and GD Towers has not been part of the Group since that date. The GD Towers business entity had been recognized in the consolidated financial statements as a discontinued operation from the third quarter of 2022 until its sale. By contrast, we use the management approach for the presentation in the combined management report, i.e., the financial performance indicators presented in the results of operations still include the value contributions from GD Towers up to and including January 2023.

For further information on the sale and the presentation of GD Towers according to the management approach, please refer to the sections “Group organization” and “Management of the Group.”

Comparison of the Group's expectations with actual figures

In the 2022 Annual Report, we outlined expectations for the 2023 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 2022, the results expected for the reporting year, and the actual results achieved in 2023. The performance indicators that we also forecast in the 2022 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 2022	Original expectations for 2023 ^a	Expectations revised during 2023 ^a	Results in 2023
Net revenue	billions of €	113.7	slight increase		112.0
Service revenue	billions of €	91.6	increase		92.9
EBITDA AL (adjusted for special factors) ^b	billions of €	39.3	around 40.8	around 41.1	40.5
Profit (loss) from operations (EBIT)	billions of €	14.8	strong increase		33.8
Earnings per share (adjusted for special factors) ^{b, c}	€	1.83	> 1.60		1.60
ROCE ^c	%	4.5	strong increase		9.0
Free cash flow AL (before dividend payments and spectrum investment) ^b	billions of €	11.2	> 16.0	> 16.1	16.1
Cash capex (before spectrum investment)	billions of €	20.7	16.8		16.6
Rating (Standard & Poor's, Fitch)		BBB, BBB+	from A- to BBB		BBB+
Rating (Moody's)		Baa1	from A3 to Baa2		Baa1

^a Our planning for 2023 assumed a U.S. dollar exchange rate of USD 1.05; financial results for GD Towers were not included.

^b Contrary to the forecasts published in the 2022 combined management report (2022 Annual Report), we adjusted the guidance for 2023 for EBITDA AL (adjusted for special factors) and free cash flow AL (before dividend payments and spectrum investment) during the course of the year (Interim Group Reports as of March 31, 2023, June 30, 2023, and September 30, 2023).

^c Pro forma figures were not provided for these performance indicators in the 2022 Annual Report. Instead, we include here the actual figures for 2022.

The comparison shown in the table of the pro forma figures for 2022 and the expectations formulated on this basis for 2023 with the results actually generated for 2023 is not like for like, i.e., these figures are not based on comparable exchange rates or a comparable composition of the Group. Below, we describe the results achieved on a like-for-like basis, i.e., at comparable exchange rates and excluding the results of GD Towers up to the date of deconsolidation on February 1, 2023.

We can once again look back with satisfaction on a successful financial year. Overall, we met or significantly exceeded our expectations. Despite lower equipment revenues in the United States operating segment, our revenue increased slightly in organic terms, i.e., adjusted for exchange rate effects and changes to the composition of the Group, while revenues decreased slightly on an inorganic basis. Our service revenue grew substantially by 3.6 % on an organic basis. Adjusted EBITDA AL increased in organic terms by 4.0 %, despite the strategic withdrawal from the terminal equipment lease business model in the United States. Taking the premises we formulated for our guidance into account, i.e., excluding the results of GD Towers and negative exchange rate effects, we met our most recently communicated guidance of around EUR 41.1 billion. In line with our strong operational performance, adjusted earnings per share met our guidance at EUR 1.60, when taking into account the exchange rate assumed when formulating our guidance. As expected, we also recorded a strong increase of 9.0 % for ROCE due to income from the sale of shares in GD Towers. At EUR 16.1 billion, free cash flow AL (before dividend payments and spectrum investment) clearly exceeded our latest guidance of over EUR 16.1 billion, taking negative exchange rate effects into account. Cash capex (before spectrum investment), taking negative exchange rate effects into account, was as expected.

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

		Pro forma figures for 2022	Expectations for 2023	Results in 2023
Group				
Customer satisfaction (TRI*M index) ^a		75.0	slight increase	76.2
Employee satisfaction (engagement score) ^a		78	stable trend	76
Energy consumption ^{a, b}	GWh	13,253	slight increase	12,241
CO ₂ emissions (Scope 1 and 2) ^{a, c}	kt CO ₂ e	233	increase	217
Fixed-network and mobile customers				
Germany				
Mobile customers	millions	54.2	increase	61.4
Fixed-network lines	millions	17.4	stable trend	17.3
Retail broadband lines	millions	14.7	slight increase	15.0
United States				
Postpaid customers	millions	92.2	increase	98.1
Prepaid customers	millions	21.4	slight increase	21.6
Europe				
Mobile customers	millions	47.3	increase	47.9
Fixed-network lines	millions	7.9	stable trend	8.0
Broadband customers	millions	6.7	increase	7.0
Systems Solutions				
Order entry	billions of €	3.8	stable trend	3.6

^a Pro forma figures were not provided for these performance indicators in the 2022 Annual Report. Instead, we include here the actual figures for 2022.

^b Energy consumption, mainly: electricity, fuel, other fossil fuels, district heating for buildings.

^c Calculated according to the market-based method of the Greenhouse Gas Protocol.

We are also largely on track with our non-financial performance indicators. In our domestic market of Germany, we even recorded a strong increase of 13.2 % in mobile customers, due in part to the high-value contract customer business under the Deutsche Telekom and congstar brands. Fixed-network and broadband lines developed as expected. In the United States operating segment, postpaid and prepaid customer numbers increased in line with our expectations. Our Europe operating segment recorded growth in customer numbers as expected, with fixed-network lines even recording an increase, thanks primarily to a strong increase in the Czech Republic. Order entry in our Systems Solutions operating segment fell short of the stated guidance, mainly due to the high-volume deals concluded in the prior year. Furthermore, the original planning did not take into account the reassignment of Multimedia Solutions to the Germany operating segment.

At the end of the reporting year, customer satisfaction came in at 76.2 points compared with an adjusted baseline figure of 75.0 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 2023 on the basis of the new structures these changes entailed. The new baseline thus diverges from the figure of 76.0 reported as of December 31, 2022. The Germany, Europe, and Systems Solutions operating segments contributed to the ongoing positive development with improvements in customer loyalty. Employee satisfaction remained at a high level of 76 points in 2023, although this is down slightly against the prior year. The slight dip in the engagement score is attributable in part to transformation processes in some business units, which have been challenging for parts of the workforce as they have entailed, for example, a need for adjustments in skills development. The Group's energy consumption and CO₂ emissions recorded an encouraging decline instead of the expected slight increase or increase, respectively, because in particular the United States was able to achieve greater savings than expected in the original planning.

For further information on the trends in our main financial and non-financial 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

The sale of the GD Towers business entity was consummated on February 1, 2023, and GD Towers has not been part of the Group since that date. The GD Towers business entity had been recognized in the consolidated financial statements as a discontinued operation from the third quarter of 2022 until its sale. By contrast, we use the management approach for the presentation in the combined management report, i.e., the financial performance indicators presented in the results of operations still include the value contributions from GD Towers up to and including January 2023. For a breakdown of these performance indicators according to the management approach into the amounts recognized in the consolidated income statement, please refer to the relevant table in the section "[Management of the Group](#)."

millions of €

	2023	2022	Change	Change %	2021
Net revenue	111,985	114,413	(2,428)	(2.1)	107,811
Service revenue^a	92,919	91,988	931	1.0	83,201
EBITDA AL (adjusted for special factors)	40,497	40,208	289	0.7	37,330
EBITDA AL	51,160	35,989	15,171	42.2	33,893
Depreciation, amortization and impairment losses	(23,975)	(27,827)	3,852	13.8	(27,482)
Profit (loss) from operations (EBIT)	33,802	16,159	17,643	n.a.	13,057
Profit (loss) from financial activities	(8,845)	(4,455)	(4,390)	(98.5)	(5,139)
Profit (loss) before income taxes	24,957	11,703	13,254	n.a.	7,918
Net profit (loss)	17,788	8,001	9,787	n.a.	4,176
Net profit (loss) (adjusted for special factors)	7,940	9,081	(1,141)	(12.6)	5,862
Earnings per share (basic and diluted)	€ 3.57	1.61	1.96	n.a.	0.87
Adjusted earnings per share (basic and diluted)	€ 1.60	1.83	(0.23)	(12.6)	1.22

^a As of January 1, 2023, the definition of service revenue was extended. Prior-year comparatives were adjusted retrospectively.

In order to increase the informative value of the prior-year comparatives based on changes to the Company's structure or exchange rate effects, we also describe selected figures in **organic terms**, by adjusting the figures for the prior year for changes in the composition of the Group, exchange rate effects, and other effects. Due to changes in the composition of the Group, the figures for the prior year presented on an organic basis were reduced primarily in the Group Development operating segment in connection with the sale of T-Mobile Netherlands as of March 31, 2022 and of GD Towers as of February 1, 2023, and in the United States operating segment in connection with the sale of the Wireline Business at T-Mobile US as of May 1, 2023. The net negative exchange rate effects were primarily attributable to the translation of U.S. dollars to euros.

Revenue, service revenue

In the reporting year, we generated net revenue of EUR 112.0 billion, which was 2.1 % or EUR 2.4 billion down on the prior-year level. In organic terms, revenue increased by 0.6 % against the prior-year level, including negative net exchange rate effects of EUR 1.9 billion, with the changes in the composition of the Group having the net reducing effect of EUR 1.1 billion. High-value service revenue in the Group increased by EUR 0.9 billion or 1.0 % year-on-year to EUR 92.9 billion. In organic terms, service revenue increased by EUR 3.2 billion or 3.6 %.

Contribution of the segments to net revenue (according to the management approach)

millions of €

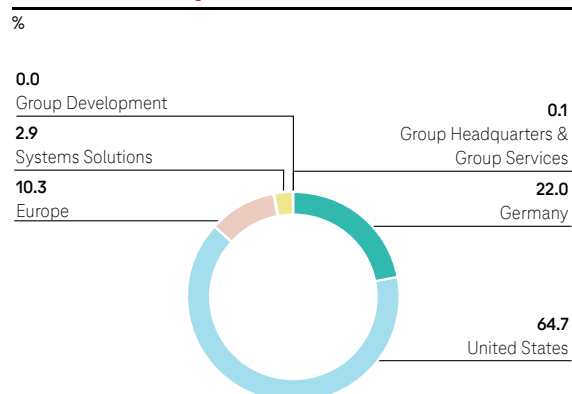
	2023	2022	Change	Change %	2021
Germany	25,187	24,505	682	2.8	24,050
United States	72,436	75,436	(3,000)	(4.0)	67,791
Europe	11,790	11,158	632	5.7	11,294
Systems Solutions	3,896	3,811	85	2.2	3,759
Group Development	115	1,708	(1,593)	(93.3)	3,165
Group Headquarters & Group Services	2,305	2,407	(102)	(4.2)	2,515
Intersegment revenue	(3,744)	(4,612)	868	18.8	(4,763)
Net revenue	111,985	114,413	(2,428)	(2.1)	107,811

In our United States operating segment, revenue was down 4.0 % against the prior-year level, due in part to exchange rate effects. In organic terms, it declined by 0.8 %. This was attributable to lower terminal equipment revenue. First of all, the migration of former Sprint customers to the T-Mobile US network is complete, such that fewer devices compatible with the T-Mobile US network were sold to these customers. Furthermore, customers use their devices longer. In addition, T-Mobile US continued its strategic withdrawal from the terminal equipment lease business. The decline in terminal equipment revenues was only partially offset by an increase in service revenue. In the Group Development operating segment, revenue development was dominated by the loss of the value contributions of the sold entities T-Mobile Netherlands and GD Towers. In organic terms, revenue increased by 3.2 %. The other operating segments recorded positive revenue trends. Revenue in our domestic market of Germany was up on the prior-year level, increasing by 2.8 %. In organic terms, revenue increased by 2.1 %. This was mainly driven by growth in service revenues in the fixed-network core business and in mobile communications. Build-out services for our cooperation partners also had a positive impact on revenue. In our Europe operating segment, revenue increased by 5.7 % year-on-year. In organic terms, revenue increased by 4.8 %, primarily attributable to the increase in high-margin service revenues in the mobile business. Contract customer additions also had positive effects on terminal equipment revenues. Revenue in our Systems Solutions operating segment was up 2.2 % year-on-year; in organic terms, it was up 5.3 %. This positive revenue trend was mainly driven by growth in the Road Charging, Digital, Advisory, and Cloud portfolio areas.

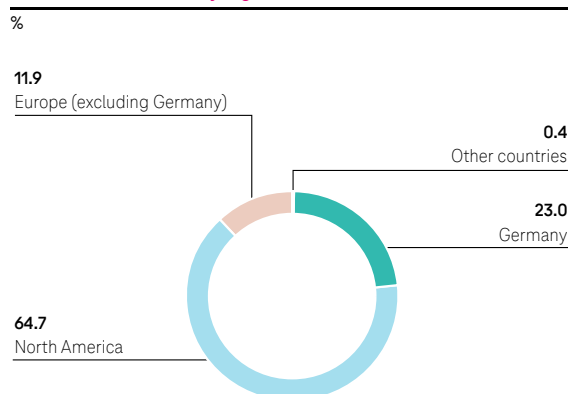
For further information on revenue development in our segments, please refer to the section “[Development of business in the operating segments](#).”

For information on the extension of the definition of service revenue, please refer to the section “[Management of the Group](#).”

Contribution of the segments to net revenue^a



Breakdown of revenue by region



^a For further information, please refer to Note 38 “[Segment reporting](#)” in the notes to the consolidated financial statements.

At 64.7 %, our United States operating segment again provided by far the largest contribution to net revenue of the Group, down 1.2 percentage points against the prior-year level. The proportion of net revenue generated internationally also decreased from 77.9 % to 77.0 %.

Adjusted EBITDA AL, EBITDA AL

Adjusted EBITDA AL increased year-on-year by EUR 0.3 billion or 0.7 % to EUR 40.5 billion in the reporting year. In organic terms, adjusted EBITDA AL increased by EUR 1.6 billion or 4.0 %, including negative net exchange rate effects of EUR 0.7 billion, and with changes in the composition of the Group having a net reducing effect of EUR 0.6 billion. Adjusted core EBITDA AL, i.e., adjusted EBITDA AL excluding revenue from terminal equipment leases in the United States, thereby presenting operational development undistorted by the strategic withdrawal from the terminal equipment lease business, increased by EUR 1.3 billion or 3.5 % to EUR 40.2 billion.

Contribution of the segments to adjusted Group EBITDA AL (according to the management approach)

millions of €

	2023	Proportion of adjusted Group EBITDA AL %	2022	Proportion of adjusted Group EBITDA AL %	Change	Change %	2021
Germany	10,238	25.3	9,837	24.5	401	4.1	9,536
United States	26,409	65.2	25,614	63.7	795	3.1	22,697
Europe	4,114	10.2	3,964	9.9	150	3.8	4,007
Systems Solutions	321	0.8	284	0.7	37	13.0	271
Group Development	45	0.1	964	2.4	(919)	(95.3)	1,307
Group Headquarters & Group Services	(609)	(1.5)	(437)	(1.1)	(172)	(39.4)	(440)
Reconciliation	(22)	(0.1)	(17)	(0.0)	(5)	(29.4)	(47)
EBITDA AL (adjusted for special factors)	40,497	100.0	40,208	100.0	289	0.7	37,330

All operating segments – with the exception of Group Development, due to the aforementioned loss of the value contributions of the sold units – made a positive contribution to the development of adjusted EBITDA AL. Our Germany operating segment contributed to the increase thanks to high-value revenue growth and improved cost efficiency with 4.1% higher adjusted EBITDA AL; in organic terms, it increased by 3.0 %. Adjusted EBITDA AL in our United States operating segment increased by 3.1 %. In organic terms, adjusted EBITDA AL grew by 5.2 % year-on-year, mainly due to lower costs. Adjusted core EBITDA AL at T-Mobile US increased by EUR 1.9 billion or 7.6 % to EUR 26.1 billion. Adjusted EBITDA AL in our Europe operating segment increased by 3.8 %. In organic terms, it increased by 2.8 %, with a positive net margin more than sufficient to offset the higher indirect costs. In our Systems Solutions operating segment, adjusted EBITDA AL increased by 13.0 % or, in organic terms, by 10.0 %, mainly due to revenue growth in the Road Charging and Digital areas.

EBITDA AL increased by EUR 15.2 billion year-on-year to EUR 51.2 billion, with special factors affecting EBITDA AL increasing by EUR 14.9 billion to EUR 10.7 billion. Net income of EUR 12.2 billion was recorded as special factors under effects of deconsolidations, disposals, and acquisitions. The deconsolidation of GD Towers as of February 1, 2023 gave rise to income of EUR 12.9 billion. Another EUR 0.2 billion came from the sale of a subsidiary by Deutsche Telekom Capital Partners. Net expenses of EUR 1.0 billion, mainly in connection with integration costs as a result of the merger of T-Mobile US and Sprint, had an offsetting effect. In the prior year, net expenses of EUR 2.3 billion had been recorded as special factors under effects of deconsolidations, disposals, and acquisitions. This included expenses of EUR 5.0 billion incurred mainly in connection with integration costs arising as a result of the merger of T-Mobile US and Sprint and in connection with payment obligations relating to the agreement concluded at that time to sell the fiber-optic-based wireline network. In the prior year, by contrast, these effects included income of EUR 1.7 billion from the deconsolidation of GlasfaserPlus and a further EUR 0.9 billion from the sale of T-Mobile Netherlands. Expenses incurred in connection with staff restructuring totaled EUR 1.5 billion, up EUR 0.3 billion against the prior-year level. In the third quarter of 2023, T-Mobile US implemented a workforce reduction program. The expenses recognized as special factors in this connection amounted to EUR 0.4 billion. No significant impairment losses on right-of-use assets or other special factors affecting EBITDA AL were recognized in the reporting year. In the prior year, the impairment losses classified as special factors amounted to EUR 0.3 billion and mainly related to right-of-use assets used in connection with the former Sprint's fiber-optic-based wireline network. Other special factors affecting EBITDA AL amounted to EUR -0.3 billion in the prior year and included expenses (including insurance compensation) of EUR 0.4 billion in connection with the proceedings pending in consequence of the cyberattack on T-Mobile US in August 2021, as well as insurance compensation of EUR 0.2 billion in connection with damage sustained in the catastrophic flooding in July 2021.

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.”](#)

Profit/loss from operations (EBIT)

Group EBIT increased to EUR 33.8 billion, up EUR 17.6 billion against the level of the prior-year period. This change was primarily due to the deconsolidation gain from the sale of GD Towers.

At EUR 24.0 billion, depreciation, amortization and impairment losses on intangible assets, property, plant and equipment, and right-of-use assets were EUR 3.9 billion lower in 2023 than in the prior year, with the decrease being mainly attributable to the United States and Group Development operating segments. Depreciation and amortization decreased by EUR 2.9 billion. In the United States operating segment, they declined due to the ongoing strategic withdrawal from the terminal equipment lease business. Depreciation and amortization also decreased due to the complete write-off of certain 4G network components, including assets affected by the decommissioning of the former Sprint's legacy CDMA and LTE networks in 2022. The decrease was offset by increased depreciation and amortization in connection with the further build-out of the nationwide 5G network in the United States. In the Group Development operating segment, depreciation and amortization were down on the prior-year level in connection with the fact that GD Towers had been held for sale until it was sold and accordingly the related depreciation and amortization had been suspended, and in connection with its subsequent sale. By contrast, a further reduction in the useful life of leased network technology for cell sites following the business combination of T-Mobile US and Sprint increased depreciation of the corresponding right-of-use assets by EUR 0.2 billion. In the Germany operating segment, depreciation and amortization increased, partly as a result of the sale and leaseback of passive network infrastructure in Germany and Austria in connection with the sale of GD Towers and the associated recognition of retained right-of-use assets.

The impairment losses recognized in the reporting year amounted to EUR 0.2 billion and largely related to the Systems Solutions operating segment and the Group Headquarters & Group Services segment. These related primarily to follow-up investments in connection with assets previously impaired in the 2020, 2021, and 2022 financial years. Furthermore, despite the business outlook remaining positive, the increase in the cost of capital in the reporting year prompted further impairment losses to be recognized on non-current assets at the end of 2023. The impairment losses recorded in the prior year of EUR 1.2 billion were mainly attributable to the former Sprint's fiber-optic-based wireline assets in 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.

For information on the sale and the presentation of GD Towers according to the management approach, including a reconciliation for the consolidated income statement, please refer to the section "[Management of the Group](#)."

Profit before income taxes

Profit before income taxes increased by EUR 13.3 billion to EUR 25.0 billion. Loss from financial activities increased year-on-year by EUR 4.4 billion to EUR 8.8 billion, mainly driven by an increase in loss of associates and joint ventures included in the consolidated financial statements using the equity method from EUR 0.5 billion to EUR 2.8 billion. The main factor in this was impairment losses recognized in the reporting year of EUR 2.6 billion and EUR 0.1 billion, respectively, on the carrying amounts of the investments in GD Towers and in GlasfaserPlus. These impairment losses were due entirely to higher discount rates due to macroeconomic developments in the reporting year. By contrast, the business outlook for GD Towers improved slightly. The prior year included an interest rate-based impairment loss of EUR 0.5 billion recognized on the carrying amount of the stake in GlasfaserPlus. Other financial income declined from EUR 1.4 billion to a financial expense of EUR 0.3 billion, in particular in connection with the interest component from the measurement of provisions and liabilities. This decrease was mainly attributable to the subsequent measurement using actuarial principles of the present value of the provision recognized for the Civil Service Health Insurance Fund. In the prior year, the measurement was affected by the significant increase in the interest rate level in that period. Gains/losses from financial instruments also declined, partly due to less pronounced positive measurement effects from derivatives compared with the prior year. Finance costs increased from EUR 5.3 billion to EUR 5.7 billion, partly due to the sale and leaseback of passive network infrastructure in Germany and Austria in connection with the sale of GD Towers, which resulted in an increase in the carrying amounts of the lease liabilities, and due to the measurement of interest rate derivatives concluded to hedge changes in market interest rates.

Net profit, adjusted net profit

Net profit increased year-on-year by EUR 9.8 billion to EUR 17.8 billion. Tax expense increased by EUR 0.7 billion to EUR 3.0 billion. The tax rate was significantly reduced in 2023 by the realization of non-taxable income from the sale of GD Towers. Taxes were furthermore reduced by deferred tax effects arising in connection with the sale-and-leaseback transaction concluded. Profit attributable to non-controlling interests increased by EUR 2.7 billion to EUR 4.2 billion. This increase was almost entirely attributable to our United States operating segment. Excluding special factors, which had a positive overall effect of EUR 9.8 billion on net profit, adjusted net profit amounted to EUR 7.9 billion, compared with EUR 9.1 billion in the prior year. The increase in loss from financial activities in particular had a decreasing effect.

For further information on tax expense, please refer to Note 32 "[Income taxes](#)" in the notes to the consolidated financial statements.

Earnings per share, adjusted earnings per share

Earnings per share is calculated as net profit divided by the weighted average number of ordinary shares outstanding, which totaled 4,976 million as of December 31, 2023. This resulted in earnings per share of EUR 3.57, which was mainly affected by the gain on the sale of GD Towers. In the prior year, earnings per share was EUR 1.61. Earnings per share adjusted for special factors affecting net profit amounted to EUR 1.60 compared with EUR 1.83 in the prior year. This decrease was mainly related to the aforementioned effects in other financial income/expense.

Reconciliations of financial performance indicators from the IFRS consolidated financial statements

A reconciliation of the definition of EBITDA to the “after leases” indicator (EBITDA AL) can be found in the following table:

millions of €					
	2023	2022	Change	Change %	2021
EBITDA	57,777	43,986	13,791	31.4	40,539
Depreciation of right-of-use assets ^a	(4,810)	(6,507)	1,697	26.1	(5,547)
Interest expenses on recognized lease liabilities ^a	(1,806)	(1,489)	(317)	(21.3)	(1,099)
EBITDA AL	51,160	35,989	15,171	42.2	33,893
Special factors affecting EBITDA AL	10,663	(4,219)	14,882	n.a.	(3,437)
EBITDA AL (adjusted for special factors)	40,497	40,208	289	0.7	37,330

^a Excluding finance leases at T-Mobile US.

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

millions of €					
	2023	2022	Change	Change %	2021
Net profit (loss)	17,788	8,001	9,787	n.a.	4,176
Special factors affecting EBITDA AL	10,663	(4,219)	14,882	n.a.	(3,437)
Staff-related measures	(1,485)	(1,230)	(255)	(20.7)	(717)
Non-staff-related restructuring	(40)	(175)	135	77.1	(22)
Effects of deconsolidations, disposals and acquisitions	12,187	(2,256)	14,443	n.a.	(2,542)
Impairment losses on right-of-use assets	(8)	(276)	268	97.1	0
Reversals of impairment losses	0	0	0	n.a.	0
Other	8	(283)	291	n.a.	(156)
Special factors affecting net profit	(815)	3,139	(3,954)	n.a.	1,751
Impairment losses	(189)	(989)	800	80.9	(258)
Profit (loss) from financial activities	(2,742)	(487)	(2,255)	n.a.	(139)
Income taxes	1,503	1,936	(433)	(22.4)	1,064
Non-controlling interests	613	2,680	(2,067)	(77.1)	1,084
Special factors	9,848	(1,080)	10,928	n.a.	(1,686)
Net profit (loss) (adjusted for special factors)	7,940	9,081	(1,141)	(12.6)	5,862

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

millions of €						
	EBITDA AL 2023	EBIT 2023	EBITDA AL 2022	EBIT 2022	EBITDA AL 2021	EBIT 2021
EBITDA AL/EBIT	51,160	33,802	35,989	16,159	33,893	13,057
Germany	(501)	(501)	1,162	1,162	(595)	(596)
Staff-related measures	(484)	(484)	(523)	(523)	(478)	(478)
Non-staff-related restructuring	(18)	(18)	(8)	(8)	(12)	(12)
Effects of deconsolidations, disposals and acquisitions	(8)	(8)	1,608	1,608	(3)	(3)
Impairment losses	0	0	0	0	0	(1)
Other	11	11	84	84	(102)	(102)

millions of €

	EBITDA AL 2023	EBIT 2023	EBITDA AL 2022	EBIT 2022	EBITDA AL 2021	EBIT 2021
United States	(1,569)	(1,556)	(5,949)	(6,637)	(2,637)	(2,692)
Staff-related measures	(643)	(643)	(352)	(352)	(16)	(16)
Non-staff-related restructuring	0	0	0	0	0	0
Effects of deconsolidations, disposals and acquisitions	(958)	(917)	(4,956)	(5,084)	(2,621)	(2,618)
Impairment losses	(8)	(36)	(275)	(836)	0	(58)
Reversals of impairment losses	0	0	0	0	0	0
Other	39	39	(366)	(366)	0	0
Europe	(94)	(94)	(31)	(147)	11	11
Staff-related measures	(69)	(69)	(70)	(70)	83	83
Non-staff-related restructuring	0	0	0	0	(1)	(1)
Effects of deconsolidations, disposals and acquisitions	1	1	12	12	(39)	(39)
Impairment losses	0	0	0	(117)	0	0
Reversals of impairment losses	0	0	0	0	0	0
Other	(26)	(26)	27	27	(32)	(32)
Systems Solutions	(144)	(270)	(159)	(270)	(206)	(384)
Staff-related measures	(116)	(116)	(107)	(107)	(141)	(141)
Non-staff-related restructuring	(1)	(1)	(5)	(5)	(3)	(3)
Effects of deconsolidations, disposals and acquisitions	0	0	(2)	(2)	(39)	(39)
Impairment losses	0	(126)	0	(111)	0	(178)
Other	(27)	(27)	(44)	(44)	(24)	(24)
Group Development	13,170	13,170	992	992	173	173
Staff-related measures	(3)	(3)	(10)	(10)	(8)	(8)
Non-staff-related restructuring	0	0	0	0	0	0
Effects of deconsolidations, disposals and acquisitions	13,173	13,173	1,003	1,003	184	184
Impairment losses	0	0	0	0	0	0
Other	0	0	(1)	(1)	(3)	(3)
Group Headquarters & Group Services	(199)	(225)	(234)	(270)	(182)	(203)
Staff-related measures	(169)	(169)	(168)	(168)	(157)	(157)
Non-staff-related restructuring	(21)	(21)	(162)	(162)	(7)	(7)
Effects of deconsolidations, disposals and acquisitions	(20)	(20)	80	80	(23)	(23)
Impairment losses	0	(26)	0	(36)	0	(21)
Other	11	11	17	17	5	5
Group	10,663	10,525	(4,219)	(5,171)	(3,437)	(3,692)
Staff-related measures	(1,485)	(1,485)	(1,230)	(1,230)	(717)	(717)
Non-staff-related restructuring	(40)	(40)	(175)	(175)	(22)	(22)
Effects of deconsolidations, disposals and acquisitions	12,187	12,228	(2,256)	(2,384)	(2,542)	(2,538)
Impairment losses	(8)	(187)	(276)	(1,100)	0	(258)
Reversals of impairment losses	0	0	0	0	0	0
Other	8	8	(283)	(283)	(156)	(156)
EBITDA AL/EBIT (adjusted for special factors)	40,497	23,277	40,208	21,330	37,330	16,749
Profit (loss) from financial activities (adjusted for special factors)		(6,053)		(3,931)		(4,998)
Profit (loss) before income taxes (adjusted for special factors)		17,225		17,399		11,752
Income taxes (adjusted for special factors)		(4,467)		(4,157)		(2,879)
Profit (loss) (adjusted for special factors)		12,757		13,242		8,873
Profit (loss) (adjusted for special factors) attributable to						
Owners of the parent (net profit (loss)) (adjusted for special factors)		7,940		9,081		5,862
Non-controlling interests (adjusted for special factors)		4,817		4,161		3,011

Net assets of the Group

Condensed consolidated statement of financial position

millions of €

	Dec. 31, 2023	Share of total assets/liabilities and shareholders' equity %	Dec. 31, 2022	Change	Dec. 31, 2021
Assets					
Cash and cash equivalents	7,274	2.5	5,767	1,507	7,617
Trade receivables	16,157	5.6	16,766	(609)	15,299
Intangible assets	136,004	46.8	140,600	(4,596)	132,647
Property, plant and equipment	65,042	22.4	65,729	(687)	61,770
Right-of-use assets	32,826	11.3	33,727	(901)	30,777
Investments accounted for using the equity method	4,605	1.6	1,318	3,287	938
Current and non-current financial assets	9,593	3.3	9,910	(317)	8,888
Deferred tax assets	6,401	2.2	8,316	(1,915)	7,906
Non-current assets and disposal groups held for sale	211	0.1	4,683	(4,472)	4,856
Miscellaneous assets	12,192	4.2	11,774	418	10,929
Total assets	290,305	100.0	298,590	(8,285)	281,627
Liabilities and shareholders' equity					
Current and non-current financial liabilities	104,522	36.0	113,030	(8,508)	111,466
Current and non-current lease liabilities	40,792	14.1	38,792	2,000	33,133
Trade and other payables	10,916	3.8	12,035	(1,119)	10,452
Provisions for pensions and other employee benefits	4,060	1.4	4,150	(90)	6,134
Current and non-current other provisions	8,100	2.8	8,204	(104)	9,463
Deferred tax liabilities	21,918	7.5	22,800	(882)	19,809
Liabilities directly associated with non-current assets and disposal groups held for sale	0	0.0	3,347	(3,347)	1,365
Miscellaneous liabilities	8,760	3.0	8,912	(152)	8,336
Shareholders' equity	91,237	31.4	87,320	3,917	81,469
Total liabilities and shareholders' equity	290,305	100.0	298,590	(8,285)	281,627

Total assets amounted to EUR 290.3 billion as of December 31, 2023, down by EUR 8.3 billion against December 31, 2022. Exchange rate effects in particular, primarily from the translation of U.S. dollars into euros, decreased the carrying amount. Total assets were also reduced in connection with the derecognition of the assets and liabilities that had been fully consolidated until the sale of GD Towers. By contrast, total assets were increased by the cash proceeds from the sale, the sale-and-leaseback transaction concluded in this connection to lease the sold passive network infrastructure in Germany and Austria, and the inclusion of the remaining 49.0 % stake.

On the assets side, **cash and cash equivalents** increased by EUR 1.5 billion year-on-year to EUR 7.3 billion.

For further information, please refer to Note 37 "Notes to the consolidated statement of cash flows" in the notes to the consolidated financial statements.

At EUR 16.2 billion, **trade receivables** decreased by EUR 0.6 billion against the 2022 year-end level, mainly as a result of a decline in receivables in the United States operating segment due to a decline in volume of devices sold and leased. Exchange rate effects, in particular from the translation of U.S. dollars into euros, also had a decreasing effect. By contrast, receivables increased in the Europe and Germany operating segments.

Intangible assets decreased by EUR 4.6 billion to EUR 136.0 billion, mainly due to amortization and impairment losses of EUR 6.6 billion. This includes impairment losses of EUR 0.1 billion. Exchange rate effects, primarily from the translation of U.S. dollars into euros, also decreased the carrying amount by EUR 3.9 billion. Disposals reduced the carrying amount by EUR 0.1 billion. By contrast, capital expenditure had an increasing effect of EUR 5.9 billion on the carrying amount. EUR 1.0 billion of this related to the acquisition of mobile spectrum in the United States and Europe operating segments.

Property, plant and equipment decreased by EUR 0.7 billion compared with December 31, 2022 to EUR 65.0 billion. Depreciation and impairment losses of EUR 12.0 billion reduced the carrying amount. This includes impairment losses of EUR 0.1 billion. Exchange rate effects, primarily from the translation of U.S. dollars into euros, also decreased the carrying amount by EUR 1.0 billion. Disposals of EUR 0.3 billion, as well as the reclassification of assets worth EUR 0.1 billion to non-current assets and disposal groups held for sale also reduced the carrying amount. By contrast, additions, primarily for the upgrade and build-out of the network (broadband, fiber-optic, and mobile infrastructure build-out) increased the carrying amount by EUR 12.2 billion. Reclassifications of lease assets – primarily in the United States operating segment for network technology – to property, plant and equipment upon expiry of the contractual lease term also increased the carrying amount by EUR 0.5 billion.

Right-of-use assets decreased by EUR 0.9 billion compared with December 31, 2022 to EUR 32.8 billion. Depreciation, amortization and impairment losses of EUR 5.4 billion reduced the carrying amount. This included a EUR 0.2 billion increase in depreciation due to a reduction in the useful life of leased network technology for cell sites in the United States operating segment following the business combination of T-Mobile US and Sprint. Exchange rate effects, primarily from the translation of U.S. dollars into euros, also decreased the carrying amount by EUR 1.0 billion. Reclassifications of lease assets – primarily in the United States operating segment for network technology – to property, plant and equipment upon expiry of the contractual lease term decreased the carrying amount by EUR 0.5 billion. Disposals reduced the carrying amount by EUR 0.1 billion. By contrast, the carrying amount was increased by additions of EUR 6.1 billion, in part as a result of the sale and leaseback of passive network infrastructure in Germany and Austria in connection with the sale of GD Towers. In this context, retained right-of-use assets of EUR 2.0 billion were recognized in the consolidated statement of financial position.

Investments accounted for using the equity method increased by EUR 3.3 billion compared to December 31, 2022, to EUR 4.6 billion, essentially as a result of the sale of the 51.0 % stake in GD Towers. Following the loss of control pursuant to the IFRSs as a result of the transaction, the companies were deconsolidated as of February 1, 2023. Since this date, the remaining 49.0 % of the shares have been included in the consolidated financial statements as an investment accounted for using the equity method. At year-end 2023, impairment losses of EUR 2.6 billion and EUR 0.1 billion, respectively, were recognized on the carrying amounts of the investments in GD Towers and in GlasfaserPlus. These impairment losses were due entirely to higher discount rates due to macroeconomic developments in the reporting year. By contrast, the business outlook for GD Towers improved slightly.

Current and non-current **financial assets** decreased by EUR 0.3 billion to EUR 9.6 billion. Originated loans and receivables increased by EUR 0.2 billion, partly due to an existing shareholder loan to GD Towers, which must be recognized in the consolidated statement of financial position as a result of the deconsolidation. At the same time, the carrying amount of cash collateral increased. By contrast, receivables from grants still to be received from funding projects for the broadband build-out in Germany decreased. The carrying amount of derivatives with a hedging relationship decreased by EUR 0.4 billion due to lower medium- and long-term interest rate expectations. The carrying amount of derivatives without a hedging relationship decreased by EUR 0.1 billion.

Non-current assets and disposal groups held for sale decreased by EUR 4.5 billion compared with December 31, 2022 to EUR 0.2 billion. The sale of GD Towers as of February 1, 2023 reduced the carrying amount by EUR 4.2 billion, and the sale of the Wireline Business at T-Mobile US as of May 1, 2023 by EUR 0.3 billion. The corresponding assets had previously been reported as held for sale on account of the sales agreements concluded.

For further information on the corporate transactions, please refer to the section [“Group organization.”](#)

Miscellaneous assets increased by EUR 0.4 billion to EUR 12.2 billion. Current and non-current other assets contributed EUR 0.3 billion to this increase, due in part to an increase in various advance payments, mainly in connection with agreements on services for certain mobile communications equipment. In addition, capitalized contract costs increased by EUR 0.3 billion. Inventories decreased by EUR 0.2 billion, due to the sale of older terminal equipment and the reduction of warehouses and shops at former Sprint sites in the United States operating segment.

On the liabilities and shareholders' equity side, current and non-current **financial liabilities** decreased by EUR 8.5 billion compared with the end of 2022 to EUR 104.5 billion. Bonds and other securitized liabilities decreased by a total of EUR 6.0 billion, due in part to scheduled repayments of EUR 5.6 billion and early repayments of EUR 4.0 billion. Net repayments of commercial paper also resulted in a decrease of EUR 2.3 billion. The carrying amount was increased by the senior notes issued in the reporting year by T-Mobile US with a total volume of USD 8.5 billion (EUR 7.9 billion). Furthermore, the carrying amounts of liabilities with the right of creditors to priority repayment in the event of default decreased by EUR 0.9 billion, other interest-bearing liabilities by EUR 0.9 billion, and liabilities to banks by EUR 0.6 billion. Derivative liabilities decreased by EUR 0.3 billion, mainly due to lower medium- and long-term interest rate expectations. Exchange rate effects, in particular from the translation of U.S. dollars into euros, also reduced the carrying amount by EUR 2.7 billion in total.

Current and non-current **lease liabilities** increased by EUR 2.0 billion to EUR 40.8 billion compared with December 31, 2022, mainly as a result of the sale and leaseback of passive network infrastructure in Germany and Austria in connection with the sale of GD Towers. As a result of this transaction, lease liabilities increased by EUR 5.0 billion. By contrast, lease liabilities in the United States operating segment decreased by EUR 1.6 billion due to the decommissioning of the former Sprint's wireless network and the closure of former Sprint shops in the prior year, as well as a decline in network and build-out investments, primarily on account of higher capital efficiency resulting from the accelerated build-out of the nationwide 5G network in the prior year. Exchange rate effects, in particular from the translation of U.S. dollars into euros, reduced the carrying amount by EUR 1.1 billion.

Trade and other payables decreased by EUR 1.1 billion to EUR 10.9 billion, due in particular to lower liabilities in the United States operating segment, primarily as a result of a lower procurement volume. Exchange rate effects, in particular from the translation from U.S. dollars into euros, also decreased the carrying amount. By contrast, the Germany and Europe operating segments recorded an increase in liabilities.

Provisions for pensions and other employee benefits decreased by EUR 0.1 billion compared with December 31, 2022 to EUR 4.1 billion, mainly due to an increase in the fair values of plan assets. By contrast, the decline in the discount rate compared with December 31, 2022 increased the carrying amount.

Current and non-current **other provisions** decreased by EUR 0.1 billion compared with the end of 2022 to EUR 8.1 billion, with provisions for restoration obligations decreasing by EUR 0.2 billion, due in particular to the decommissioning of the former Sprint mobile network and due to shop closures in 2022. Provisions for procurement and sales support decreased by EUR 0.2 billion, mainly in connection with the bonuses paid out to sales partners in the United States operating segment. Miscellaneous other provisions decreased by EUR 0.3 billion. By contrast, other provisions for personnel costs increased by EUR 0.3 billion, mainly due to an increase in the carrying amount of the provision recognized for the Civil Health Insurance Fund (Postbeamtenkrankenkasse – PBeaKK). This is primarily due to a decline in the discount rate. Provisions for termination benefits increased by EUR 0.2 billion. These provisions include expenses incurred for the workforce reduction implemented in the United States operating segment in the third quarter of 2023.

Liabilities directly associated with non-current assets and disposal groups held for sale decreased by EUR 3.3 billion against December 31, 2022 to EUR 0.0 billion. The sale of GD Towers as of February 1, 2023 reduced the carrying amount by EUR 3.0 billion, and the sale of the wireline business at T-Mobile US as of May 1, 2023 by EUR 0.4 billion. The corresponding liabilities had previously been reported as held for sale on account of the sales agreements concluded.

For further information on the corporate transactions, please refer to the section ["Group organization."](#)

Miscellaneous liabilities decreased from EUR 8.9 billion as of December 31, 2022 to EUR 8.8 billion, mainly due to a decrease of EUR 0.3 billion in other liabilities as a result of existing build-out obligations in connection with grants still to be received from funding projects for the broadband build-out in Germany. By contrast, contract liabilities increased by EUR 0.2 billion.

Shareholders' equity increased from EUR 87.3 billion as of December 31, 2022 to EUR 91.2 billion, with profit of EUR 22.0 billion and capital increases from share-based payments of EUR 0.7 billion having an increasing effect. Other comprehensive income, by contrast, decreased the carrying amount by EUR 2.3 billion. Transactions with owners, mainly attributable to the United States operating segment, reduced the carrying amount of shareholders' equity by EUR 12.5 billion. These arose in connection with T-Mobile US' share buy-back program from 2022 and the T-Mobile US shareholder return program from September 2023, which, in addition to the share buy-back started in 2023, also comprised the payment of an initial cash dividend of USD 0.65 per share. The transfer of T-Mobile US shares to SoftBank in accordance with the supplementary agreement from February 20, 2020 closed between T-Mobile US, SoftBank, and Deutsche Telekom in the course of the merger of T-Mobile US and Sprint resulted in a reclassification within shareholders' equity. The carrying amount was also reduced in connection with dividend payments for the 2022 financial year to Deutsche Telekom AG shareholders in the amount of EUR 3.5 billion and to other shareholders of subsidiaries in the amount of EUR 0.5 billion.

Profitability and financial position of the Group

Profitability

millions of €	2023	2022	2021
Profit (loss) from operations (EBIT)	33,802	16,159	13,057
Share of profit (loss) of associates and joint ventures accounted for using the equity method	(2,766)	(522)	(102)
Net operating profit (NOP)	31,036	15,636	12,956
Tax (imputed tax rate 2023: 26.6 %; 2022: 27.8 %; 2021: 27.8 %)	(8,256)	(4,347)	(3,602)
Net operating profit after taxes (NOPAT)	22,781	11,289	9,354
Cash and cash equivalents	7,274	5,767	7,617
Intangible assets	136,004	140,600	132,647
Property, plant and equipment	65,042	65,729	61,770
Right-of-use assets	32,826	33,727	30,777
Non-current assets and disposal groups held for sale and liabilities ^a	211	1,336	3,491
Investments accounted for using the equity method	4,605	1,318	938
Operating working capital	7,660	7,370	7,702
Other provisions	(8,100)	(8,204)	(9,463)
Net operating assets (NOA)	245,520	247,643	235,479
Average net operating assets (Ø NOA)	253,453	253,389	229,035
ROCE	9.0	4.5	4.1

^a Excluding the carrying amounts of companies accounted for using the equity method.

ROCE increased by 4.5 percentage points in the reporting period to 9.0 %. This was due to significant growth in net operating profit after taxes (NOPAT), while the average amount of net operating assets (NOA) remained almost constant over the year. The significant increase in NOPAT was mainly attributable to the development of special factors. Special factors totaling EUR 10.5 billion had a positive effect on EBIT in the reporting year, whereas EBIT was impacted by overall negative special factors amounting to EUR 5.2 billion in the prior year. The main driver for the development of special factors in the reporting year was the deconsolidation gain from the sale of GD Towers and the reduction in expenses associated with the integration of Sprint at T-Mobile US. By contrast, at EUR 2.8 billion, the increase in loss of associates and joint ventures included in the consolidated financial statements using the equity method had a reducing effect on NOPAT. This was attributable to impairment losses recognized in the reporting year of EUR 2.6 billion and EUR 0.1 billion, respectively, on the carrying amounts of the investments in GD Towers and in GlasfaserPlus.

In 2023, NOPAT amounted to EUR 22.8 billion, up from EUR 11.3 billion in the prior year. At EUR 253.5 billion, average NOA remained almost constant compared with the prior year.

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."

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. There have been no changes resulting from our finance management in the reporting year. We will present our plans for the coming years at the Capital Markets Day scheduled for 2024.

Calculation of net debt

millions of €

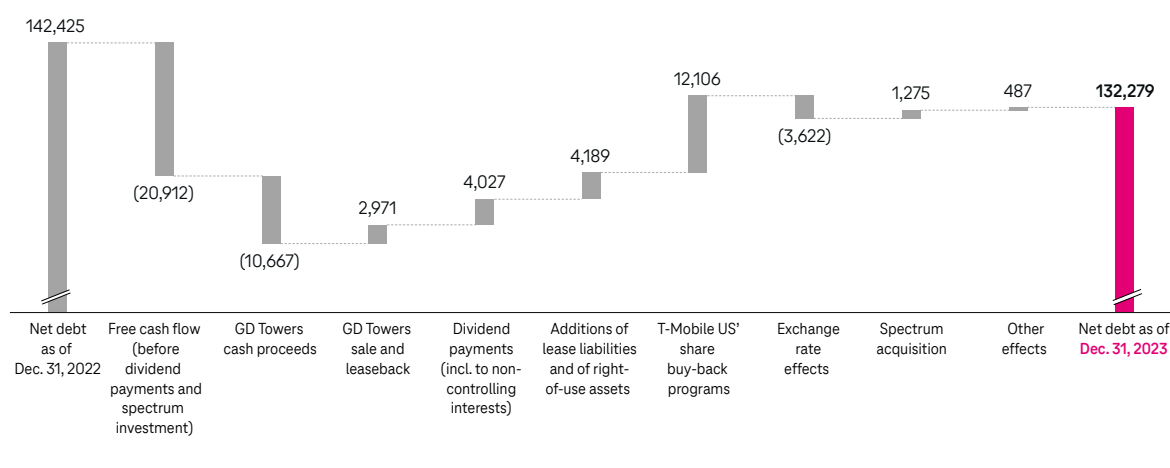
	Dec. 31, 2023	Dec. 31, 2022	Change	Change %	Dec. 31, 2021
Bonds and other securitized liabilities	87,773	93,802	(6,029)	(6.4)	93,857
Liabilities to banks	3,560	4,122	(562)	(13.6)	4,003
Other financial liabilities	13,189	15,107	(1,918)	(12.7)	13,730
Lease liabilities	40,792	41,063	(271)	(0.7)	33,767
Financial liabilities and lease liabilities	145,314	154,093	(8,779)	(5.7)	145,357
Accrued interest	(1,009)	(999)	(10)	(1.0)	(1,012)
Other	(967)	(805)	(162)	(20.1)	(855)
Gross debt	143,338	152,289	(8,951)	(5.9)	143,490
Cash and cash equivalents	7,274	5,767	1,507	26.1	7,617
Derivative financial assets	1,780	2,273	(493)	(21.7)	2,762
Other financial assets	2,005	1,824	181	9.9	969
Net debt^a	132,279	142,425	(10,146)	(7.1)	132,142
Lease liabilities ^b	38,533	38,692	(159)	(0.4)	31,493
Net debt AL	93,746	103,733	(9,987)	(9.6)	100,649

^a Including net debt reported under liabilities directly associated with non-current assets and disposal groups held for sale.

^b Excluding finance leases at T-Mobile US.

Changes in net debt

millions of €



Net debt decreased by EUR 10.1 billion to EUR 132.3 billion, mainly due to the strong increase in free cash flow (before dividend payments and spectrum investment) and the cash proceeds from the sale of GD Towers. By contrast, net debt was increased mainly by the share buy-back programs at T-Mobile US.

Other financing options

Off-balance-sheet financing instruments mainly relate to the sale of receivables by means of factoring. Total receivables sold as of December 31, 2023 amounted to EUR 2.7 billion (December 31, 2022: EUR 2.8 billion). At the end of 2023, this solely related to factoring agreements in the United States operating segment. The agreements are used in particular for active receivables management.

The rating of Deutsche Telekom AG

	Standard & Poor's	Moody's	Fitch
Long-term rating/outlook			
Dec. 31, 2021	BBB/stable	Baa1/stable	BBB+/stable
Dec. 31, 2022	BBB/positive	Baa1/stable	BBB+/stable
Dec. 31, 2023	BBB+/stable	Baa1/stable	BBB+/stable
Short-term rating	A-2	P-2	F2

On May 19, 2023, the rating agency Standard & Poor's raised the long-term rating from BBB to BBB+ with a stable outlook. We are therefore still a solid investment-grade company with access to the international capital markets.

Financial flexibility

	2023	2022	2021
Relative debt^a			
Net debt	2.82x	3.07x	3.06x
EBITDA (adjusted for special factors)			
Equity ratio	31.4	29.2	28.9

^a Relative debt is calculated on a quarterly basis.

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. At 2.82x, we have deviated from the target range of 2.25x to 2.75x in the reporting year, as expected, on account of the business combination of T-Mobile US and Sprint. We expect to be back in the target range by the end of 2024.

Calculation of free cash flow AL

millions of €

	2023	2022	Change	Change %	2021
Net cash from operating activities	37,298	35,819	1,479	4.1	32,171
Cash outflows for investments in intangible assets	(5,560)	(7,551)	1,991	26.4	(12,749)
Cash outflows for investments in property, plant and equipment	(12,306)	(16,563)	4,257	25.7	(13,616)
Cash capex	(17,866)	(24,114)	6,248	25.9	(26,366)
Spectrum investment	1,275	3,096	(1,821)	(58.8)	8,388
Cash capex (before spectrum investment)	(16,591)	(21,019)	4,428	21.1	(17,978)
Proceeds from the disposal of intangible assets (excluding goodwill) and property, plant and equipment	205	439	(234)	(53.3)	139
Free cash flow (before dividend payments and spectrum investment)	20,912	15,239	5,673	37.2	14,332
Principal portion of repayment of lease liabilities ^a	(4,770)	(3,769)	(1,001)	(26.6)	(5,521)
Free cash flow AL (before dividend payments and spectrum investment)	16,141	11,470	4,671	40.7	8,810

^a Excluding finance leases at T-Mobile US.

Free cash flow AL (before dividend payments and spectrum investment) increased by EUR 4.7 billion year-on-year to EUR 16.1 billion. The following effects impacted on this development:

Net cash from operating activities increased by EUR 1.5 billion to EUR 37.3 billion on the back of the good business performance. Lower cash outflows in connection with the integration of Sprint in the United States also had an increasing effect. However, the trend in net cash from operating activities was negatively impacted by the sale of T-Mobile Netherlands and GD Towers, as well as by exchange rate effects. In particular, the increase in tax payments of EUR 0.4 billion and the increase in net interest payments of EUR 0.1 billion also had a reducing effect.

Cash capex (before spectrum investment) decreased by EUR 4.4 billion to EUR 16.6 billion. Cash capex in the United States operating segment decreased by EUR 4.3 billion to EUR 9.1 billion, mainly as a result of higher cash outflows in the prior year for the accelerated build-out of the 5G network and the integration of Sprint. In the Group Development operating segment, cash capex decreased, mainly due to the sales of T-Mobile Netherlands and GD Towers. In the Germany operating segment, capital expenditure totaled around EUR 4.6 billion in the reporting year, EUR 0.2 billion more than in the prior year, with much of this figure going towards the fiber-optic build-out. In the Europe operating segment, cash capex stood at EUR 1.8 billion, which was on a par with the prior-year level. We continue to invest here in the provision of broadband and fiber-optic technology and in 5G as part of our integrated network strategy. In the Systems Solutions operating segment, our capital expenditure stood at the prior-year level of EUR 0.2 billion. Lower investments in the Cloud portfolio area were offset by higher investments in the Road Charging portfolio area, due to increased demand for on-board units.

An increase of EUR 1.0 billion in cash outflows – in particular in the Germany and United States operating segments – for the repayment of lease liabilities reduced free cash flow AL.

For further information on the statement of cash flows, please refer to Note 37 "[Notes to the consolidated statement of cash flows](#)" in the notes to the consolidated financial statements.

Development of business in the operating segments

Germany

Customer development

thousands					
	Dec. 31, 2023	Dec. 31, 2022	Change	Change %	Dec. 31, 2021
Mobile customers	61,419	54,249	7,170	13.2	53,211
Contract customers	25,171	23,791	1,380	5.8	23,129
Prepaid customers ^a	36,248	30,458	5,790	19.0	30,081
Fixed-network lines	17,342	17,363	(21)	(0.1)	17,525
Retail broadband lines	15,018	14,715	303	2.1	14,478
Of which: optical fiber ^b	12,893	12,112	781	6.4	10,379
Television (IPTV, satellite)	4,327	4,122	205	5.0	4,001
Unbundled local loop lines (ULLs)	2,527	3,136	(609)	(19.4)	3,622
Wholesale broadband lines	8,307	8,045	262	3.3	7,948
Of which: optical fiber	7,307	6,970	337	4.8	6,778

^a Due to a network switchover, a portion of our prepaid customers had been migrated to another provider by the end of the third quarter of 2022.

^b From June 1, 2022 until December 31, 2022, we migrated customers to fiber-optic lines under our "Turn customers into fans" (Kunden zu Fans machen) initiative. Around 1 million lines in total were upgraded as part of this initiative.

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, a broad product portfolio, and good service. We want to offer our customers a seamless and technology-neutral telecommunications experience. We regularly adapt our product portfolio to address the needs of our customers.

The fixed-network broadband market hosts a large number of players with differing infrastructures – from national through to regional providers. In order to consolidate our position on the market as Germany's leading telecommunications provider, we continue to add new offerings to our portfolio.

Mobile communications

The number of high-value mobile contract customers under the Telekom and congstar brands grew by 1.2 million customers overall. Sustained high demand for mobile rate plans with data volumes continues to drive this trend. The number of prepaid customers grew by 5.8 million against the start of the year, primarily due to M2M SIM cards used in the automotive industry.

Fixed network

Demand remained high for our fiber-optic-based lines, with the total number increasing to 20.2 million since the end of 2022. Two key factors are driving this strong growth: demand for higher bandwidths, and the technical migration of customer lines to optical fiber under our "Turn customers into fans" (Kunden zu Fans machen) initiative, which concluded at the end of 2022.

The number of retail broadband lines remained at a high level, increasing by 303 thousand in 2023 to 15.0 million. 46 % of the customers have subscribed to a rate plan with speeds of 100 Mbit/s or higher. We recorded an increase of 205 thousand in the number of TV customers compared with year-end 2022. The number of fixed-network lines remained more or less stable at 17.3 million lines.

Wholesale

As of December 31, 2023, fiber-optic-based lines accounted for 67.4 % of all lines – 5.1 percentage points more than at the end of 2022. This growth is a result of the demand for our commitment agreements. Ongoing demand among retail customers for higher-bandwidth lines also contributed to the increase. The number of unbundled local loop lines decreased by 609 thousand compared with the end of the prior year, while fiber-optic-based lines increased by 337 thousand. These developments result partly from the shift to higher-value fiber-optic-based lines and partly from consumers switching to other providers. In addition, our wholesale partners are migrating their retail customers to their own infrastructures. The total number of wholesale lines at the end of 2023 was 10.8 million.

Development of operations

millions of €

	2023	2022	Change	Change %	2021
Revenue	25,187	24,505	682	2.8	24,050
Consumers	12,640	12,370	270	2.2	12,122
Business Customers	9,258	9,040	218	2.4	8,922
Wholesale	2,688	2,676	12	0.4	2,709
Other	602	419	183	43.7	297
Service revenue	22,096	21,533	563	2.6	21,212
EBITDA	10,294	11,025	(731)	(6.6)	8,976
Special factors affecting EBITDA	(501)	1,162	(1,663)	n.a.	(595)
EBITDA (adjusted for special factors)	10,794	9,864	930	9.4	9,572
EBITDA AL	9,737	10,998	(1,261)	(11.5)	8,941
Special factors affecting EBITDA AL	(501)	1,162	(1,663)	n.a.	(595)
EBITDA AL (adjusted for special factors)	10,238	9,837	401	4.1	9,536
EBITDA AL margin (adjusted for special factors) %	40.6	40.1			39.7
Depreciation, amortization and impairment losses	(4,220)	(4,019)	(201)	(5.0)	(4,020)
Profit (loss) from operations (EBIT)	6,073	7,006	(933)	(13.3)	4,956
EBIT margin %	24.1	28.6			20.6
Cash capex	(4,587)	(4,399)	(188)	(4.3)	(4,119)
Cash capex (before spectrum investment)	(4,587)	(4,399)	(188)	(4.3)	(4,119)

Revenue, service revenue

In 2023, we generated revenue of EUR 25.2 billion, an increase of 2.8 % year-on-year. This was mainly attributable to growth in service revenues of 2.6 %, due to increased revenue in the fixed-network core business, largely driven by broadband and IT business, and to higher mobile service revenues. Revenue also grew on the back of an increase of 43.7 % in other revenues, primarily from build-out services for our cooperation partners. In organic terms, revenue increased by 2.1 % year-on-year and service revenue by 1.9 %.

Revenue from **Consumers** increased by 2.2 % compared with the prior year. Revenue from broadband business continued to grow, due in part to the positive effects from customer appreciation for reliable networks and high bandwidths. Volume-driven declines in revenue from voice components continued to impact on traditional fixed-network business. The mobile business increased due to higher service revenues, mainly as a result of positive customer development.

Revenue from **Business Customers** was up by 2.4 % year-on-year. IT business and mobile business, the latter driven by sustained growth in the customer base, contributed to this uptrend. In organic terms, revenue increased by 0.9 % year-on-year.

Wholesale revenue was up slightly at the end of 2023 by 0.4 % year-on-year.

Adjusted EBITDA AL, EBITDA AL

Adjusted EBITDA AL increased by EUR 0.4 billion or 4.1 % year-on-year to EUR 10.2 billion. In organic terms, adjusted EBITDA AL grew by 3.0 % year-on-year. Our adjusted EBITDA AL margin increased to 40.6 %. The main reasons for this increase are a sound operational development, driven by high-value revenue growth, and enhanced cost efficiency. Organic factors with a positive impact on earnings also included the lower headcount and ongoing implementation of efficiency enhancement and digitalization measures.

EBITDA AL decreased by EUR 1.3 billion to EUR 9.7 billion. In the prior-year period, special factors included the gain on deconsolidation of GlasfaserPlus (EUR 1.7 billion) and insurance compensation in connection with damage sustained in the catastrophic flooding in July 2021 (EUR 0.2 billion). In the reporting year, special factors also included EUR 0.5 billion for socially responsible staff restructuring.

Profit/loss from operations (EBIT)

Profit from operations amounted to EUR 6.1 billion, a decrease of 13.3 % year-on-year. This decline is primarily attributable to the gain recognized in the prior year on the deconsolidation of GlasfaserPlus. Depreciation, amortization and impairment losses were EUR 0.2 billion higher than in the prior year, mainly as a result of the sale and leaseback of passive network infrastructure in Germany in connection with the sale of GD Towers.

For further information on the sale of GD Towers, please refer to the section “Management of the Group.”

Cash capex (before spectrum investment), cash capex

Cash capex increased by EUR 188 million or 4.3 % compared with the prior year, primarily due to investments in the fiber-optic business. Capital expenditure totaled around EUR 4.6 billion in 2023, with much of this figure going towards the build-out of our fiber-optic network. The number of households passed by our fiber-optic network had increased to around 8 million by the end of 2023. In mobile communications, 95.9 % of German households can already use 5G.

United States

Customer development

thousands					
	Dec. 31, 2023	Dec. 31, 2022	Change	Change %	Dec. 31, 2021
Customers	119,700	113,598	6,102	5.4	108,719
Postpaid customers	98,052	92,232	5,820	6.3	87,663
Postpaid phone customers ^{a, b}	75,936	72,834	3,102	4.3	70,262
Other postpaid customers ^{a, b}	22,116	19,398	2,718	14.0	17,401
Prepaid customers ^a	21,648	21,366	282	1.3	21,056

^a Customers impacted by the decommissioning of the legacy Sprint CDMA and LTE and T-Mobile US UMTS networks have been excluded from our customer base resulting in the removal of 212 thousand postpaid phone customers and 349 thousand postpaid other customers in the first quarter of 2022 and 284 thousand postpaid phone customers, 946 thousand postpaid other customers and 28 thousand prepaid customers in the second quarter of 2022. In the fourth quarter of 2023, we recognized an additional base adjustment to increase postpaid phone customers by 20 thousand and increase postpaid other customers by 150 thousand due to fewer customers than expected whose service was deactivated as a result of the network shutdowns. In connection with our acquisition of companies, we included a base adjustment in the first quarter of 2022 to increase postpaid phone customers by 17 thousand and reduce postpaid other customers by 14 thousand. Certain customers now serviced through reseller contracts were removed from our reported postpaid customer base resulting in the removal of 42 thousand postpaid phone customers and 20 thousand postpaid other customers in the second quarter of 2022.

^b In the first quarter of 2021, we acquired 11 thousand postpaid phone customers and 1 thousand postpaid other customers through our acquisition of an affiliate. In the third quarter of 2021, we acquired 716 thousand postpaid phone customers and 90 thousand postpaid other customers through our acquisition of the Wireless Assets from Shentel.

Customers

At December 31, 2023, the United States operating segment (T-Mobile US) had 119.7 million customers, compared to 113.6 million customers at December 31, 2022. Net customer additions were 5.9 million in 2023, compared to 6.8 million in 2022 due to the factors described below.

Postpaid net customer additions were 5.7 million in 2023, compared to 6.4 million in 2022. Postpaid net customer additions decreased primarily from lower postpaid other net customer additions, primarily due to deactivations from mobile internet devices in the educational sector that were originally activated during the coronavirus pandemic and no longer needed, and lower net additions from wearables. This decrease was partially offset by higher net additions from other connected devices and higher High Speed Internet net customer additions, primarily due to continued growth in gross additions driven by increasing customer demand, partially offset by increased deactivations from a growing customer base. High Speed Internet net customer additions included in postpaid other net customer additions were 1.9 million and 1.8 million in 2023 and 2022, respectively.

Prepaid net customer additions were 282 thousand in 2023, compared to 338 thousand in 2022. This decrease was primarily due to continued moderation of industry growth and continued industry migration of prepaid to postpaid, partially offset by growth in High Speed Internet. High Speed Internet net customer additions included in prepaid net customer additions were 252 thousand and 236 thousand in 2023 and 2022, respectively.

Development of operations

millions of €

	2023	2022	Change	Change %	2021
Revenue	72,436	75,436	(3,000)	(4.0)	67,791
Service revenue	58,522	58,219	303	0.5	48,361
EBITDA	30,038	26,707	3,331	12.5	25,555
Special factors affecting EBITDA	(1,286)	(4,155)	2,869	69.0	(1,836)
EBITDA (adjusted for special factors)	31,324	30,862	462	1.5	27,392
EBITDA AL	24,840	19,665	5,175	26.3	20,060
Special factors affecting EBITDA AL	(1,569)	(5,949)	4,380	73.6	(2,637)
EBITDA AL (adjusted for special factors)	26,409	25,614	795	3.1	22,697
Core EBITDA AL (adjusted for special factors) ^a	26,130	24,280	1,850	7.6	19,912
EBITDA AL margin (adjusted for special factors) %	36.5	34.0			33.5
Depreciation, amortization and impairment losses	(15,551)	(19,237)	3,686	19.2	(18,338)
Profit (loss) from operations (EBIT)	14,487	7,470	7,017	93.9	7,217
EBIT margin %	20.0	9.9			10.6
Cash capex	(10,053)	(16,340)	6,287	38.5	(18,594)
Cash capex (before spectrum investment)	(9,060)	(13,361)	4,301	32.2	(10,328)

^a Adjusted core EBITDA AL is distinguished by excluding revenue from terminal equipment leases from adjusted EBITDA AL, thereby presenting operational development undistorted by the withdrawal from the terminal equipment lease business.

Revenue, service revenue

Total revenue for the United States operating segment of EUR 72.4 billion in 2023 decreased by 4.0 percent, compared to EUR 75.4 billion in 2022. In U.S. dollars, T-Mobile US' total revenues decreased 1.3 percent during the same period. Total revenues decreased primarily due to lower equipment revenues, partially offset by higher service revenues. The components of these changes are described below.

Service revenues increased in 2023 by 0.5 percent to EUR 58.5 billion. This increase resulted from higher postpaid revenues, primarily due to higher average postpaid accounts and higher postpaid Average Revenue per Account (ARPA). This increase was partially offset by lower wholesale and other service revenues, primarily from lower Wireline revenues due to the sale of the Wireline Business on May 1, 2023, and lower MVNO revenues, primarily due to the migration by Verizon of legacy TracFone customers off of the T-Mobile US network and as DISH services more of its Boost customers with their standalone network, partially offset by growth in other MVNO partners.

Equipment revenues decreased in 2023 primarily from a decrease in the number of devices sold, primarily driven by higher postpaid upgrades in the prior year period related to facilitating the migration of Sprint customers to the T-Mobile US network and longer device lifecycles, as well as lower prepaid device sales and device sales associated with government assistance programs. In addition, equipment revenues decreased due to a decrease in lease revenues and a decrease in customer purchases of leased devices, primarily due to a lower number of customer devices under lease as a result of the continued strategic shift in device financing from leasing to equipment installment plans (EIP). Equipment revenues also decreased due to a decrease in accessory revenue, primarily due to a decrease in the number of associated devices sold. The decrease in equipment revenues was partially offset by slightly higher average revenue per device sold, primarily driven by an increase in the high-end phone mix, including from the impact of a decrease in sales of low-end devices associated with government assistance programs and higher promotions in the prior year period, which included promotions for Sprint customers to facilitate their migration to the T-Mobile US network.

Adjusted EBITDA AL, EBITDA AL

In euros, adjusted EBITDA AL increased by 3.1 percent to EUR 26.4 billion in 2023, compared to EUR 25.6 billion in 2022. The adjusted EBITDA AL margin increased to 36.5 percent in 2023, compared to 34.0 percent in 2022. In U.S. dollars, adjusted EBITDA AL increased 5.9 percent during the same period. Adjusted EBITDA AL increased primarily due to higher service revenues as discussed above, lower equipment costs as a result of lower number of devices and accessories sold, primarily driven by longer device lifecycles, as well as lower prepaid device sales and lower device sales associated with government assistance programs, higher realized Sprint Merger-related synergies and lower costs due to the sale of the Wireline Business on May 1, 2023. The increase in adjusted EBITDA AL was partially offset by lower equipment revenues as described above, slightly higher average cost per device sold driven by an increase in the high-end phone mix, including from the impact of a decrease in sales of low-end devices associated with government assistance programs and higher site costs related to the continued build-out of our nationwide 5G network. In U.S. dollars, lease revenues decreased as a result of the continued strategic shift in device financing from leasing to EIP by 78.7 percent in 2023.

In euros, adjusted core EBITDA AL increased by 7.6 percent to EUR 26.1 billion in 2023, compared to EUR 24.3 billion in 2022. In U.S. dollars, adjusted core EBITDA AL increased by 10.6 percent during the same period. The change was primarily due to the fluctuation in adjusted EBITDA AL as discussed above, excluding the change in lease revenues.

EBITDA AL in 2023 included special factors of EUR -1.6 billion compared to EUR -5.9 billion in 2022. The change in special factors was primarily due to lower Sprint Merger-related costs, lower losses related to the sale of the Wireline Business, lower legal-related expenses, net of recoveries, including for the proposed settlement of certain litigation associated with the cyberattack on T-Mobile US in August 2021 and lower impairment expense due to the non-cash impairment of certain Wireline Business-related right-of-use assets recognized during 2022. These lower expenses were partially offset by higher severance and related costs associated with the August 2023 workforce reduction. Special factors include Sprint Merger-related costs predominantly associated with the integration of Sprint and are comprised of integration costs to achieve efficiencies in network, retail, information technology and back office operations, migrate customers to the T-Mobile US network and billing systems and the impact of legal matters assumed as part of the Sprint Merger. In addition, Sprint Merger-related special factors include restructuring costs, including severance, store rationalization and network decommissioning as well as transaction costs, including legal and professional services related to the completion of transactions. Overall, EBITDA AL increased by 26.3 percent to EUR 24.8 billion in 2023, compared to EUR 19.7 billion in 2022, primarily due to the factors described above, including special factors.

Profit/loss from operations (EBIT)

EBIT increased to EUR 14.5 billion in 2023, compared to EUR 7.5 billion in 2022. In U.S. dollars, EBIT increased by 98.9 percent during the same period primarily due to higher EBITDA AL and lower depreciation, amortization and impairment losses. In U.S. dollars, depreciation, amortization and impairment losses decreased by 17.0 percent primarily due to lower depreciation expense on leased devices, resulting from a lower number of total customer devices under lease and certain 4G-related network assets becoming fully depreciated, including assets impacted by the decommissioning of the legacy Sprint CDMA and LTE networks in 2022. These decreases were partially offset by higher depreciation expense (excluding leased devices) from the continued build-out of our nationwide 5G network and higher amortization of capitalized software driven by increased in-service internally developed and purchased software.

Cash capex (before spectrum investment), cash capex

Cash capex (before spectrum investment) decreased by 32.2 percent to EUR 9.1 billion in 2023, compared to EUR 13.4 billion in 2022. In U.S. dollars, cash capex (before spectrum investment) decreased by 30.2 percent due to a decrease in purchases of property and equipment, primarily due to increased capital efficiencies from accelerated investments in the T-Mobile US nationwide 5G network in 2022.

Cash capex decreased by 38.5 percent to EUR 10.1 billion in 2023, compared to EUR 16.3 billion in 2022. In U.S. dollars, cash capex decreased by 37.4 percent primarily due to lower purchases of property and equipment as discussed above and USD 2.8 billion paid for spectrum licenses won at the conclusion of Auction 110 in February 2022 and USD 0.3 billion paid in total for spectrum licenses won at the conclusion of Auction 108 in September 2022, compared to no spectrum licenses won during 2023, partially offset by higher relocation costs associated with C-band spectrum licenses acquired in Auction 107 in 2021.

Europe

Customer development

thousands		Dec. 31, 2023	Dec. 31, 2022	Change	Change %	Dec. 31, 2021
Europe, total	Mobile customers	47,853	47,336	517	1.1	45,816
	Contract customers	27,222	26,476	746	2.8	26,575
	Prepaid customers	20,631	20,860	(229)	(1.1)	19,241
	Fixed-network lines	8,020	7,904	116	1.5	7,802
	Broadband customers	6,989	6,682	307	4.6	6,381
	Television (IPTV, satellite, cable)	4,283	4,131	152	3.7	4,019
	Unbundled local loop lines (ULLs)/ wholesale PSTN	1,614	1,768	(154)	(8.7)	1,932
	Wholesale broadband lines	1,121	1,011	110	10.9	865
Greece	Mobile customers	7,119	7,323	(204)	(2.8)	7,045
	Fixed-network lines	2,617	2,622	(5)	(0.2)	2,624
	Broadband customers	2,405	2,359	46	1.9	2,306
Romania	Mobile customers	3,798	4,166	(368)	(8.8)	3,691
Hungary	Mobile customers	6,246	5,950	296	5.0	5,634
	Fixed-network lines	1,936	1,886	50	2.7	1,821
	Broadband customers	1,592	1,507	85	5.6	1,417
Poland	Mobile customers	12,592	12,512	80	0.6	11,542
	Fixed-network lines	29	30	(1)	(3.3)	29
	Broadband customers	260	154	106	68.8	77
Czech Republic	Mobile customers	6,523	6,423	100	1.6	6,297
	Fixed-network lines	763	704	59	8.4	645
	Broadband customers	463	430	33	7.7	391
Croatia	Mobile customers	2,336	2,305	31	1.3	2,276
	Fixed-network lines	870	868	2	0.2	875
	Broadband customers	661	648	13	2.0	633
Slovakia	Mobile customers	2,525	2,446	79	3.2	2,502
	Fixed-network lines	860	854	6	0.7	880
	Broadband customers	657	643	14	2.2	633
Austria	Mobile customers	4,975	4,510	465	10.3	5,258
	Fixed-network lines	607	605	2	0.3	593
	Broadband customers	665	663	2	0.3	656
Other ^a	Mobile customers	1,738	1,702	36	2.1	1,572
	Fixed-network lines	338	336	2	0.6	336
	Broadband customers	285	277	8	2.9	268

^a "Other": national companies of North Macedonia, Montenegro, and the lines of the GTS Central Europe group in Romania.

Total

In the Europe operating segment, almost all key performance indicators for customer development improved compared with the end of 2022, exceeding our expectations in some cases. Our convergent product portfolio, in particular, generated growth compared with year-end 2022 of 10.0 % in FMC customers thanks to ongoing demand. As a consequence, we are working flat out to build out our fixed-network infrastructure with state-of-the-art optical fiber. The number of broadband customers has increased by 4.6 %. The number of mobile customers increased by 1.1 % compared with the end of 2022. Our build-out of the 5G network is making good progress.

Mobile communications

At the end of the year, we had a total of 47.9 million mobile customers in the Europe operating segment, an increase of 1.1 % compared with the end of 2022. The number of contract customers increased by 2.8 %. The contract customer base grew at all of our national companies, but especially in Greece, Poland, the Czech Republic, Croatia, and Austria. Overall, contract customers accounted for 56.9 % of the total customer base. Our customers benefited from greater coverage with fast mobile broadband – a result of our integrated network strategy. The footprint countries of our operating segment are also making excellent headway with 5G. As of December 31, 2023, our national companies covered 67.2 % of the population on average with 5G, a significant increase against the prior year.

The prepaid customer base declined slightly by 1.1 % compared with the end of 2022. In addition, as part of our regular business activities we offer our prepaid customers high-value contract plans with the resulting number of contract conversions contributing positively to contract customer business.

Fixed network

The broadband business increased by 4.6 % compared with the end of 2022 to a total of 7.0 million customers. This growth is mainly driven by the national companies in Poland, Hungary, Greece, and the Czech Republic. By continuing to invest in optical fiber, we are systematically building out our fixed-network infrastructure. As of the end of the reporting year, around 9.1 million households, which is around 1 million additional households, had access to our high-performance fiber-optic network offering gigabit speeds. We have already won some 35 % of the households in these areas as active customers for one of our fiber-optic broadband products. The total number of fixed-network lines subscribed to increased again by 1.5 %, reaching 8.0 million as of December 31, 2023.

The TV and entertainment business had a total of 4.3 million customers as of the end of the fourth quarter of 2023, up by 3.7 % compared with the end of the prior year. This was attributable among other things to the acquisition of exclusive rights to broadcast sports events in 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. In order to remain competitive here, we are constantly developing our offerings and integrate these OTT services in our platforms. This includes both local (e.g., Voyo in Slovakia and in the Czech Republic) and international (Disney+ in Austria) offerings.

FMC – fixed-mobile convergence and digitalization

Our portfolio of convergent products, MagentaOne, was highly popular with consumers across all of our national companies. As of the end of 2023, we had 7.7 million FMC customers; this corresponds to growth of 10.0 % compared with the end of the prior year. Our national companies in particular in Poland, Greece, Hungary, and the Czech Republic contributed to this growth. As of December 31, 2023, FMC customers accounted for 62.8 % of the broadband customer base. We have also seen rising customer numbers from the marketing of our MagentaOne Business product to business customers.

We continue to expand our digital interaction with customers, which means we can meet customer needs in a more personalized and efficient way, and position products and innovative services on the market more quickly. Around 71 % of our consumers use our service app.

Development of operations

millions of €

	2023	2022	Change	Change %	2021
Revenue	11,790	11,158	632	5.7	11,294
Greece	3,189	3,155	34	1.1	3,046
Romania	287	306	(19)	(6.2)	709
Hungary	2,031	1,715	316	18.4	1,750
Poland	1,522	1,413	109	7.7	1,421
Czech Republic	1,280	1,226	54	4.4	1,121
Croatia	956	905	51	5.6	908
Slovakia	825	806	19	2.4	787
Austria	1,458	1,391	67	4.8	1,346
Other ^a	319	320	(1)	(0.3)	301
Service revenue^b	9,739	9,296	443	4.8	9,580
EBITDA	4,496	4,296	200	4.7	4,390
Special factors affecting EBITDA	(94)	(31)	(63)	n.a.	11
EBITDA (adjusted for special factors)	4,590	4,327	263	6.1	4,380
EBITDA AL	4,020	3,933	87	2.2	4,018
Special factors affecting EBITDA AL	(94)	(31)	(63)	n.a.	11

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 in North Macedonia, Montenegro, and the GTS Central Europe group in Romania, as well as the Europe Headquarters.

^b As of January 1, 2023, the definition of service revenue was extended. Prior-year comparatives were adjusted retrospectively.

millions of €

	2023	2022	Change	Change %	2021
EBITDA AL (adjusted for special factors)	4,114	3,964	150	3.8	4,007
Greece	1,325	1,310	15	1.1	1,265
Romania	17	38	(21)	(55.3)	147
Hungary	600	493	107	21.7	536
Poland	393	378	15	4.0	385
Czech Republic	470	503	(33)	(6.6)	471
Croatia	367	349	18	5.2	355
Slovakia	350	350	0	0.0	327
Austria	529	506	23	4.5	487
Other ^a	61	37	24	64.9	34
EBITDA AL margin (adjusted for special factors) %	34.9	35.5			35.5
Depreciation, amortization and impairment losses	(2,524)	(2,572)	48	1.9	(2,576)
Profit (loss) from operations (EBIT)	1,973	1,724	249	14.4	1,814
EBIT margin %	16.7	15.5			16.1
Cash capex	(2,049)	(1,872)	(177)	(9.5)	(1,905)
Cash capex (before spectrum investment)	(1,766)	(1,755)	(11)	(0.6)	(1,783)

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 in North Macedonia, Montenegro, and the GTS Central Europe group in Romania, as well as the Europe Headquarters.

^b As of January 1, 2023, the definition of service revenue was extended. Prior-year comparatives were adjusted retrospectively.

Revenue, service revenue

Our Europe operating segment generated revenue of EUR 11.8 billion in the 2023 financial year, a year-on-year increase of 5.7 %. In organic terms, revenue increased by 4.8 %. Service revenues grew by 4.8 % year-on-year, or by 4.0 % in organic terms.

Organic revenue growth was largely driven by the strong performance of the mobile business, especially the increase in mobile service revenues with higher margins: alongside the larger contract customer base, higher prices in several countries and increases in roaming and visitor revenues further contributed to this trend. Contract customer additions also had positive effects on terminal equipment revenues. Fixed-network service revenues increased against the prior year. Our intense focus on the continued build-out of high-speed network infrastructure drove growth in broadband and TV revenues, which more than offset the expected declines in voice telephony revenues and wholesale revenues. The systems solutions business made a positive contribution to revenue overall. Regulatory interventions such as the reduction in termination rates had a negative impact on our organic development of revenue in the reporting period.

All countries apart from Romania contributed to the growth in revenue in organic terms, with our national companies in Hungary, Austria, Poland, Croatia, Slovakia, and Greece recording the best absolute development by country.

Revenue from **Consumers** increased in organic terms by 5.8 % year-on-year, due to the mobile business, where both service revenues and sales of mobile terminal equipment increased. In the fixed network, revenue from broadband and TV business increased thanks to our continuous fiber-optic build-out and our TV and entertainment offerings. This more than offset the decline in revenue from voice telephony. In addition, the higher number of FMC customers had a positive impact on revenue.

Revenue from **Business Customers** grew by 6.0 % against the prior year, with Hungary, Poland, and Greece making the most important contributions. All product areas – mobile communications, fixed-network, and systems solutions – recorded growth. The number of mobile contract customers increased by 2.1 %, with almost all national companies, in particular Poland, Austria, and Greece, contributing to growth, which offset the census-driven decline in Hungary. In the fixed-network business, the number of broadband customers rose by 5.1 %. Growth was reported across all customer segments, with the highest growth recorded in the segment of smaller business customers, which was able to increase revenue by 8.7 % against the prior year. IT revenue grew strongly compared with the prior year, increasing by 6.7 %, due to an increase in systems solutions business and data communication, especially in Hungary, Greece, Slovakia, and Poland. Digital Infrastructure developed positively as a result of the expansion of capacities and strong growth in the cloud and security solutions business.

Adjusted EBITDA AL, EBITDA AL

Our Europe operating segment generated adjusted EBITDA AL of EUR 4.1 billion in the reporting year, up 3.8 % year-on-year. In organic terms, adjusted EBITDA AL grew by 2.8 %, again posting a positive earnings performance, with a positive net margin more than sufficient to offset the rise in indirect costs. This rise in costs is mainly driven by inflation-induced cost increases (especially higher energy and personnel costs). In Hungary, the supplementary telecommunications tax continues to have an adverse impact on our EBITDA AL.

Looking at the development by country, the increase in adjusted organic EBITDA AL was attributable to positive absolute trends, in particular at our national companies in Hungary, Croatia, Austria, and Greece. These increases were offset by declines in the Czech Republic and Romania, primarily due to one-time effects.

At EUR 4.0 billion, EBITDA AL increased by 2.2 % against the prior year. The net expense arising from special factors was higher than in the prior-year.

Development of operations in selected countries

Greece. In the reporting year, revenue in Greece increased by 1.1 % year-on-year to EUR 3.2 billion. This trend is due to higher mobile revenues. Alongside higher service revenues, the addition of new contract customers drove an increase in terminal equipment revenues. However, mobile revenues were affected by termination rate cuts imposed by the regulatory authority. Revenue declined slightly in the fixed-network business, where traditional voice telephony revenues are tapering off. Wholesale revenues also decreased as a result of lower volumes. Our convergence products, however, performed well, with further customer additions and corresponding revenue. Systems solutions business recorded a further substantial rise in revenue.

Adjusted EBITDA AL stood at EUR 1.3 billion, up 1.1 % year-on-year, driven by lower indirect costs.

Hungary. Revenue in Hungary totaled EUR 2.0 billion in the 2023 financial year, which corresponds to substantial growth of 18.4 %. Excluding positive exchange rate effects, revenue increased by 15.6 % against the prior year in organic terms. The biggest driver of this increase was mobile business, mainly on account of significantly higher service revenues. Fixed-network revenue also increased markedly against the prior year. We recorded higher service revenues, in particular in the broadband and TV business, both driven again by larger customer bases. Thanks to our increased investments in the build-out of fiber-optic lines, our offers have won over large numbers of customers. Our convergence products also continued to perform well, with further customer additions and corresponding revenue. Systems solutions business also recorded a significant increase in revenue.

Adjusted EBITDA AL stood at EUR 600 million, 21.7 % above the prior-year level. In organic terms, the increase was 19.3 %. The increase in indirect costs, especially for energy, personnel, and the supplementary telecommunications tax, was more than offset by the higher net margin.

Poland. Revenue in Poland increased by 7.7 % compared with the prior year to EUR 1.5 billion. Excluding positive exchange rate effects, revenue increased by 4.2 % in organic terms. Mobile business was the main driver of this uptrend in revenue, with growth in the contract customer base also having a positive effect on terminal equipment business. However, mobile revenues were affected by termination rate cuts imposed by the regulatory authority. The number of FTTH customers in the fixed-network business also increased significantly, creating the basis for further broadband growth. This is reflected in higher broadband service revenues, and is also thanks to our successful partnership agreements on network infrastructure. The number of FMC customers increased again substantially in 2023. This had a corresponding positive impact on revenues. We recorded substantial revenue growth in the systems solutions business.

Adjusted EBITDA AL stood at EUR 393 million, 4.0 % above the prior-year level. In organic terms, adjusted EBITDA AL grew slightly by 1.3 %. The revenue-driven increase in the net margin was slightly higher than the increase in indirect costs, in particular as a result of higher energy costs.

Czech Republic. Revenue in the Czech Republic stood at EUR 1.3 billion in the reporting year, an increase of 4.4 % against the prior year. Excluding positive exchange rate effects, organic growth was 2.0 %. This is largely attributable to our mobile business, which recorded higher service revenues and increased revenues from terminal equipment sales, the latter driven in part by renewed growth in the number of contract customers. However, mobile revenues were affected by termination rate cuts imposed by the regulatory authority. The fixed-network business also contributed to revenue growth. Thanks to our investments in the build-out of fiber-optic lines, our offers have won over large numbers of customers. Our convergence products recorded further customer additions and corresponding revenue growth.

Adjusted EBITDA AL decreased by 6.6 % year-on-year to EUR 470 million. In organic terms, earnings fell by 8.7 %, due to a decrease in the net margin and as a result of higher indirect costs. In addition to higher energy and personnel costs, a one-time effect from the termination of a business relationship in the business customer segment also had an impact.

Austria. Revenue in Austria totaled EUR 1.5 billion in the 2023 financial year. This increase of 4.8 % was mainly attributable to growth in mobile revenues, despite the adverse effects from the termination rate cuts. Alongside higher service revenues, terminal equipment revenues also increased, driven in part by growth in the contract customer base. Broadband revenues in the fixed-network business recorded growth. Revenue from systems solutions business increased slightly.

Adjusted EBITDA AL increased by 4.5 % year-on-year to EUR 529 million. In organic terms, earnings grew by 3.2 %, driven mainly by a revenue-related increase in the net margin.

Profit/loss from operations (EBIT)

In our Europe operating segment, EBIT increased by 14.4 % in the reporting year to EUR 2.0 billion, mainly due to the 4.7 % increase in EBITDA. Depreciation, amortization and impairment losses were down 1.9 % against the prior-year level, mainly due to an impairment loss recognized in the prior year on non-current assets in the Romanian mobile business.

Cash capex (before spectrum investment), cash capex

In the 2023 financial year, our Europe operating segment reported a year-on-year increase of 0.6 % in cash capex (before spectrum investment) to EUR 1.8 billion, and thus remained stable at the prior-year level. Cash capex increased by 9.5 % against the prior-year period as a result of the acquisition of spectrum licenses in Croatia and Poland. We continue to invest in the provision of broadband, fiber-optic technology, and 5G as part of our integrated network strategy.

Systems Solutions

Order entry

millions of €

	2023	2022	Change	Change %	2021
Order entry	3,628	3,952	(324)	(8.2)	3,876

Development of business

The 2023 financial year continued to be dominated by the focusing of our systems solutions business on growth and future viability. As communicated at the Capital Markets Day in May 2021, we have established four portfolio areas in line with market needs: Advisory, Cloud, Digital, and Security.

We have also defined selected industries (automotive, healthcare, public sector, and public transport), for which we have increased our offer of vertical solutions based on our expertise. In addition, we have agreed partnerships with leading cloud service providers (e.g., Amazon Web Services, Google Cloud, and Microsoft Azure), so as to be able to offer our customers an even broader and more flexible range of cloud solutions. We are also increasingly expanding our portfolio with AI-based solutions and data room offerings.

By aligning ourselves in this way, our strategic goal is to become the leading IT service provider in the DACH region (Germany, Austria, Switzerland) and in other selected countries.

Order entry in our Systems Solutions operating segment decreased year-on-year by 8.2 % in the 2023 financial year, putting it below our expectations. This development was largely attributable to the high-volume deals concluded in the prior year. Furthermore, the prior-year figure includes order entry for Multimedia Solutions (MMS), which was reassigned to the Germany segment as of January 1, 2023.

Development of operations

millions of €

	2023	2022	Change	Change %	2021
Revenue	3,896	3,811	85	2.2	3,759
Of which: external revenue	3,258	3,106	152	4.9	3,032
Service revenue^a	3,796	3,751	45	1.2	3,722
EBITDA	272	229	43	18.8	174
Special factors affecting EBITDA	(144)	(159)	15	9.4	(206)
EBITDA (adjusted for special factors)	416	388	28	7.2	380
EBITDA AL	177	125	52	41.6	65
Special factors affecting EBITDA AL	(144)	(159)	15	9.4	(206)
EBITDA AL (adjusted for special factors)	321	284	37	13.0	271
EBITDA AL margin (adjusted for special factors) %	8.2	7.5			7.2
Depreciation, amortization and impairment losses	(344)	(340)	(4)	(1.2)	(421)
Profit (loss) from operations (EBIT)	(71)	(110)	39	35.5	(247)
Special factors affecting EBIT	(270)	(270)	0	0.0	(384)
EBIT (adjusted for special factors)	198	160	38	23.8	138
EBIT margin (adjusted for special factors) %	5.1	4.2			3.7
Cash capex	(210)	(221)	11	5.0	(235)
Cash capex (before spectrum investment)	(210)	(221)	11	5.0	(235)

^a As of January 1, 2023, the definition of service revenue was extended. Prior-year comparatives were adjusted retrospectively.

Revenue, service revenue

Revenue in our Systems Solutions operating segment developed more strongly than expected, increasing by 2.2 % year-on-year in the 2023 financial year to EUR 3.9 billion. This positive revenue trend is driven by growth in the Road Charging (up 23.7 %), Digital (up 10.9 %), and Advisory (up 3.4 %) portfolio areas, and by a slight increase in the Cloud portfolio area (up 2.4 %), which includes our declining traditional IT infrastructure business. External revenue increased by 4.9 %, mainly driven by the Digital and Road Charging portfolio areas. Service revenue also developed positively, increasing slightly by 1.2 %. In organic terms, revenue increased by 5.3 % year-on-year and service revenue by 4.3 %.

Adjusted EBITDA AL, EBITDA AL

In the 2023 financial year, adjusted EBITDA AL at our Systems Solutions operating segment increased by 13.0 % year-on-year to EUR 321 million, which was in line with our expectations. The increase in adjusted EBITDA AL is primarily attributable to revenue growth in the Road Charging and Digital areas. The negative impact of general price rises, especially in personnel and energy costs, was mitigated by efficiency measures. In organic terms, adjusted EBITDA AL grew by 10.0 % year-on-year. EBITDA AL increased by EUR 52 million compared with the prior year to EUR 177 million. The expense arising from special factors decreased by EUR 15 million year-on-year to EUR 144 million, mainly as a result of lower restructuring costs.

Profit/loss from operations (EBIT), adjusted EBIT

Adjusted EBIT in our Systems Solutions operating segment improved by EUR 38 million year-on-year in the 2023 financial year, coming in at EUR 198 million, due to the reasons described under adjusted EBITDA AL and as a result of declines in depreciation and amortization. EBIT increased by EUR 39 million compared with the prior year to EUR -71 million. The expense arising from special factors was unchanged against the prior year at EUR 270 million. In the reporting year, this included non-cash impairment losses on non-current assets totaling EUR 126 million. These related primarily to follow-up investments in connection with assets previously impaired in the 2020, 2021, and 2022 financial years. Furthermore, despite the business outlook remaining positive, the increase in the cost of capital in the reporting year prompted further impairment losses to be recognized on non-current assets at the end of 2023. Impairment losses totaling EUR 111 million were recorded as special factors in the prior year.

Cash capex (before spectrum investment), cash capex

Cash capex in the Systems Solutions operating segment stood at EUR 210 million in the 2023 financial year, down EUR 11 million against the prior year. This trend mainly resulted from lower capital expenditure in the Cloud portfolio area. By contrast, capital expenditure in the Road Charging area was up year-on-year due to rising demand for on-board units. The prior-year figure had also included the MMS entity, which was reassigned to the Germany operating segment effective January 1, 2023.

Group Development

The sale of the GD Towers business entity was consummated on February 1, 2023, and GD Towers has not been part of the Group since that date. The development of operations contains the value contributions up to and including January 2023.

The GD Towers business entity had been recognized in the consolidated financial statements as a discontinued operation from the third quarter of 2022 until its sale. According to the management approach, we include the value contributions by GD Towers in the performance indicators explained here.

For further information on the sale and the presentation of GD Towers according to the management approach, please refer to the sections “Group organization” and “Management of the Group.”

For information on the impairment loss recognized on the carrying amount of the stake in GD Towers and recognized in profit/loss from financial activities, please refer to the section “Development of business in the Group.”

The sale of T-Mobile Netherlands was consummated on March 31, 2022. T-Mobile Netherlands has not been part of the Group since April 1, 2022. The development of operations contains the value contributions for the first quarter of 2022.

Development of operations

millions of €

	2023	2022	Change	Change %	2021
Revenue	115	1,708	(1,593)	(93.3)	3,165
Of which: T-Mobile Netherlands	0	536	(536)	(100.0)	2,071
Of which: GD Towers	99	1,154	(1,055)	(91.4)	1,112
Service revenue	0	411	(411)	(100.0)	1,621
EBITDA	13,220	2,106	11,114	n.a.	1,790
Special factors affecting EBITDA	13,170	992	12,178	n.a.	173
EBITDA (adjusted for special factors)	50	1,113	(1,063)	(95.5)	1,618
Of which: T-Mobile Netherlands	0	201	(201)	(100.0)	757
Of which: GD Towers	78	943	(865)	(91.7)	894
EBITDA AL	13,215	1,956	11,259	n.a.	1,479
Special factors affecting EBITDA AL	13,170	992	12,178	n.a.	173
EBITDA AL (adjusted for special factors)	45	964	(919)	(95.3)	1,307
Of which: T-Mobile Netherlands	0	190	(190)	(100.0)	668
Of which: GD Towers	73	804	(731)	(90.9)	669
EBITDA AL margin (adjusted for special factors) %	39.1	56.4			41.3
Depreciation, amortization and impairment losses	(2)	(195)	193	99.0	(706)
Profit (loss) from operations (EBIT)	13,217	1,911	11,306	n.a.	1,084
Cash capex	(24)	(343)	319	93.0	(572)
Cash capex (before spectrum investment)	(24)	(343)	319	93.0	(572)

Revenue, service revenue

Revenue in our Group Development operating segment decreased in the 2023 financial year by 93.3 % year-on-year to EUR 115 million. This decline was mainly attributable to the sale of T-Mobile Netherlands and GD Towers. In organic terms, revenue grew by 3.2 % year-on-year. The GD Towers business did not generate any service revenues.

Adjusted EBITDA AL, EBITDA AL

Adjusted EBITDA AL decreased by 95.3 % to EUR 45 million. Here too, the decline was attributable to the sale of T-Mobile Netherlands and GD Towers. In organic terms, adjusted EBITDA AL grew by 52.9 %. The suspension of the depreciation on right-of-use assets due to the fact that the GD Towers business entity had been held for sale starting the third quarter of 2022 had a positive effect. EBITDA AL was positively influenced by net special factors of EUR 13.2 billion, of which EUR 12.9 billion related to the deconsolidation of GD Towers, and EUR 0.2 billion to the sale of an equity investment by Deutsche Telekom Capital Partners. In addition, EBITDA AL increased by EUR 11.3 billion compared with the prior-year period to EUR 13.2 billion.

Profit/loss from operations (EBIT)

EBIT increased by EUR 11.3 billion year-on-year to EUR 13.2 billion, mainly as a result of the development described under EBITDA AL. Depreciation, amortization and impairment losses were down year-on-year, primarily in connection with the fact that the GD Towers business entity had been held for sale starting the third quarter of 2022, and, accordingly, the related depreciation and amortization had been suspended, and its subsequent sale.

Cash capex (before spectrum investment), cash capex

Cash capex stood at EUR 24 million, well below the prior-year level. The decline is mainly attributable to the sale of T-Mobile Netherlands and GD Towers.

Group Headquarters & Group Services

Development of operations

millions of €

	2023	2022	Change	Change %	2021
Revenue	2,305	2,407	(102)	(4.2)	2,515
Service revenue^a	1,024	1,026	(2)	(0.2)	1,078
EBITDA	(522)	(361)	(161)	(44.6)	(300)
Special factors affecting EBITDA	(199)	(234)	35	15.0	(182)
EBITDA (adjusted for special factors)	(323)	(128)	(195)	n.a.	(118)
EBITDA AL	(808)	(672)	(136)	(20.2)	(622)
Special factors affecting EBITDA AL	(199)	(234)	35	15.0	(182)
EBITDA AL (adjusted for special factors)	(609)	(437)	(172)	(39.4)	(440)
Depreciation, amortization and impairment losses	(1,352)	(1,476)	124	8.4	(1,463)
Profit (loss) from operations (EBIT)	(1,874)	(1,837)	(37)	(2.0)	(1,764)
Cash capex	(969)	(973)	4	0.4	(1,007)
Cash capex (before spectrum investment)	(969)	(973)	4	0.4	(1,007)

^a As of January 1, 2023, the definition of service revenue was extended. Prior-year comparatives were adjusted retrospectively.

Revenue, service revenue

Revenue in our Group Headquarters & Group Services segment decreased in the reporting year by 4.2 %, mainly as a result of lower intragroup revenues from land and buildings due to the ongoing optimized use of space as well as to lower intragroup service revenues at Deutsche Telekom IT on account of a reduced revenue-relevant cost basis. By contrast, the reassignment of units in connection with the bundling of finance functions at Deutsche Telekom Services Europe, which were still assigned to the Germany operating segment in the first quarter of 2022, had an increasing effect on revenue. Against this background, organic revenue decreased by 2.7 % compared with the prior-year period.

Adjusted EBITDA AL, EBITDA AL

Adjusted EBITDA AL in the Group Headquarters & Group Services segment declined by EUR 172 million in the reporting year to EUR -609 million, mainly due to income from the disposal of non-current assets recognized in the prior year in connection with the further optimization of our real estate portfolio, as well as higher intragroup reimbursements, and lower revenue from land and buildings due to the ongoing optimized use of space. These effects, which had a negative impact on EBITDA AL, were partially offset by lower operating expenses in our Group Services, especially relating to land and buildings. Overall, EBITDA AL was negatively impacted in the reporting year by special factors amounting to EUR 199 million, especially for staff-related measures. In the prior-year period, EBITDA AL had been reduced by negative net special factors of EUR 234 million, with expenses for staff-related and non-staff-related restructuring measures being offset by the positive effect from the reduction in other provisions, in particular in connection with a measurement effect arising from the obligation to make additional capital contributions for defined benefit obligations vis-à-vis former employees and with the termination of legal proceedings.

Profit/loss from operations (EBIT)

The year-on-year decrease of EUR 37 million in EBIT to EUR -1,874 million was largely due to the decline in EBITDA AL. Depreciation, amortization and impairment losses were down by contrast, largely due to lower capitalization in connection with declines both in the licensing of the Group-wide ERP system and in land and buildings due to the ongoing optimization of our real estate portfolio. Impairment losses on software used by the Systems Solutions operating segment were lower than in the prior year.

Cash capex (before spectrum investment), cash capex

Our cash capex remained at the prior-year level. Higher cash capex for vehicles was offset by lower capital expenditure in the Technology and Innovation Board of Management department.

Development of business at Deutsche Telekom AG

Deutsche Telekom AG prepares its annual financial statements in accordance with the principles of the 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. In the Germany operating segment, total revenue was up 2.8 % against the prior year. This increase continued to be driven primarily by service revenues in the fixed-network and mobile business. Total revenue in the United States operating segment decreased by 4.0 % year-on-year. In U.S. dollars, total revenue was down 1.3 % year-on-year, impacted by lower terminal equipment revenue. Revenue in our Europe operating segment grew by 5.7 % on the back of higher mobile service revenues. Total revenue in our Systems Solutions operating segment was up 2.2 % year-on-year. The positive revenue trend was attributable to growth in the Road Charging (up 23.7 %), Digital (up 10.9 %), and Advisory (up 3.4 %) portfolio areas. The Cloud portfolio area, which comprises the shrinking traditional IT infrastructure business, accounted for 2.4 % of the increase in revenue. Total revenue in our Group Development operating segment decreased by 93.3 % due to the sale of T-Mobile Netherlands and of 51.0 % of the shares in the companies of the cell tower business in Germany and Austria. In organic terms, revenue increased by 3.2 % year-on-year.

Deutsche Telekom AG reported income after taxes for the 2023 financial year of EUR 9.1 billion. Alongside the operating business, the development of business was affected in particular by the sale of 51.0 % of the shares in GD Towers Holding GmbH, Münster, and by a capital repayment by Deutsche Telekom Europe B.V., Maastricht, which was partially recognized in income via an intermediate holding company.

Results of operations of Deutsche Telekom AG

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

millions of €

	2023	2022	Change	Change %	2021
Net revenue	2,110	2,250	(140)	(6.2)	2,538
Other own capitalized costs	2	9	(7)	(77.8)	9
Total operating performance	2,112	2,259	(147)	(6.5)	2,547
Other operating income	1,371	2,480	(1,109)	(44.7)	1,177
Goods and services purchased	(419)	(456)	37	8.1	(481)
Personnel costs	(1,964)	(1,936)	(28)	(1.4)	(2,176)
Depreciation, amortization and write-downs	(174)	(277)	103	37.2	(288)
Other operating expenses	(2,481)	(2,919)	438	15.0	(2,485)
Operating results	(1,555)	(849)	(706)	(83.2)	(1,706)
Net financial income (expense)	11,281	5,700	5,581	97.9	5,606
Income taxes	(614)	(839)	225	26.8	(278)
Income after income taxes	9,112	4,012	5,100	n.a.	3,622
Other taxes	(17)	(18)	1	5.6	(17)
Income after taxes	9,095	3,994	5,101	n.a.	3,605

Operating results decreased further from EUR -0.8 billion to EUR -1.6 billion, due mainly to a year-on-year decrease in other operating income of EUR 1.1 billion and a EUR 0.1 billion decrease in net revenue. In particular, a decline in other operating expenses of EUR 0.4 billion had an offsetting effect.

Lower intragroup cost transfers from renting and leasing out property and from hiring out employees contributed to the reduction in net revenue of EUR 0.1 billion in total.

The decrease of EUR 1.0 billion in other operating income was mainly due to EUR 1.1 billion lower gains on asset disposals, which in the previous year had primarily included gains of EUR 0.6 billion on the intragroup disposal of shares in Erste DFMG Deutsche Funkturm Vermögens-GmbH, Bonn, and of EUR 0.5 billion arising from the buy-back of own shares by DFMG Holding GmbH, Bonn. The decline was also attributable to EUR 0.1 billion lower income from derivatives, mainly in connection with U.S. dollar currency contracts.

The decrease of EUR 0.4 billion in other operating expenses primarily resulted from a decrease of EUR 0.1 billion in expenses from derivatives, of EUR 0.1 billion in expenses for the placement of civil servants, and of EUR 0.1 billion in foreign currency translation losses on loans denominated in foreign currency.

Net financial income increased by EUR 5.6 billion to EUR 11.3 billion, due primarily to an increase of EUR 5.6 billion in income related to subsidiaries, associated and related companies. A EUR 0.2 billion increase in net interest expense had an offsetting effect.

Income related to subsidiaries, associated and related companies of EUR 12.1 billion (2022: EUR 6.5 billion) was positively affected in the reporting year, in particular by profits transferred by Telekom Deutschland GmbH, Bonn, of EUR 5.0 billion (2022: EUR 7.1 billion), by Deutsche Telekom Towers Holding GmbH, Bonn, of EUR 4.0 billion (2022: EUR 0.0 billion), by Deutsche Telekom Europe Holding GmbH, Bonn, of EUR 3.6 billion (2022: EUR 0.0 billion), and by other German companies of EUR 0.5 billion (2022: EUR 0.7 billion) in total. The transfer of losses of EUR 1.3 billion (2022: EUR 1.4 billion), including EUR 0.9 billion (2022: EUR 0.9 billion) from Deutsche Telekom IT GmbH, Bonn, and EUR 0.2 billion (2022: EUR 0.4 billion) from T-Systems International GmbH, Frankfurt/Main, had an offsetting effect.

Income related to subsidiaries, associated and related companies was impacted in particular by the operating business of the consolidated subsidiaries. In addition, this item was positively affected in the reporting year by income of EUR 3.7 billion at Deutsche Telekom Towers Holding GmbH, Bonn, from the sale of 51.0 % of the shares in GD Towers Holding GmbH, Münster, and income of EUR 3.5 billion at Deutsche Telekom Europe Holding GmbH, Bonn, from a capital repayment by Deutsche Telekom Europe B.V., Maastricht, using a portion of its hidden reserves. In the previous year, income of EUR 2.3 billion from the intragroup sale of shares in DFMG Deutsche Funkturm GmbH, Münster, and income of EUR 0.4 billion from the sale of 50.0 % of the shares in GlasfaserPlus Holding GmbH & Co. KG, Cologne, had had an effect on the profit transferred at Telekom Deutschland GmbH, Bonn.

Net interest expense increased from EUR 0.6 billion to EUR 0.8 billion. Higher short-term interest rates led to a EUR 0.8 billion increase in net interest expense in connection with the intragroup and external financing. This was primarily offset by income from plan assets for pension obligations amounting to EUR 0.2 billion. In the previous year, by contrast, expenses of EUR 0.2 billion had been recorded in this context. In addition, higher income from interest added back to noncurrent pension accruals had a positive effect of EUR 0.1 billion on net interest expense.

Income after income taxes increased by EUR 5.1 billion year-on-year in the 2023 financial year.

Other tax expense of EUR 17 million resulted in income after taxes of EUR 9,095 million in the 2023 financial year. Taking into account EUR 3,217 million in unappropriated net income carried forward, unappropriated net income totaled EUR 12,312 million (prior year: EUR 6,700 million).

Financial position of Deutsche Telekom AG

Balance sheet of Deutsche Telekom AG under German GAAP

millions of €

	Dec. 31, 2023	Dec. 31, 2023 %	Dec. 31, 2022	Change	Dec. 31, 2021
Assets					
Intangible assets	79	0.1	139	(60)	301
Property, plant and equipment	2,268	1.8	2,252	16	2,337
Financial assets	106,260	86.1	105,599	661	106,615
Noncurrent assets	108,607	88.0	107,990	617	109,253
Receivables	9,981	8.1	10,800	(819)	5,186
Other assets	2,995	2.4	2,689	306	1,556
Cash and cash equivalents	1,450	1.2	162	1,288	454
Current assets	14,426	11.7	13,651	775	7,196
Prepaid expenses and deferred charges	364	0.3	338	26	455
Difference between plan assets and corresponding liabilities	4	0.0	0	4	0
Total assets	123,401	100.0	121,979	1,422	116,904
Shareholders' equity and liabilities					
Capital stock and reserves	53,792	43.6	53,674	118	53,662
Unappropriated net income	12,312	10.0	6,700	5,612	5,888
Shareholders' equity	66,104	53.6	60,374	5,730	59,550
Accruals for pensions and similar obligations	4,133	3.3	4,010	123	3,898
Tax accruals	319	0.3	490	(171)	252
Other accruals	3,141	2.5	3,150	(9)	3,034
Accruals	7,593	6.2	7,650	(57)	7,184
Debt	9,428	7.6	12,619	(3,191)	10,175
Remaining liabilities	40,167	32.5	41,206	(1,039)	39,859
Liabilities	49,595	40.2	53,825	(4,230)	50,034
Deferred income	109	0.1	130	(21)	136
Total shareholders' equity and liabilities	123,401	100.0	121,979	1,422	116,904

In addition to shareholders' equity, our financial position is mainly determined by noncurrent 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 increased by EUR 1.4 billion year-on-year to EUR 123.4 billion.

The development of total assets was attributable in particular to the increase of EUR 1.3 billion in cash and cash equivalents, the increase of EUR 0.7 billion in financial assets, and the increase of EUR 0.3 billion in other assets. By contrast, receivables decreased by EUR 0.8 billion and intangible assets by EUR 0.1 billion.

Financial assets increased year-on-year by EUR 0.7 billion, with EUR 0.4 billion of the increase resulting from the split-off of pension obligations and certain asset items from T-Systems International GmbH, Frankfurt/Main, and EUR 0.3 billion resulting from a shareholder loan to GD Towers Holding GmbH, Münster.

At EUR 10.0 billion, receivables were down EUR 0.8 billion year-on-year, due mainly to a decrease of EUR 1.1 billion in receivables from cash management. This decline was attributable in particular to the repayment of the cash management balances with companies of the cell tower business in Germany. EUR 4.5 billion of the EUR 4.9 billion shareholder loan granted in this context was repaid by the buyers of the 51.0 % shares in GD Towers Holding GmbH, Münster. Receivables from cash management of EUR 3.7 billion from Deutsche Telekom Towers Holding GmbH, Bonn, which were largely attributable to the company's profit transfer, had an offsetting effect.

The increase of EUR 0.3 billion in other assets is due primarily to higher receivables from collateral (cash securities in connection with hedging), which increased by EUR 0.2 billion. This change is attributable to normal fluctuations in market values. The EUR 0.1 billion higher receivables from accrued interest also contributed to this increase.

The development of total shareholders' equity and liabilities was mainly influenced by the increase of EUR 5.7 billion in shareholders' equity and of EUR 0.1 billion in accruals for pensions and similar obligations. The decline of EUR 3.2 billion in financial liabilities, of EUR 1.0 billion in remaining liabilities, and of EUR 0.2 billion in tax accruals had an offsetting effect.

The increase in shareholders' equity of EUR 5.7 billion was primarily attributable to income after taxes of EUR 9.1 billion for the 2023 financial year and to an increase in additional paid-in capital of EUR 0.1 billion resulting from transfers of treasury shares in connection with stock-based compensation plans. The dividend payment of EUR 3.5 billion for the previous year had an offsetting effect.

The increase of EUR 0.1 billion in accruals for pensions and similar obligations was mainly attributable to the split-off of pension obligations in the amount of EUR 0.6 billion of T-Systems International GmbH, Frankfurt/Main, which took effect retrospectively as of January 1, 2023. Payments of pension benefits of EUR 0.3 billion and a EUR 0.2 billion higher fair value of the plan assets offset against pension obligations had a reducing effect.

Financial liabilities decreased by EUR 3.2 billion year-on-year to EUR 9.4 billion, due primarily to a reduction in commercial paper in the amount of EUR 2.3 billion and to repayments of loans and bonds amounting to EUR 0.9 billion net.

The decrease in remaining liabilities of EUR 1.0 billion was attributable to a decline in liabilities from cash management of EUR 2.1 billion, in particular as a result of the capital repayment by Deutsche Telekom Europe B.V., Maastricht. This was offset by a EUR 1.0 billion increase in financial liabilities to affiliated companies. EUR 6.3 billion of this increase was from a loan taken out from Deutsche Telekom Towers Holding GmbH, Bonn, in the amount of the purchase price payment received for 51.0 % of the shares in GD Towers Holding GmbH, Münster. A decrease in financial liabilities due to loan repayments made to Deutsche Telekom International Finance B.V., Maastricht, in the amount of EUR 5.1 billion had an offsetting effect.

Statement of cash flows of Deutsche Telekom AG under German GAAP

millions of €

	2023	2022	Change	2021
Income after taxes	9,095	3,994	5,101	3,605
Net cash provided by (used for) operating activities	8,714	4,753	3,961	8,673
Net cash provided by (used for) investing activities	47	1,614	(1,567)	(2,980)
Net cash (used for) provided by financing activities	(7,473)	(6,659)	(814)	(8,440)
Net change in cash and cash equivalents	1,288	(292)	1,580	(2,747)
Cash and cash equivalents, at the beginning of the year	162	454	(292)	3,201
Cash and cash equivalents, at the end of the year	1,450	162	1,288	454

Net cash provided by operating activities increased by EUR 4.0 billion year-on-year to EUR 8.7 billion and was mainly influenced by income related to subsidiaries, associated and related companies and the change in intragroup cash management balances. The increase is due in particular to the repayment of receivables from cash management by DFMG Holding GmbH, Bonn, amounting to EUR 4.9 billion in connection with the sale of 51.0 % of the shares in GD Towers Holding GmbH, Münster. Net cash provided by operating activities in the previous year had been affected in particular by the sale of T-Mobile Netherlands Holding B.V., The Hague, and the funds drawn by DFMG Holding GmbH, Bonn, to create the target structure under company law for the sale of the cell tower business.

Net cash provided by for investing activities was almost reduced to zero, which corresponds to a decrease of EUR 1.6 billion year-on-year. The main cash inflows resulted from interest received of EUR 0.9 billion and repayments of medium- and long-term loans by subsidiaries in the amount of EUR 0.3 billion. The grant of a short-term loan to Deutsche Telekom Europe B.V., Maastricht, of EUR 0.6 billion and medium- and long-term loans to subsidiaries of EUR 0.6 billion, in particular to GD Towers Holding GmbH, Münster, had an offsetting effect. In the previous year, net cash provided by/used for investing activities had been impacted by cash inflows of EUR 2.0 billion from loan repayments by T-Mobile USA, Inc., Bellevue, and of EUR 1.8 billion from the intragroup sale of shares as well as by cash outflows of EUR 2.2 billion for the acquisition of further shares in T-Mobile US, Inc., Bellevue.


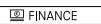
Net cash used for financing activities increased by EUR 0.8 billion year-on-year to EUR 7.5 billion. Net cash used for financing activities primarily resulted from the payment of the dividend for the 2022 financial year of EUR 3.5 billion, from net repayments of financial liabilities in the amount of EUR 2.1 billion, and from interest paid of EUR 1.8 billion.


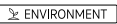
In all, this resulted in an increase in cash and cash equivalents of EUR 1,288 million in the reporting year.

Risk management in hedge accounting

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

Combined non-financial statement

Sustainability is at the heart of Deutsche Telekom's business activities. Tim Höttges, the Chair of our Board of Management, reiterated this at the shareholders' meeting in Bonn in April 2023. To emphasize this claim, we further strengthened our existing governance structure in the reporting year: clear responsibilities for implementing the Group sustainability strategy, including measuring progress using ESG KPIs, were defined in the Germany, United States, Europe, and Systems Solutions operating segments in 2023. This supplements and reinforces the existing network of CR managers in more than 50 Group companies. We also realigned the Global CR Board as a Group-wide steering committee in the reporting year. Our revised CR Policy was adopted by the Board of Management in 2023 and started to be rolled out across the Group.  

These clear responsibilities are enabling us to establish the basis for achieving our ambitious goals – for example in the area of climate protection: we aim to make our entire value chain climate-neutral by 2040 – from device production through to power consumption by customers. On our journey towards climate neutrality, we defined new, more ambitious interim and final goals in the reporting year that were validated by the Science Based Targets initiative (SBTi): 55 % less CO₂ by 2030 compared with 2020 and achieving climate neutrality in 2040. To do this, we want to cut emissions by at least 90 % and offset up to a maximum of 10 % using compensatory measures. This means that we once again obtained confirmation in 2023 that our current climate protection goals contribute to compliance with the Paris Agreement. The implementation plan that we want to deploy to put our climate goals into practice focuses on core levers such as the power consumption of our networks, fuel consumption in our fleet, thermal energy consumption in buildings, reducing emissions in the production of upstream products at our suppliers, and increasing product efficiency in the utilization phase. These and other measures have helped us reduce our CO₂ emissions even further over the past years.  

A growing range of sustainable products and solutions also enables our customers to reduce CO₂ emissions and conserve other resources. Our approach to resource conservation is holistic: our goal is for almost all fixed-network and mobile products we bring into circulation to be recyclable or returned to the circular ecosystem by 2030. The return ratio for mobile and fixed-network devices in the reporting year was 28 %.

A more sustainable way of doing business not only has an ecological dimension, but also a social one. We want to give everyone access to the digital world. Making our products and services as accessible as possible is a new key aspect of doing this. We drafted the Design for All product development guide in the reporting year. It aims to avoid marginalization, stigmatization, and discrimination right from the start when new products are being developed.

Artificial intelligence (AI) can be particularly helpful in making processes more accessible. AI opens up new opportunities, but also confronts us with new challenges. We at Deutsche Telekom are committed to bringing about digitalization that focuses on people and values. We were one of the first companies in the world to adopt Digital Ethics Guidelines on AI back in 2018. In the reporting year, we launched a ChatGPT/GenAI expert group to advise us on how to integrate generative AI into our business.

Putting people at the heart of digitalization – for us, this also means ensuring that people can use the internet safely. This includes in particular protecting children and young people. We therefore launched the #ShareWithCare campaign in the reporting year to raise people's awareness about how to use children's photos responsibly online.

Ultimately, 2023 was another year when our commitment was required on a very practical level to help people in emergency situations: following the devastating earthquakes in Morocco, Syria, and Turkey, we immediately provided telephony and data traffic across the Group to and from the affected areas free of charge. We also provided immediate assistance in the wake of the forest fires on the island of Maui in Hawaii and the hurricane that struck Florida, Georgia, and South Carolina.

From climate protection and resource conservation through to digital participation and practical emergency aid: Deutsche Telekom has committed to being an optimistic and reliable partner for people in challenging times. This is what the new brand claim, which we introduced in the reporting year, stands for: T – Connecting your world.

Creating transparency

We have been reporting on our corporate responsibility (CR) activities for more than 20 years: on our website, in our CR report, and in our annual report. Since the 2016 financial year, we have additionally explained how our core business contributes to achieving the UN Sustainable Development Goals (SDGs), which have been agreed 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 a non-financial statement (NFS) as part of the management report in accordance with § 289c to § 289e, § 315c in conjunction with § 289c to § 289e HGB. In selecting the issues to be presented in the 2023 NFS, we took the statutory requirements into account. In addition, since the 2021 reporting year, we have fulfilled the obligatory reporting requirements regarding environmentally sustainable economic activities in accordance with Regulation (EU) 2020/852 of the European Parliament and of the Council of June 18, 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (hereinafter EU Taxonomy): In the section "Aspect 1: Environmental concerns" we provide a breakdown of what percentage of our net revenue and also of our capital expenditure and operating expenditure for environmental objectives, for which criteria exist in EU legislation, is taxonomy-eligible or taxonomy-aligned. Deutsche Telekom makes a contribution to the environmental objective "Climate change mitigation" through its taxonomy-aligned economic activities. The requirements for transparency in corporate sustainability are constantly increasing. To meet these requirements, we have followed the Global Reporting Initiative (GRI) standards for our concepts and materiality analysis in this NFS, and our CR reporting additionally reflects other voluntary frameworks such as those of the Sustainability Accounting Standards Board (SASB) and the Task Force on Climate-related Financial Disclosures (TCFD). We are also getting ready for the forthcoming requirements of the Corporate Sustainability Reporting Directive (CSRD) in a Group-wide, cross-divisional readiness project to align our future reporting with this legislation.

We will publish detailed information on this in our [2023 CR Report](#).

The Supervisory Board of Deutsche Telekom AG is responsible for the review of the content of the NFS. It did this with the support of Deloitte GmbH Wirtschaftsprüfungsgesellschaft (external auditor) in the form of a limited assurance engagement. The two non-financial performance indicators "energy consumption" and "CO₂ emissions" (Scope 1 and 2) are included as management-relevant performance indicators in the reasonable assurance engagement on Deutsche Telekom's consolidated financial statements and the combined management report. The NFS engagement is based on 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 (combined non-financial statement). 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 engagement.

Our annual CR report supplements this NFS, meeting in full the requirements from a range of different stakeholders for substantiated accountability. The NFS is used by CR experts as an aid to rating Deutsche Telekom's sustainability performance. In the reporting year, we have focused on combining ESG measures along the operating segments in the CR report so as to more clearly reflect the Group perspective. This will also prepare us for compliance with the CSRD requirements that will apply to us starting in the 2024 financial year.

The transparency of our reporting is acknowledged by external parties. In the reporting year, Deutsche Telekom's sustainability reporting received the Building Public Trust Award in the DAX category for the most transparent reporting. The topics of taxonomy, climate goals, and CSRD readiness received special mention. For the best sustainability communication in the NetFederation CSR benchmark, we again ranked second in the reporting year with 815 points, 3 points behind first place and 97 points ahead of third place.

Sustainable Development Goals

In 2015, the member states of the United Nations adopted 17 Sustainable Development Goals (SDGs). We want to make concrete contributions to achieving these goals along our entire value chain.



Our contributions to achieving the SDGs have also had a positive effect on our own Company. In order to highlight these contributions, we have divided them into five areas: Finance, Structure, Relationships, Employees, and Environment.

Deutsche Telekom's value contributions



FINANCE



STRUCTURE



RELATIONSHIPS



EMPLOYEES



ENVIRONMENT

As a responsible employer, we greatly value employee participation and a working environment that is fair and respectful; we encourage diversity and support our employees on their journey toward the digital working world (SDGs 5, 8, 10). At the same time, this has a positive effect on teamwork in our Company (Employees). By building out our broadband network, we are making an active contribution to creating high-quality infrastructure, and promoting innovation (SDG 9). At the same time, we are strengthening our infrastructure (Structure). We are making our network increasingly energy-efficient and using electricity from 100 % renewable energy sources (SDG 13). This is how we are making our own business activities more environmentally friendly (Environment). Following the switch to electricity from renewable energy sources, we are making further improvements by continuously working on the composition of the electricity mix (e.g., by increasing the share of electricity via power purchase agreements, which we use to support the expansion of renewable energy in our markets) and on improving energy efficiency. Our growing range of sustainable products and solutions increases this effect and enables our customers to reduce CO₂ emissions and conserve other resources (SDGs 12, 14, 15). Our smart cities solutions also promote a sustainable way of life (SDG 11). At the same time, these offerings enable us to generate revenue (Finance). Our commitment to an internet free of hate and to more civil courage online contributes to a peaceful, inclusive society based on the rule of law (SDG 16) and is associated with new cooperation relationships (SDG 17) for us (Relationships).

To clearly highlight the contribution our products, services, and activities make toward the individual sustainability development goals and our value chain, we have marked the relevant passages with the respective SDG and value contribution symbols. The symbols used are considered information extraneous to management reports in accordance with the explanation given in the section ["Introductory remarks."](#)

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. In addition, as already outlined, we support the United Nations Sustainable Development Goals (SDGs).

Our CR strategy focuses on four key areas in which we want to act as a role model:

1. Our commitment to climate-neutral business practices
2. Our determined efforts to ensure the circularity of our products and services
3. Our commitment to diversity, equity, and inclusion (DE&I), and our investment in training for our employees
4. Our determination to help shape a digital society that is based on fundamental democratic values and in which all people can participate safely, competently, and with autonomy

Good governance is the foundation of these strategic pillars. For us, this includes an internal control system and a risk management system, including a compliance management system which is aligned with the Company's risk situation. Maintaining data protection and security, cyber security, engaging with the fundamental principles of digital responsibility, upholding human rights, shaping sustainable supply chains, investing capital based on ecological and social criteria, and ensuring communication about our environmental and social sustainability activities is transparent are additional meaningful aspects of good governance.

Our Board of Management bears overall responsibility for CR: it discusses and decides on the most important strategic guardrails and objectives. The Board of Management is advised and supervised in this task by the Supervisory Board. The Group Corporate Responsibility (GCR) unit develops the Group-wide CR strategy, including the associated policies and guidelines. Its aim is to further develop our corporate culture, particularly in terms of sustainable innovation, ecological business operations, and social responsibility. Since 2022, the Chair of the Board of Management has been responsible for GCR. The Supervisory Board and the Board of Management are thereby emphasizing how seriously Deutsche Telekom takes its social and environmental responsibility. The Board of Management is informed every quarter about the status of the most important sustainability indicators in the Group Performance Report. During the course of the year, the Supervisory Board is also regularly informed by GCR about the sustainability strategy and the progress made in implementing it. Furthermore, a training workshop on the role of the Supervisory Board as part of new sustainability requirements was held in 2023. Additionally, the former Global CR Board was realigned in the reporting year as a Group-wide steering committee and preparatory body for the Board of Management.

The different Group business units and segments are responsible for implementing the CR strategy. A governance structure based on the overall responsibility of the Board of Management was established in the operating segments in 2023: overarching CR responsibility for the segment lies with the relevant management. This delegates content adaptation and implementation of the Group sustainability strategy to CR segment leads. The CR segment controllers provide support to establish processes for capturing, consolidating, and analyzing ESG KPIs in their segment. Specific measures are driven by the CR managers of each unit, who work together within the international CR Manager Network.

Our values and basic principles are anchored in our Guiding Principles, the Code of Conduct, the Code of Human Rights, 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. In order to continue driving forward implementation of our CR ambitions across the Group, the Board of Management adopted the refined and revised CR Policy in February 2023. We then introduced a process for implementing the revised version throughout the Group. At the end of 2023, the CR Policy had been enforced at 75 of 135 Group companies; the rollout will be continued in 2024.

| We will publish detailed information on the CR Policy in our [2023 CR Report](#).

We record ESG data as part of our CR controlling and reporting activities. We use this data to calculate our ESG KPIs, which we use to measure and manage our CR performance. The non-financial performance indicators "energy consumption" and "CO₂ emissions" (Scope 1 and 2) that are relevant for remuneration are essential elements of the Group's higher-level controlling processes. This also applies to other ESG KPIs, such as the Energy Intensity ESG KPI and the Sustainable Packaging and Return of Devices circular economy KPIs. Alongside the ESG KPIs, we also report other metrics and data with the aim of meeting internal and external transparency requirements.

Growing numbers of investors are focusing on sustainability aspects in their investment decisions (Socially Responsible Investment, SRI). SRI investment products consist of securities from companies that have been reviewed based on environmental, social, and governance (ESG) criteria. The development of demand from socially responsible investors for the T-Share is an indicator we can use to assess our sustainability performance. The Socially Responsible Investment ESG KPI indicates the percentage of Deutsche Telekom AG shares held by such investors. To do this, we monitor sustainably managed shares at fund level. For better comparability with other companies, the total number of shares given pertains to the number of Deutsche Telekom shares in free float. Our Group-wide commitment to greater sustainability is paying off: as of December 31, 2023, around 32 % (prior year: 31.3 %) of all T-Shares were held by investors who show concern for environmental, social, and governance criteria in their investment choices.

As part of our CR strategy, we have taken part successfully for many years in ESG ratings, which we select based on reputation, relevance, and independence. When rating agencies give high marks to our social and ecological commitment, the T-Share is included in the financial market's sustainability indexes. In 2023, the T-Share was once again listed in all sustainability indexes relevant for us as a company.

Listing of the T-Share in sustainability indexes/ratings

Rating agency	Indexes/ratings/ranking	2023	2022	2021	2020	2019
S&P CSA	DJSI World	✓	✓	✓	✓	✓
	DJSI Europe	✓	✓	✓	✓	✓
	S&P ESG Index Series	✓	✓	✓	✓	✓
CDP	STOXX Global Climate Change Leaders	✓	✓	✓	✓	✓
	Supplier Engagement A-List	o	✓	✓	✓	✓
MSCI	ESG Universal Indexes	✓	✓	✓	✓	✓
ISS-ESG	Prime Status (Sector Leader)	✓	✓	✓	✓	✓
Bloomberg	Gender Equality Index	✓	✓	✓	✓	✓
Sustainalytics	STOXX Global ESG Leaders ^a	✓	✓	✓	✓	✓
	UN Global Compact 100 ^b	n.a.	✓	✓	✓	✓
FTSE Financial Times Stock Exchange	FTSE4Good	✓	✓	✓	✓	✓
Moody's	Euronext indexes based on Moody's ESG data	✓	✓	✓	✓	✓

✓ Listed ✗ Not listed o Result not available at the date of publication

^a Listed in other indexes in the relevant universe.

^b Index was discontinued in the reporting year.

We will publish detailed information on this in our [2023 CR Report](#).

Process for determining significant topics

For some two decades now, we have determined the topics that are relevant for our sustainability strategy and for our reporting on the basis of a materiality process. This materiality process takes into account the applicable requirements of the German Commercial Code (Handelsgesetzbuch – HGB). We continuously refine our materiality analysis. In 2023, key factors influencing the refining of the process were the requirements stipulated in the CSRD, which will be relevant for our reporting as of the 2024 reporting year. However, since the CSRD will have the effect of changing the materiality criteria, we selected the topics for the present NFS based on the results of the 2022 materiality analysis, which we reviewed in the reporting year to ensure it was fully up to date. In the course of a document analysis, among other points, we explored existing and forthcoming legislation, selected competitors, and the expectations of our stakeholders, e.g., the capital markets. We also considered the results of existing materiality analyses from four national companies (T-Mobile US, T-Mobile Polska, Hrvatski Telekom, and OTE) in order to incorporate a geographically and socially broad-based international perspective. In doing this, we considered both the negative and the positive impact of our business activities on the environment and on society along the entire value chain. In a further step, we assessed our financial sustainability opportunities and risks. The results were then validated in an internal workshop with participants from various functional units. The participants also contributed the concerns of various external stakeholders, whose views they are able to cover well due to their activities. This review process identified energy consumption in the supply chain and transportation as an additional key issue. Although the two topics of “collaboration with employees’ representatives and trade unions” and “occupational health and safety” are no longer considered to be key topics, we continue to include them in our reporting. The key topic of “service quality” constitutes a central aspect of customer satisfaction.

For further information on customer satisfaction, please refer to the sections “[Group strategy](#)” and “[Management of the Group](#).”

The issues are assigned to the aspects as shown below and can be found in the corresponding sections of the NFS:

Aspect	Issue
1. Environmental concerns	<ul style="list-style-type: none"> – Climate protection – Energy consumption in the supply chain and transportation – Resource conservation
2. Employee concerns	<ul style="list-style-type: none"> – Collaboration with employees' representatives and trade unions – Diversity, equity, and inclusion – Occupational health and safety
3. Social concerns	<ul style="list-style-type: none"> – Network access and digital responsibility – Connect the unconnected – Data privacy and data security
4. Respecting human rights	<ul style="list-style-type: none"> – Labor standards in our own business area and at our suppliers
5. Fighting corruption	<ul style="list-style-type: none"> – Compliance management system

We will publish detailed information on the materiality process in our [2023 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 our corporate governance. As part of this process, we take into account the results of the financial assessment of the sustainability risks and opportunities in the materiality analysis. The issues of climate protection, human rights due diligence (Supply Chain Due Diligence Act (Lieferkettensorgfaltspflichtengesetz)) and reputation, which we explain in the “[Risk and opportunity management](#)” section, are not to be classified as “very likely severe” within the meaning of § 289c (2) and (3) and § 315c HGB. We maintain the practice of reporting on these matters in order to also meet the transparency requirements of our stakeholders. 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

We are committed not only to minimizing the impact our business activities may have on the climate and the environment, but also to tapping into the opportunities for sustainable development offered by digitalization. If harnessed properly, these opportunities can contribute, among other factors, to protecting resources and saving energy.

In order to establish uniform processes in the Company and to continually improve our environmental protection efforts, we use a comprehensive environmental management system that is part of the Group-wide integrated QHSE (quality, health, safety, and environment) management, and that is based on international standard ISO 14001. We amended our Group-wide Environmental Guidance in the reporting year. It collates the relevant aspects of our self-commitments. The amendments reflect the increasing importance of issues such as the circular economy, biodiversity, and water scarcity. The Environmental Guidance also contains an updated version of the EMF Policy (EMF being short for “electro-magnetic fields”). The Environmental Guidance was adopted by the Global CR Board in the reporting year.

In order to handle the rising tide of regulatory requirements, especially from the EU (e.g., the Green Deal), 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. Correspondingly, evaluations and indications resulting from the task force's activities are taken into account in the Group's various sustainability initiatives.

Climate protection

Our investments in the network build-out make us one of the biggest investors in the industry. In 2023, we invested more than EUR 16 billion Group-wide, primarily in building and operating networks to meet the growing demand for faster, full-coverage data services. However, the network build-out is not to lead to an increase in CO₂ emissions and thus accelerate climate change. For this reason, we use energy from renewable sources to decouple CO₂ emissions from energy consumption. In Europe, we have set ourselves the goal of doubling the energy efficiency of our networks by the end of 2024. Above and beyond this, we want to further increase energy efficiency – for instance at our data centers – and thus reduce energy consumption in the medium term despite the expected rise in data consumption (2024 against 2020, goal excludes T-Mobile US). The two non-financial performance indicators “energy consumption” and “CO₂ emissions” (Scope 1 and 2) were incorporated into the variable component of our Board of Management's remuneration in 2021, and in 2022 were also made relevant for our international executives (excluding T-Mobile US), as well as all employees in Germany not covered by collective agreements. In the United States, we are forging ahead with the highly intensive build-out of our 5G network, in particular in rural areas. This initially drives up power consumption. T-Mobile US, like the Group as a whole, has covered 100 % of its electricity requirements from renewable energy sources since 2021. There are fluctuations in T-Mobile US' Scope 1 carbon footprint owing to unforeseeable natural disasters and the associated temporary use of equipment such as diesel generators to restore and back up damaged network infrastructure. Consideration must be given to the special national situation in this key market, which is why the decision was taken not to include T-Mobile US in these two non-financial performance indicators in respect of short-term variable remuneration. This step ensures that the right incentives are set for the Board of Management,

executives, and all employees in Germany not covered by collective agreements toward the sustainable development of the business, while at the same time safeguarding the stability of network operations.



The annual ambition for the performance indicators “energy consumption” and “CO₂ emissions” (Scope 1 and 2) will continue to be set, managed, and reported for the entire Group as before, including a target value for T-Mobile US. Energy consumption for the Group as a whole in the reporting year was down slightly year-on-year at 12,241 GWh (prior year: 13,253 GWh). Due in particular to the Group-wide use of electricity from renewable energy sources, CO₂ emissions (Scope 1 and 2) are at a low level and dropped further as a result of our measures to 217 kt CO₂e (prior year: 233 kt CO₂e). The values given for total energy consumption and Scope 1 and Scope 2 emissions are based in part on estimates, assumptions, and extrapolations, and, in part, on data provided by our external energy service providers.

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 Board of Management adopted climate goals, which it stepped up again in 2021: In March 2023, we replaced our previous science-based target on our journey towards climate neutrality with more ambitious interim and final goals, which have now been confirmed by the SBTi.

Our climate goals are:

- a. We achieved 100 % electricity from renewable energy sources across the Group (Scope 2, market-based method) at the end of 2021.
- b. We are aiming to reach climate neutrality across the Company by the end of 2025 (Scope 1 and 2). As we cannot avoid all emissions, we intend to offset around 5 % of the remaining emissions through compensatory measures.
- c. As a new interim goal on our journey towards climate neutrality along the entire value chain, we have committed to reducing CO₂ emissions across Scopes 1–3 by 55 % in absolute terms by 2030 compared with 2020. This interim goal is considerably more ambitious than our previous goal, which was to reduce Scope 3 emissions by 25 % per customer (compared with 2017) by 2030. As a result of our systematic efforts to reduce our Scope 1 and Scope 2 emissions, the majority (over 98 %) of our carbon footprint now occurs through the production and use of our products. We maintain a close dialog with our suppliers in order to reduce the emissions generated during production and to ensure the products manufactured consume less energy during the utilization phase.
- d. We want to reach net zero by 2040 across all three scopes along the entire value chain. We want to cut emissions by at least 90 %, so that we only need to offset up to 10 %. This goal is also in line with the targets set out by the European Green Digital Coalition, of which Deutsche Telekom is a founding member.

As a general principle, where there are CO₂ emissions that we cannot avoid by using renewable energy, improving energy efficiency, or agreeing climate goals with suppliers, for example, we will offset these using compensatory measures that mean they are permanently removed from the atmosphere, such as through natural sinks in which natural ecosystems absorb greenhouse gases from the atmosphere. We have set ourselves the quality requirement for offsetting that we only use high-quality removal projects in accordance with Oxford category IV and V, i.e., the removal of carbon through short- and long-term storage.

We developed our Group-wide climate goals in line with the current scientific and political conditions. For the current targets, the SBTi once again confirmed in the reporting year that our climate protection goals contribute to compliance with the Paris Agreement even under its stricter new guidelines. We developed a Climate Target Transition Plan in 2023 that we will detail further in 2024 in accordance with the future requirements of the European Sustainability Reporting Standards (ESRS). The plan enables us to manage and monitor the success of our reduction measures internally. It also helps us to inform our stakeholders about our journey towards net zero emissions. The SBTi also gave a positive assessment of the targets set by our subsidiaries in the United States and Hungary. The national companies are taking different steps to achieve these targets. These include power purchase agreements (PPAs) for procuring electricity from specific sustainable sources, such as wind and solar power. At the end of 2023, we were obtaining 32.5 % of our electricity through these PPAs (prior year: 27.7 %).   By 2025, we intend to increase this percentage in Europe to 50 % of our power consumption. Our aim is to actively support the sustainable production of electricity from renewable energies.

As approximately three-quarters of Scope 3 emissions are attributable to the supply chain, we established the Supply Chain Emission Reduction task force in the reporting year. It prioritizes suppliers by their relevance to our CO₂ emissions. The task force agrees targets and measures with the intention to define binding emission reduction agreements together with our suppliers. Suppliers also play an important role when it comes to reducing emissions from the utilization phase of the devices we lease or sell. Improving energy efficiency is one of the key levers here.

We calculate our CO₂ emissions across the Group in line with the Greenhouse Gas (GHG) protocol. The market-based method is used for Scope 2 emissions. The standard distinguishes between three CO₂ emissions categories (Scope 1, 2, and 3). The calculations for Scope 3 were partly based on assumptions, and the value for Scope 3 amounted to 10,476 kt CO₂e (prior year: 12,287 kt CO₂e) in the reporting year. This reduction partly resulted from methodology adjustments for upstream activities in particular. The following graphic visualizes the emissions of the different scopes resulting from our business activities, shown as CO₂-equivalent emissions (CO₂e emissions).

CO₂e emissions (Scope 1–3)

Deutsche Telekom Group in 2023 in % and kilotons (kt) of CO₂e



■ Scope 3 emissions from upstream activities:

Upstream transportation and distribution, purchased goods and services, capital goods, waste generated in operations, fuel- and energy-related activities, business travel, and employee commuting. In the reporting year, we took steps to improve the data quality by more precisely allocating the effects of our civil engineering activities to Scope 3 emissions from upstream activities.

■ Scope 1 emissions from Deutsche Telekom's own activities:

Primary energy requirements for operation of Deutsche Telekom's systems, buildings, and vehicles

■ Scope 2 emissions from energy procured:

Generation of electricity and district heating/cooling procured by Deutsche Telekom. Renewable energy certificates are taken into account when Scope 2 emissions are determined.

■ Scope 3 emissions from downstream activities:

Transportation of products sold to the customer, use of sold or leased products, and disposal and recycling of sold products. Additional emissions are generated during the utilization phase of our solutions by devices that our customers purchase from third parties and not from Deutsche Telekom (prior year: around 2.6 million metric tons of CO₂e). As we have only a negligible influence on these devices and hence on their energy consumption and emissions, we report these emissions separately. Due to methodology adjustments, this value has not yet been available for the reporting year at the time of publication.

We will publish detailed information on the year-on-year development of data and the impact of the adjusted Scope 3 methodology on previous years in our [2023 CR Report](#).

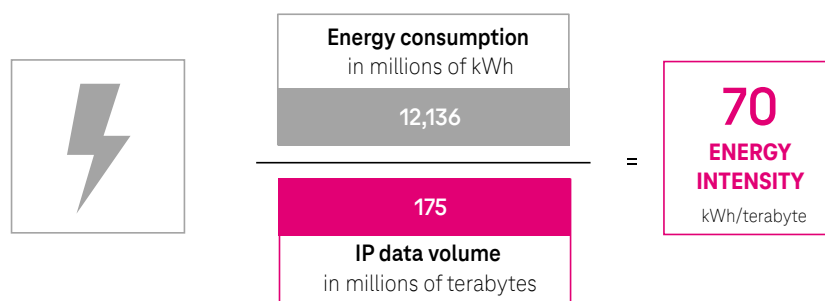
We determine the effectiveness of our climate protection measures using key performance indicators (KPIs). The Renewable Energy KPI is an important metric for us. It shows how much of our Company's overall electricity consumption is obtained from renewable energy sources, and has been 100 % across the Group since 2021. Direct procurement, guarantees of origin, own energy production, and PPAs are included in this calculation.

The Power Usage Effectiveness (PUE) metric serves as one indicator for the efficiency enhancement in our data centers. We determine this metric using the method recommended by the standard DIN EN 50600 for data centers, which takes the total energy consumed by data centers into account, not just that used to operate the servers. In 2023, the global PUE metric for our T-Systems data centers was 1.53 (prior year: 1.59). Our most efficient highly available data center has a PUE of 1.24. In the reporting year, the European Commission honored the T-Systems data center in Biere with the European Code of Conduct Award for significantly reducing its energy consumption.

The KPI for Energy Intensity for Deutsche Telekom (fixed-network and mobile entities) is shown in the following graphic. The KPI reflects our energy consumption in relation to the volume of data transmitted, thus demonstrating how our network's energy efficiency has recorded positive growth. The result stands at 70 (prior year: 91).

Energy Intensity ESG KPI

Deutsche Telekom Group (fixed-network and mobile entities) in 2023



We are also applying our climate protection efforts to our mobility: Our goal within the Group is to progressively increase the proportion of electric vehicles in our fleet in order to have fully electric mobility in place as soon as possible. We committed to buying only electric company vehicles in Germany from 2023 onward, for example, and a policy to this effect came into force in January 2023. On the basis of this, almost 100 % of the company vehicles we ordered in the reporting year had an electric drive in Germany, apart from just two exceptions that were covered by the policy. We have also extended the retention period for company vehicles from three to four years. In addition, our subsidiary Comfort Charge provides e-mobility charging infrastructure in Germany. One target designed to support a nationwide charging infrastructure was to operate more than 250 rapid charging stations by the end of 2023. We only narrowly missed this target due to various factors, with

approximately 230 rapid charging stations. The main reasons for this were local construction delays, late approvals, or missing power connections, which prevented us from setting up the remaining stations in 2023. They will be successively installed in 2024 so that we will quickly reach the threshold of 250 rapid charging stations. Both our own fleet and third-party vehicles can use the vehicle charging stations.

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 Enabling Sustainability Initiative (GeSI) and Econsense. 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 2022, we were awarded an A rating by CDP and included on its Supplier Engagement Rating Leader Board. The supplier engagement rating had not yet been announced for the reporting year at the time of the publication of this report. Our CDP Supply Chain Coverage ESG KPI indicates the degree to which our procurement volume was covered by our suppliers' participation in the CDP Supply Chain Program in 2023. A total of around 51 % (prior year: over 52 %) of the procurement volume was covered in 2023 (excluding T-Mobile US). In the reporting year, 294 suppliers took part in the program (prior year: 247).

SDG 17 ENVIRONMENT

Resource conservation SDG 12 FINANCE

Our goal is to make our product portfolio increasingly sustainable. To achieve this, we take a holistic approach to resource conservation and are committed to the responsible use of resources along our entire value chain. We aim to make products and materials as durable as possible and to ensure they are always recycled at the end of their lifetimes. Also, by providing innovative, network-based solutions, we support our customers in reducing their own CO₂ emissions and contributing to climate protection.

Sustainable products are a key factor in competition for us. Using the Sustainable Revenue Share ESG KPI, we determine how much revenue we (excluding T-Mobile US) generate from products that make a contribution to sustainability. Revenues for individual product clusters are partially determined using a percentage allocation based on assumptions. In 2023, this share amounted to almost 43 % (prior year: 42 %). We have recorded this indicator since 2014 using our own methodology, which we adapted in 2022. As previously, a product can only be assigned to the sustainable product portfolio provided it is highly likely that the product does not entail any of the seven risks defined in our methodology. The risk analysis covered the following issues: pollution involved in the manufacturing of ICT products, avoidable non-recyclable electronic waste, unethical working conditions, the use of conflict minerals during production, social exclusion, radiation and its impacts on health, and information security. Additionally, a product must offer at least one of five sustainability benefits. Reduced energy consumption, a reduction in CO₂ emissions, efforts to achieve a circular economy, a reduction in time required, and enabling social participation are taken into consideration for this. Cost savings are still considered as additional information. However, a cost benefit does not constitute a sustainability benefit in and of itself. Revenues from the rental of devices in the fixed network were included for the first time this year, making up around 1 percentage point of the total value. It is difficult to differentiate between data and voice revenues when taking mobile broadband revenues into account, which is why this is based on assumptions. Owing to the fact that the EU Taxonomy does not cover the major part of our business model at present, we are also reporting this KPI in parallel for the reporting year.

We will publish detailed information on the Sustainable Revenue Share ESG KPI in our [2023 CR Report](#).

The return, repair, and recycling of old devices should be a matter of course. By 2030, we want all of the fixed-network and mobile products we bring into circulation to be recycled at the end of their lifetimes. We are implementing measures to increase the return of used devices to achieve the goals we have set ourselves. We measure the progress we are making by recording the return ratios for the aforementioned product categories and the number of reconditioned devices. The return ratio for mobile devices was 25 % for the Group in 2023. More than 4.4 million fixed-network devices (customer premises equipment, CPE) were taken back across the Group in the reporting year. In the Germany and Europe operating segments, 38 % of the devices collected there were reconditioned for reuse. T-Mobile US has a different calculation basis. There, the returned devices are sent to third parties who responsibly manage reuse, resale, and recycling. T-Mobile US reports the percentage of recovered materials that were reused and recycled in its annual Corporate Responsibility Report. We also want our suppliers to make their devices and network technology circular by 2030. We ask suppliers to provide relevant information, including about the environmental impact of the production and operation of individual products (life-cycle analyses). We also evaluate information on energy efficiency, spare parts supply, including software updates, the use of recycled materials, and the relevant packaging solution – in particular with regard to eliminating single-use plastics.

In general, we work closely with manufacturers in many areas to make our product offering ever more sustainable. For example, we stepped up our strategic collaboration with Fairphone – a vendor specializing in sustainable smartphones – in the reporting year. In 2021, we introduced the Eco Rating methodology, in cooperation with four other European mobile communications operators. Eleven network operators are now using this rating methodology in 36 countries. More than 450 cell phone models from 23 vendors were evaluated by the end of 2023 in terms of their environmental impact throughout their entire life cycle. The score calculation methodology is regularly reviewed on the basis of technical advances and changes in the regulatory regime and adapted, if necessary. We use the Eco Rating to help our customers make more sustainable purchase decisions and motivate vendors to reduce the environmental footprint of their devices. We are also pursuing our goals in our packaging. Since mid-2022, all new branded products launched across Europe must meet the sustainability criteria laid down in our new packaging guideline. Packaging for smartphones that we source from our suppliers must also meet these criteria. We did not become aware of any violations of the packaging guideline by suppliers in the reporting year. We verify compliance with the criteria by means of regular factory audits. SDG 12 ENVIRONMENT

We want to make the sustainability benefits of our products transparent for our customers. That is why we undertake testing procedures to obtain recognized environmental labels. For example, several routers and mesh devices are certified with the Green Product environmental label of the TÜV Rheinland testing service provider. The Blue Angel government environmental label was also awarded to the system for taking back cell phones operated jointly by Telekom Deutschland and Foxway Germany. We use our #GreenMagenta and #GoodMagenta labels for those of our products and initiatives that bring sustainability benefits. #GreenMagenta encompasses Deutsche Telekom products, services, projects, actions, and initiatives that make a particularly positive contribution to climate protection and the more responsible use of resources. #GoodMagenta describes projects, actions, and initiatives that make a positive contribution to overcoming social challenges in the digital world. We have set out strict rules for awarding these two labels. There must be proven sustainability benefits. The two labels are only awarded after completing a defined process, which also includes a comprehensive impact assessment. This process was validated by an audit performed by TÜV Rheinland in the reporting year. If there are clear disadvantages for society or the environment, #GreenMagenta or #GoodMagenta will not be awarded, despite any potential advantages. More than 45 products from Germany and some European national companies, such as T-Mobile Austria in Austria, Hrvatski Telekom in Croatia, and Makedonski Telekom in North Macedonia, have already been awarded the labels. For example, we have labeled our green network in Germany, which has been operated with electricity from 100 % renewable energy sources since 2021, with #GreenMagenta, while our new MagentaTV Box G7, with a case made from biobased plastic and plastic-free packaging, also bears the label. SDG 12 ENVIRONMENT

We will publish detailed information on this in our [2023 CR Report](#).

Conserving valuable resources is also a goal of the Green Pioneers initiative launched by our employees. Our Green Pioneers raise awareness among the workforce of resource efficiency in the workplace and also provide inspiration for our core business. In 2023, some Green Pioneers held courses on environmental issues for their colleagues, with more than 2,100 employees in total taking part. As part of the WeGrow employee development program, we planted around 1,000 trees and shrubs in collaboration with the Green Pioneers in the reporting year. We also used the Green Pioneers Day in the reporting year, marking the fifth anniversary of the initiative, to develop new ideas and goals for the future work of the community with the participants. SDG 13 EMPLOYEES

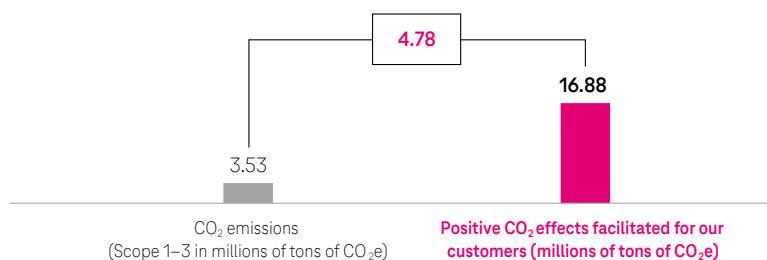
Environmental opportunities arising from the digital transformation

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 and mobility up for the future in terms of sustainability, 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. SDG 17 FINANCE

We use the Enablement Factor to measure our overall performance with regard to climate protection. For this ESG KPI, we calculate the positive CO₂ effects facilitated for our customers through using selected products. Relevant emissions generated by customers are generally taken into account. Rebound effects are taken into account based on studies and estimates by experts, where it is possible to do so with reasonable effort. We put this figure in relation to our own CO₂ emissions. According to this figure, the positive CO₂ effects facilitated for our customers in Germany were 378 % higher in 2023 than our own CO₂ emissions (enablement factor of 4.78 to 1). The year-on-year increase (enablement factor of 3.76 to 1) was mainly due to the substantial reduction in Scope 3 emissions. The usefulness of the KPI depends very much on the underlying assumptions, and the solution-based approach means double counting cannot be ruled out. SDG 9 ENVIRONMENT

Enablement Factor ESG KPI

Deutsche Telekom Group in Germany in 2023



In addition, we are currently supporting the work of the European Green Digital Coalition (EGDC) to develop an industry standard for calculating emissions savings from ICT products. This standard is designed to increase transparency and credibility and lead to improved comparability when calculating savings. As soon as this calculation guideline has been finalized, we will adapt our own calculations and reporting to the new requirements.

Compliance with the EU Taxonomy transparency requirements

The EU Taxonomy is designed to promote investment flows from the finance sector to businesses that are involved in environmentally sustainable activities. The EU Taxonomy is therefore aimed at helping implement the European Green Deal. As a basis for this, the EU Taxonomy provides a binding definition of the environmental sustainability of activities and investments. The EU Taxonomy Regulation requires companies to report on these economic activities. In 2021 and 2022, criteria for the taxonomy environmental objectives “Climate change mitigation” (CCM) and “Climate change adaptation” (CCA) were initially defined in the EU legislation. In June 2023, criteria were adopted for the remaining four environmental objectives: “Water and marine resources” (WTR), “Circular economy” (CE), “Pollution prevention and control” (PPC), and “Biodiversity and ecosystems” (BIO). These new criteria were applied for the first time in 2023 financial year.

Under the EU Taxonomy Regulation, the first step is to ascertain the taxonomy-eligible economic activities of a company. These are activities that are covered by the EU Taxonomy and that therefore potentially contribute significantly to achieving the environmental objectives. The second step is to check whether these activities are taxonomy-aligned. An activity is defined as taxonomy-aligned if it meets the technical screening criteria for a significant contribution to at least one environmental objective listed in the Annexes to Delegated Regulations (EU) 2021/2139, (EU) 2022/1214, (EU) 2023/2485, and (EU) 2023/2486. At the same time, it must not do any significant harm to any of the other environmental objectives and must meet the minimum social standards (“minimum safeguards”) set out in Taxonomy Regulation (EU) 2020/852, which in particular require compliance with human and labor rights.

Deutsche Telekom is a company in the information and telecommunications industry. The following two economic activities are therefore relevant to our core business (taxonomy-eligible) in connection with the “Climate change mitigation” (CCM) environmental objective under the EU Taxonomy:

- Data processing, hosting and related activities (CCM 8.1)
- Data-driven solutions for GHG emissions reductions (CCM 8.2)

Since we also lease devices to our customers as part of our core business, the following economic activity, which is assigned to the “Circular economy” (CE) environmental objective, is also relevant for Deutsche Telekom:

- Product-as-a-service and other circular use and result-oriented service models (CE 5.5)

No economic activities relevant to the environmental objective “Climate change adaptation” (CCA) were identified in the 2023 financial year.

The EU Taxonomy does not currently include criteria for the economic activity “Provision and operation of electronic communication networks and services.” This means that most of our business model is not yet covered by the EU Taxonomy. As a result, the EU Taxonomy does not give us an opportunity to indicate our contribution to climate change mitigation in the area of fixed and mobile network build-out and operation. We are active in various business and industry associations to ensure that relevant and appropriate criteria are added to the EU Taxonomy to reflect our core activities in the area of fixed and mobile networks. Among other activities, we took part in the joint feedback process of the European Commission and the Platform on Sustainable Finance in 2023.

On the other hand, the EU Taxonomy does provide a list of cross-cutting activities outside of our core business that are relevant for our general corporate infrastructure, such as for fleet and facilities management and energy generation. In the 2023 financial year, Deutsche Telekom only carried out the following taxonomy-eligible cross-cutting activity for the environmental objective “Climate change mitigation” (CCM) to a financially material extent:

■ Transport by motorbikes, passenger cars, and light commercial vehicles (CCM 6.5)

The three tables below provide an overview of our taxonomy-eligible and taxonomy-aligned economic activities for the reporting year. They break the figures down into both absolute values and the applicable percentage of Deutsche Telekom’s turnover, capital expenditure, and operating expenditure. As required by law, we will begin publishing disclosures on the taxonomy alignment of the economic activity “Product-as-a-service and other circular use- and result-oriented service models” (CE 5.5) for the 2024 reporting year.

Method for ascertaining taxonomy eligibility and alignment

When ascertaining the taxonomy-eligibility of economic activities, we focused on our core business activities taking cost-benefit aspects into account. There was a slight change to the application of the materiality assessment in the reporting year. In contrast to the prior year, we are therefore no longer reporting turnover and capital expenditure for 2023 for our Comfort Charge subsidiary, which offers charging solutions for electric vehicles, in connection with the taxonomy-eligible economic activity “Infrastructure enabling low-carbon road and public transport” (CCM 6.15).

Those activities identified as taxonomy-eligible were checked individually for their taxonomy alignment. However, proof of conformity for avoiding significant harm to the environmental objective “Climate change adaptation” (CCA) was provided comprehensively for all taxonomy-eligible activities, as we manage climate risks centrally at Group level. The only exception to this is the United States operating segment, where management of climate risks is still in the process of being established and therefore does not yet fully meet the requirements of the EU Taxonomy. No taxonomy-eligible activities were carried out to any significant extent in the United States operating segment in the reporting year. We monitor compliance with minimum social safeguards using a Group-wide management system.

To avoid significant harm to the environmental objective “Climate change adaptation” (CCA), checking for taxonomy alignment of all of the economic activities listed above requires an analysis of potential physical climate risks. We carried out a comprehensive analysis of physical climate risks in the reporting year as part of our risk management activities. The climate risk analysis was carried out using a recognized software platform based on the climate scenarios defined by the Intergovernmental Panel on Climate Change (IPCC). In connection with the taxonomy-eligible activities, no significant harm to the environmental objective “Climate change adaptation” (CCA) was identified, as individual local climate risks are minimized by existing mitigation measures.

The minimum social safeguards require a management system to monitor compliance with the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights, including the ILO Core Conventions and the International Bill of Human Rights. We have made an express commitment to the principles listed above. We perform human rights due diligence using a risk-based management system encompassing both the Group and our supply chain that we use to monitor compliance with social and environmental standards. We also maintain a process of trust-based dialog with employees’ representatives and trade unions. To prevent corruption and safeguard fair competition, Deutsche Telekom has established a compliance management system that is aligned with the company’s risk situation and is externally certified at regular intervals.

For further information on minimum social standards, please refer to the sections “Collaboration with employees’ representatives and trade unions,” “Connect the unconnected,” “Due diligence processes in the Group,” “Labor standards at our suppliers,” and “Compliance management system,” and to the 2023 CR Report.

Economic activities that are relevant to turnover

The taxonomy-eligible economic activity **Data processing, hosting and related activities (CCM 8.1)** covers “Storage, manipulation, management, movement, control, display, switching, interchange, transmission or processing of data through data centers, including edge computing.” Of our Group-wide business activities, our Systems Solutions operating segment (T-Systems) comes under this sector. As well as data centers operated by T-Systems, we also included data centers operated on co-locations in the assessment.

Only data centers that comply with the European Code of Conduct for Energy Efficiency in Data Centres can be considered as making a substantial contribution to climate change mitigation in accordance with the EU Taxonomy. Five of the eight locations directly managed by T-Systems comply with this code. As we have not yet verified compliance with the Code of Conduct through external audits in accordance with EU Taxonomy requirements, we are not classifying the data centers used for economic activity CCM 8.1 as taxonomy-aligned in the reporting year. In addition, in accordance with the EU Taxonomy, the global warming potential of refrigerants that need to be used in data center cooling systems may not exceed a value of 675 GWP (Global Warming Potential). This criterion is currently met by one data center that was fully refurbished in 2022. The other sites currently still use industry-typical refrigerants that meet the criteria of the EU directive on fluorinated greenhouse gases. We will make the change to taxonomy-aligned refrigerants as part of the regular refurbishment program for our data centers. We will carry out a detailed review of the individual data centers' compliance with the criteria for preventing significant harm to the remaining environmental objectives in each case as soon as they fulfill the aforementioned climate change mitigation requirements in full.

We associate those solutions and products in the Group that, in accordance with the description in the EU Taxonomy, are "predominantly aimed at the provision of data and analytics enabling GHG emission reductions" with the economic activity **Data-driven solutions for GHG emissions reductions (CCM 8.2)**. These are solutions and products that have clear potential to enable users to save CO₂ emissions. When selecting them, we take into account solutions and products that are incorporated into our Enablement Factor and Sustainable Revenue Share ESG KPIs, and/or that have been awarded our #GreenMagenta label. We thus identified the following taxonomy-eligible services within our Group-wide business activities:

- Business-related video conferencing solutions (saves travel-induced CO₂ emissions)
- Workplace and cloud solutions (increases energy efficiency by improving server utilization)
- IoT solutions (saves CO₂ emissions)

We provide these services to a significant financial extent in the Germany operating segment, in our major national companies in the Europe operating segment, and local business units in the Systems Solutions operating segment.

The technical screening criteria require a life-cycle analysis as evidence of the taxonomy alignment of the solutions in question. These must show that a solution results in substantial greenhouse gas emission reductions both over and beyond its entire life cycle in comparison with the relevant reference solution available on the market. We understand reference solutions to be alternative solutions that would typically be used in a company in our footprint markets. This assumes that the companies are aligned with best practices. The technical screening criteria do not stipulate a specific threshold for "substantial" reductions in greenhouse gases in comparison with the reference solution. In the prior year, we therefore defined a threshold based on scientific findings; greenhouse gas reductions resulting from taxonomy-eligible solutions exceeding this threshold value are thus considered "substantial." The requisite life-cycle analyses have been prepared for business-related web conferencing solutions and for the cloud solutions Future Cloud Infrastructure, Open Telekom Cloud, and SAP Cloud Services. Deutsche Telekom offers a number of IoT solutions that can reduce CO₂ emissions. As we have not yet prepared any life-cycle analysis to demonstrate the effects of these solutions, they are not reported as taxonomy-aligned for the reporting year.

In contrast to the prior year, the taxonomy-eligible business-related web conferencing solutions were analyzed by comparing them with hybrid meetings to take account of market trends. Significant greenhouse gas savings were demonstrated. For instance, compared with hybrid meetings, virtual-only meetings reduce greenhouse gas emissions by around 62 % (small meetings) or 32 % (large meetings).

Of the workplace and cloud solutions covered by the life-cycle analysis, the Future Cloud Infrastructure, including the SAP Cloud Services run on this infrastructure, reduced greenhouse gas emissions by around 9.7 % in comparison with decentralized data centers operated by our customers themselves. However, this effect was below the threshold value defined in the prior year. Future Cloud Infrastructure and SAP Cloud Services are thus reported as non-taxonomy-aligned for the 2023 financial year. The life-cycle analysis also found that using the Open Telekom Cloud reduced greenhouse gas emissions by 47 % compared with the reference scenario. The reference scenario is based on the assumption that our customers use their own, decentralized server infrastructure for storing and processing data rather than the cloud solution. We therefore classify the Open Telekom Cloud and all web conferencing solutions included in a life-cycle analysis as taxonomy-aligned.

For the aforementioned solutions, we exclusively use infrastructure located in Germany. The requirements for the "Circular economy" (CE) conform to current EU legislation, which we implement as part of our environment management activities at our EU sites. We also require our business partners to provide evidence that the hardware used in the data centers is actually reconditioned or recycled at the end of its service life.

We record leases of devices to business customers and consumers in the Germany operating segment under the taxonomy-eligible economic activity **Product-as-a-service and other circular use and result-oriented service models (CE 5.5)**. As required by law, we will begin publishing disclosures on the taxonomy alignment of this economic activity for the 2024 reporting year.

Cross-cutting activities

Deutsche Telekom has a vehicle fleet that includes both company cars and service vehicles. The economic activity **Transport by motorbikes, passenger cars, and light commercial vehicles (CCM 6.5)** is therefore relevant as a cross-cutting activity that applies to the purchase, the lease, and the operation of vehicles of the classes M1 (passenger cars) and N1 (light commercial vehicles with a maximum weight of 3.5 t). As we are pushing forward with the transition to a fully electric fleet, especially in Germany and the EU, some of the new vehicles purchased already meet the CO₂ thresholds set in the EU Taxonomy. We were also able to provide evidence of the alignment of these vehicles with the other key EU Taxonomy requirements, which are based on current EU legislation for new vehicles. As the choice of tires is left to the vehicle users themselves, we could not provide evidence of the taxonomy alignment of tires for the reporting year. We therefore report capital expenditure associated with our vehicle fleet as non-taxonomy-aligned.

Calculation of the Taxonomy KPIs

The total Group figures used as the basis for calculation in accordance with the EU Taxonomy in the reporting year amounted to EUR 112.0 billion in turnover (2022: EUR 114.2 billion), EUR 24.3 billion in capital expenditure (2022: EUR 38.5 billion), and EUR 0.4 billion in operating expenditure (2022: EUR 0.4 billion). The definition of turnover according to the EU Taxonomy is equivalent to net revenue in our consolidated income statement contained in the consolidated financial statements. The relevant capital expenditure was determined on the basis of the consolidated statement of financial position contained in the consolidated financial statements and is determined as the sum of additions under property, plant and equipment, intangible assets (excluding goodwill), and right-of-use assets. In line with the EU Taxonomy requirements, the disclosures on capital expenditures do not form part of a capital expenditure (capex) plan. The EU Taxonomy defines costs that relate to research and development; building remediation measures; short-term leases; maintenance and repair; and any other direct expenditures relating to the day-to-day maintenance of property, plant and equipment as relevant operating expenditure.

The disclosures on taxonomy eligibility and taxonomy alignment in terms of turnover, capital expenditure, and operating expenditure are directly assigned at the level of product groups to either the operation of data centers in accordance with economic activity CCM 8.1, the provision of ICT solutions in accordance with economic activity CCM 8.2, and lease of devices in accordance with economic activity CE 5.5. We do not generate any turnover with cross-cutting activities. Exclusively capital expenditure was assigned to economic activity CCM 6.5.

To avoid double counting within the meaning of the EU Taxonomy, we have almost exclusively allocated taxonomy-eligible cloud solutions from T-Systems to economic activity CCM 8.2; we only report one solutions portfolio under economic activity CCM 8.1, as this is not taxonomy-eligible in accordance with economic activity CCM 8.2. The lease of devices to our customers in accordance with economic activity CE 5.5 does not overlap with the solutions that fall under economic activities CCM 8.1 and CCM 8.2. In addition, capital and operating expenditures were only assigned to cross-cutting activity CCM 6.5 if a direct correlation with the reported turnover-relevant economic activities was excluded.

As the EU Taxonomy does not yet adequately cover our core business, an aggregate view of the taxonomy eligibility of all economic activities results in very low proportions again in 2023 of turnover (2.5 %; 2022: 1.8 %), capital expenditure (2.1 %; 2022: 0.8 %), and operating expenditure (33.2 %; 2022: 33.5 %) for the Deutsche Telekom Group. The changes against the prior year relate mainly to the first-time disclosure of taxonomy-eligible turnover and capital expenditure from the lease of devices in accordance with economic activity CE 5.5. The largest proportion of taxonomy-eligible operating expenditure can be allotted to property, plant and equipment (76.4 %; 2022: 69.6 %), followed by right-of-use assets (15.5 %; 2022: 12.3 %) and intangible assets (8.0 %; 2022: 18.1 %).

The largest proportion of taxonomy-eligible turnover, capital expenditure, and operating expenditure can be allotted to economic activity CCM 8.1: based on the relevant total figures for the Group, taxonomy-eligible business activities for data processing and hosting represented 1.0 % of turnover (2022: 1.0 %), 0.9 % of capital expenditure (2022: 0.4 %), and 19.1 % of direct expenses (2022: 19.0 %). To enable a statement of taxonomy eligibility at segment level, too, we also report supplementary KPIs for the Systems Solutions operating segment. The taxonomy-eligible portion, determined using the same calculation logic, is 35.0 % (2022: 36.0 %) in relation to net revenue of the segment, and 66.0 % (2022: 62.6 %) in relation to capital expenditure.

In second place, with 0.8 % (2022: 0.8 %) taxonomy-eligible turnover, is economic activity CCM 8.2, to which the business-related web conferencing solutions make a substantial contribution. We also generated relevant taxonomy-eligible turnover from leases of devices, which we added as new economic activity CE 5.5 in the reporting year due to the expanded taxonomy criteria and amounted to 0.6 % of the Group's total turnover. Economic activity CE 5.5 is additionally associated with relevant capital expenditure of 0.7 % based on the total figures for the Group. Cross-cutting activity CCM 6.5 has only a supporting function for Deutsche Telekom's core business.

In the 2023 financial year, the taxonomy-aligned proportion of all economic activities of the Deutsche Telekom Group was 0.2 % of turnover (2022: 0.5 %), 0.0 % of capital expenditure (2022: 0.0 %), and 0.5 % of operating expenditure (2022: 0.4 %). The taxonomy-aligned proportion results from economic activity CCM 8.2. The decrease in taxonomy-aligned turnover is largely due to an optimization of the reference scenario with which emissions savings from our cloud solutions are compared. For the Systems Solutions operating segment, the taxonomy-aligned proportion of turnover was 3.6 % (2022: 12.3 %), 0.0 % of capital expenditure (2022: 0.1 %), and 0.0 % of operating expenditure (2022: 0.8 %).

Taking the Future Cloud Infrastructure and SAP Cloud Services additionally into account, which reduced greenhouse gas emissions by 9.7 % according to the life-cycle analysis, the taxonomy-aligned proportion for the Group would come in at 0.5 % (turnover), 0.0 % (capital expenditure), and 0.5 % (operating expenditure). For the Systems Solutions operating segment, including Future Cloud Infrastructure and SAP Cloud Services would lead to a proportion of 11.5 % (turnover), 0.0 % (capital expenditure), and 0.4 % (operating expenditure).

Given the high standards laid down in the technical screening criteria, the transformation is expected to be a lengthy process. We plan to increase the taxonomy alignment of our economic activities on a continual basis.

EU Taxonomy KPIs

				Substantial contribution to environmental objectives ^a						Do no significant harm to environmental objectives						Minimum safe-guards	Taxonomy aligned (A.1.) or eligible (A.2.) proportion of turnover 2022	Category enabling activity	Category transitional activity
		Turnover		Climate change mitigation	Climate change adaptation	Water	Pollution	Circular economy	Biodiversity	Climate change mitigation	Climate change adaptation	Water	Pollution	Circular economy	Biodiversity				
Economic activities	Code	millions of €	%	Y, N, EL, N/EL	Y, N, EL, N/EL	Y, N, EL, N/EL	Y, N, EL, N/EL	Y, N, EL, N/EL	Y, N, EL, N/EL	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	E	T
A. Taxonomy-eligible activities																			
A.1. Environmentally sustainable activities (taxonomy-aligned)																			
Data-driven solutions for GHG emissions reductions	CCM 8.2	257	0.2	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.5	E	
Turnover of environmentally sustainable activities (taxonomy-aligned) (A.1.)		257	0.2	0.2	0.0	0.0	0.0	0.0	0.0	Y	Y	Y	Y	Y	Y	Y	0.5		
of which: enabling		257	0.2	0.2	0.0	0.0	0.0	0.0	0.0								0.5	E	
of which: transitional		0	0.0	0.0													0.0		T
A.2. Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities)																			
Data processing, hosting and related activities	CCM 8.1	1,148	1.0	EL	N/EL	N/EL	N/EL	N/EL	N/EL								1.0		
Data-driven solutions for GHG emissions reductions	CCM 8.2	719	0.6	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.3		
Product-as-a-service and other circular use- and result-oriented service models ^b	CE 5.5	645	0.6	N/EL	N/EL	N/EL	N/EL	EL	N/EL								-		
Transport by motorbikes, passenger cars and light commercial vehicles	CCM 6.5	0	0.0	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.0		
Infrastructure enabling low-carbon road transport and public transport ^c	CCM 6.15	-	-	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.0		
Turnover of taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities) (A.2.)		2,513	2.2	1.6	0.0	0.0	0.0	0.6	0.0								1.3		
A. Turnover of taxonomy-eligible activities (A.1. + A.2.)		2,770	2.5	1.8	0.0	0.0	0.0	0.6	0.0								1.8		
B. Taxonomy non-eligible activities																			
Turnover of taxonomy non-eligible activities		109,200	97.5															98.2	
Total		111,970	100.0															100.0	

^a Meaning of abbreviations: Y: Yes, taxonomy-eligible and taxonomy-aligned activity with the relevant environmental objective; N: No, taxonomy-eligible but not taxonomy-aligned activity with the relevant environmental objective; EL: Eligible, taxonomy-eligible activity for the relevant objective; N/EL: Not eligible, taxonomy-non-eligible activity for the relevant environmental objective.

^b The analysis of the economic activity "Product-as-a-service and other circular use- and result-oriented service models" (CE 5.5) was limited to taxonomy eligibility only in 2023. The analysis of taxonomy alignment pursuant to Delegated Regulation (EU) 2023/2486 will take place in the 2024 financial year.

^c Due to a change in application of the materiality assessment, turnover in connection with the taxonomy-eligible economic activity "Infrastructure enabling low-carbon road transport and public transport" (CCM 6.15) is no longer being reported in the 2023 financial year.

For further information on turnover, please refer to the consolidated income statement in the consolidated financial statements or to Note 20 "Net revenue" in the notes to the consolidated financial statements.

		Substantial contribution to environmental objectives ^a								Do no significant harm to environmental objectives								Taxonomy aligned (A.1.) or eligible (A.2.)		Minimum safe-guards	proportion of capex 2022	Category enabling activity	Category transitional activity
		Capital expenditure (capex)		Climate change mitigation	Climate change adaptation	Water	Pollution	Circular economy	Biodiversity	Climate change mitigation	Climate change adaptation	Water	Pollution	Circular economy	Biodiversity								
Economic activities	Code	millions of €	%	Y, N, EL, N/EL	Y, N, EL, N/EL	Y, N, EL, N/EL	Y, N, EL, N/EL	Y, N, EL, N/EL	Y, N, EL, N/EL	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	E	T				
A. Taxonomy-eligible activities																							
A.1. Environmentally sustainable activities (taxonomy-aligned)																							
Data-driven solutions for GHG emissions reductions	CCM 8.2	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.0	E					
Capex of environmentally sustainable activities (taxonomy-aligned) (A.1.)		0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Y	Y	Y	Y	Y	Y	Y	0.0						
of which: enabling		0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								0.0	E					
of which: transitional		0	0.0	0.0													0.0		T				
A.2. Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities)																							
Data processing, hosting and related activities	CCM 8.1	213	0.9	EL	EL	N/EL	N/EL	N/EL	N/EL								0.4						
Data-driven solutions for GHG emissions reductions	CCM 8.2	2	0.0	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.0						
Product-as-a-service and other circular use- and result-oriented service models ^b	CE 5.5	170	0.7	N/EL	N/EL	N/EL	N/EL	EL	N/EL								-						
Transport by motorbikes, passenger cars and light commercial vehicles	CCM 6.5	133	0.5	EL	EL	N/EL	N/EL	N/EL	N/EL								0.3						
Infrastructure enabling low-carbon road transport and public transport ^c	CCM 6.15	-	-	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.0						
Capex of taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities) (A.2.)		517	2.1	1.4	0.0	0.0	0.0	0.7	0.0								0.8						
A. Capex of taxonomy-eligible activities (A.1. + A.2.)		517	2.1	1.4	0.0	0.0	0.0	0.7	0.0								0.8						
B. Taxonomy non-eligible activities																							
Capex of taxonomy non-eligible activities		23,773	97.9														99.2						
Total		24,290	100.0														100.0						

^a Meaning of abbreviations: Y: Yes, taxonomy-eligible and taxonomy-aligned activity with the relevant environmental objective; N: No, taxonomy-eligible but not taxonomy-aligned activity with the relevant environmental objective; EL: Eligible, taxonomy-eligible activity for the relevant objective; N/EL: Not eligible, taxonomy-non-eligible activity for the relevant environmental objective.

^b The analysis of the economic activity "Product-as-a-service and other circular use- and result-oriented service models" (CE 5.5) was limited to taxonomy eligibility only in 2023. The analysis of taxonomy alignment pursuant to Delegated Regulation (EU) 2023/2486 will take place in the 2024 financial year.

^c Due to a change in application of the materiality assessment, capital expenditure (capex) in connection with the taxonomy-eligible economic activity "Infrastructure enabling low-carbon road transport and public transport" (CCM 6.15) is no longer being reported in the 2023 financial year.

For further information on capital expenditure, please refer to Notes 6 "Intangible assets," 7 "Property, plant, and equipment," and 8 "Right-of-use assets" in the notes to the consolidated financial statements. The capital expenditure given here also includes the additions of all non-current assets and disposal groups held for sale in the 2023 financial year.

		Substantial contribution to environmental objectives ^a								Do no significant harm to environmental objectives													
		Operating expenditure (opex)		Climate change mitigation	Climate change adaptation	Water	Pollution	Circular economy	Biodiversity	Climate change mitigation	Climate change adaptation	Water	Pollution	Circular economy	Biodiversity	Minimum safe-guards	Taxonomy aligned (A.1.) or eligible (A.2.) proportion of opex 2022	Category enabling activity	Category transitional activity				
Economic activities	Code			millions of €	%	Y, N, EL, N/EL	Y, N, EL, N/EL	Y, N, EL, N/EL	Y, N, EL, N/EL	Y, N, EL, N/EL	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	E	T			
A. Taxonomy-eligible activities																							
A.1. Environmentally sustainable activities (taxonomy-aligned)																							
Data-driven solutions for GHG emissions reductions	CCM 8.2	2	0.5	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0.4	E					
Opex of environmentally sustainable activities (taxonomy-aligned) (A.1.)		2	0.5	0.5	0.0	0.0	0.0	0.0	0.0	Y	Y	Y	Y	Y	Y	Y	0.4						
of which: enabling		2	0.5	0.5	0.0	0.0	0.0	0.0	0.0								0.4	E					
of which: transitional		0	0.0	0.0													0.0		T				
A.2. Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities)																							
Data processing, hosting and related activities	CCM 8.1	79	19.1	EL	EL	N/EL	N/EL	N/EL	N/EL								19.0						
Data-driven solutions for GHG emissions reductions	CCM 8.2	56	13.6	EL	N/EL	N/EL	N/EL	N/EL	N/EL								14.1						
Product-as-a-service and other circular use- and result-oriented service models ^b	CE 5.5	0	0.0	N/EL	N/EL	N/EL	N/EL	EL	N/EL								-						
Transport by motorbikes, passenger cars and light commercial vehicles	CCM 6.5	0	0.0	EL	EL	N/EL	N/EL	N/EL	N/EL								0.0						
Infrastructure enabling low-carbon road transport and public transport ^c	CCM 6.15	-	-	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.0						
Opex of taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities) (A.2.)		135	32.7	32.7	0.0	0.0	0.0	0.0	0.0								33.1						
A. Opex of taxonomy-eligible activities (A.1. + A.2.)		137	33.2	33.2	0.0	0.0	0.0	0.0	0.0								33.5						
B. Taxonomy non-eligible activities																							
Opex of taxonomy non-eligible activities		276	66.8														66.5						
Total		413	100.0														100.0						

^a Meaning of abbreviations: Y: Yes, taxonomy-eligible and taxonomy-aligned activity with the relevant environmental objective; N: No, taxonomy-eligible but not taxonomy-aligned activity with the relevant environmental objective; EL: Eligible, taxonomy-eligible activity for the relevant objective; N/EL: Not eligible, taxonomy-non-eligible activity for the relevant environmental objective.

^b The analysis of the economic activity "Product-as-a-service and other circular use- and result-oriented service models" (CE 5.5) was limited to taxonomy eligibility only in 2023. The analysis of taxonomy alignment pursuant to Delegated Regulation (EU) 2023/2486 will take place in the 2024 financial year.

^c Due to a change in application of the materiality assessment, operating expenditure (opex) in connection with the taxonomy-eligible economic activity "Infrastructure enabling low-carbon road transport and public transport" (CCM 6.15) is no longer being reported in the 2023 financial year.

For further information on operating expenditure, please refer to Note 26 "Other operating expenses" in the notes to the consolidated financial statements.

	Proportion of turnover/ Total turnover 2023	
	Taxonomy-aligned per objective	Taxonomy-eligible per objective
Climate change mitigation (CCM)	0.2	1.8
Climate change adaptation (CCA)	0.0	0.0
Water (WTR)	0.0	0.0
Circular economy (CE)	0.0	0.6
Pollution (PPC)	0.0	0.0
Biodiversity (BIO)	0.0	0.0



	Proportion of capital expenditure (capex)/ Total capital expenditure (capex) 2023	
	Taxonomy-aligned per objective	Taxonomy-eligible per objective
Climate change mitigation (CCM) ^a	0.0	1.4
Climate change adaptation (CCA) ^a	0.0	1.4
Water (WTR)	0.0	0.0
Circular economy (CE)	0.0	0.7
Pollution (PPC)	0.0	0.0
Biodiversity (BIO)	0.0	0.0

^a Capital expenditure (capex) in connection with taxonomy-eligible activities that could theoretically be assigned to the "Climate change mitigation" (CCM) or the "Climate change adaptation" (CCA) environmental objective is reported here under both objectives.

	Proportion of operating expenditure (opex)/ Total operating expenditure (opex) 2023	
	Taxonomy-aligned per objective	Taxonomy-eligible per objective
Climate change mitigation (CCM) ^a	0.5	33.2
Climate change adaptation (CCA) ^a	0.0	19.1
Water (WTR)	0.0	0.0
Circular economy (CE)	0.0	0.0
Pollution (PPC)	0.0	0.0
Biodiversity (BIO)	0.0	0.0

^a Operating expenditure (opex) in connection with taxonomy-eligible activities that could theoretically be assigned to the "Climate change mitigation" (CCM) or the "Climate change adaptation" (CCA) environmental objective is reported here under both objectives.

Aspect 2: Employee concerns

With their commitment, expertise, and high performance, our on average more than 200,000 employees ensure that we live up to our ambition to always be there for our customers, to operate a stable network, to grow the Company, and to pave the way for the digital society. They are therefore of pivotal importance for 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.  

For our Guiding Principles and further information about our HR work, please refer to the section "[Employees](#)."

For information on the opportunities and risks associated with employees, please refer to the section "[Risk and opportunity management](#)."

Collaboration with employees' representatives and trade unions

Digitalization is fundamentally changing the way we work together. Employees are expected to demonstrate ever-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 to manage change, but also to 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. 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 our employees in countries within the European Union and the European Economic Area. The EWC has up to 32 seats (prior year: 32), 28 of which are currently occupied (prior year: 28) (as of December 31, 2023). 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, 2023, 74 % of employees in Germany were covered by collective agreements (prior year: 73 %). We record the Group-wide coverage rate every two years. As of December 31, 2022, it stood at around 45 %. In 2023, 45 collective agreements were signed with the trade unions in Germany (prior year: 90), which is a testament to the close cooperation with employees' representatives.

We also monitored trade union matters in the United States over the course of 2023. The responsibility for national human resources management matters in the United States lies with T-Mobile US' management, who are committed to exercising this responsibility. Across the globe, Deutsche Telekom respects the rights to freedom of association and collective bargaining in accordance with national law. This applies to the United States, with employees 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. In accordance with national legal requirements, T-Mobile US does not discriminate against employees because of a decision they have made about union support.

Our human rights policy statement Code of Human Rights & Social Principles was expanded in the reporting year to incorporate aspects such as the content of the existing Employee Relations Policy. The Code of Human Rights contains our globally applicable self-commitment to uphold freedom of association and the right to collective bargaining, among other elements. The new structure of the revised Code of Human Rights is also based on the requirements of the German Act on Corporate Due Diligence in Supply Chains (Lieferkettensorgfaltspflichtengesetz – LkSG).

Our employee survey, which of late has been carried out every two years, is a key indicator of the relationship between our Company and its workforce. The employee survey was not carried out in the reporting year on account of a change in service provider, and has instead been rescheduled for 2024. On top of this, we conduct pulse surveys (carried out twice a year, or once a year in years when the employee survey is carried out), which give us a sentiment snapshot across the Group. The most recent pulse survey was conducted in November 2023, with 77 % – i.e., more than 106,000 colleagues – participating. The survey asked employees about sustainability, among other topics: 81 % of those surveyed (prior year: 84 %) stated that they identified with Deutsche Telekom's environmental and social engagement. A total of 80 % (prior year: 83 %) believe that Deutsche Telekom acts responsibly toward the environment and society. The values reflect the survey findings excluding T-Mobile US, since T-Mobile US conducts its own employee survey.

For further information on the employee survey and the non-financial performance indicator "employee satisfaction," please refer to the section "Employees."

Diversity, equity, and inclusion

People from over 120 countries work successfully together at Deutsche Telekom. They all bring their diverse skills and demographic 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 Diversity, Equity, and Inclusion Group Policy, the six Guiding Principles, the Leadership Anchors as guidance for executives, and the Code of Human Rights are key cornerstones of our commitment to diversity. We are also a founding member of the Diversity Charter corporate initiative and a member of the advisory board of the Beyond Gender Agenda business network. In Germany, for example, our collective agreements on remuneration and other matters reached with the trade unions ensure transparent, gender-neutral compensation.

In line with the key dimensions of diversity set out by the Diversity Charter, we offer all employees – irrespective of age, ethnic origin and nationality, gender and gender identity, physical and mental abilities, religion and worldview, sexual orientation, and social origin – many development opportunities. We have developed action plans for each dimension of diversity so that we can make our working environment even more inclusive and put our diversity strategy in place in the various units. For example, we celebrated the Muslim festival of Eid al-Fitr and the Pride Festival together with our employees in 2023.

We are particularly keen not only to promote respectful interaction, but also to drive systemic changes in products and processes and make data-driven decisions. For example, executives are now being trained and sensitized on the topic of unconscious bias and other issues so as to avoid biased judgment in hiring and performance decisions. In 2023, we were one of the first DAX companies to introduce a voluntary, anonymous self-identification questionnaire in a pilot project in Germany, India, and Slovakia. This allows us to analyze the results of the employee survey across all seven diversity dimensions and to derive specific recommendations for action. More than 50 % of employees participated. This questionnaire is set to be implemented worldwide in 2025.

Diversity, equity, and inclusion (DE&I) are also rooted in the culture of T-Mobile US. In 2021, T-Mobile US launched its strategic DE&I plan Equity In Action, which focuses on employees and on the key priorities of talent, culture, brand, and digital equity. As a part of the Equity In Action plan, T-Mobile US established an External Diversity and Inclusion Council, which includes members from civil rights and social justice organizations. The External Council helps the company identify priorities, goals, and community efforts. It also helps T-Mobile US implement its Equity In Action plan and with the delivery of the DE&I promises.

Alongside these action plans, we are also continuing to move forward on cross-divisional issues. These include mentoring programs, flexible working models, child care services, advisory services for those caring for family members, a global talent hub, and innovative ideas for dealing with demographic change. The regular collection of data via the pulse survey is another measure. Questions were asked about nondiscrimination, a safe and supportive working environment, and equal opportunities in the Company. In November 2023, the pulse survey resulted in a score of 91 % for nondiscrimination (previous year: 92 %) and 86 % for equal opportunities (previous year: 85 %).

We also offer various training courses that shine a light on unconscious bias in order to reveal hidden prejudices. Additionally, we offer training on the various aspects of diversity. In the Learning from Experts (LEX) format, employees regularly provide input, including on issues with DE&I relevance. Finally, we support our numerous employee networks, employee resource groups (ERGs), and corporate communities, in Germany for example MagentaPride, Women@telekom, the Fathers' Network, BIPoC@DT (Black, Indigenous, and People of Color), and the newly founded Network for Neurodiversity. At T-Mobile US, there are six internal diversity, equity, and inclusion (DE&I) employee resource groups (ERGs). The ERGs include a group for persons with disabilities, a multicultural group with sub-affinity groups, a multigenerational network, an LGBTQI+ community, a network for veterans and active members of the military, and a women's network. Each of the ERGs also focuses on, and welcomes, allies.

For further information on equity and diversity in our Group, please refer to the section "[Employees](#)."

Occupational health and safety

Measures that promote health within the Company not only help individual employees and ensure long-term business success, but also have positive effects outside of the Company. For example, certain vaccinations and check-up services are also available to the families of employees. 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 an internationally harmonized quality, work, health, and environmental management system based on the international standards ISO 9001, ISO 45001, and ISO 14001.

The Board of Management bears overarching responsibility for safeguarding health, occupational safety, and the environment. The Group companies have health and safety managers who are responsible for specific processes and offerings that take into account special requirements and conditions right down to company level. We systematically evaluate the measures to ensure they are effective. The health rate, for instance, is reported to the Board of Management once per quarter. In addition, we review the results of our employee survey, analyses of stress prevention measures under collective agreements, health insurance reports, and competitor benchmarks. We analyze this data and use it to derive suitable measures. For example, we have adapted our fire safety assistant concept and introduced an app for our employees to call first aiders in order to respond to the changed conditions due to mobile working. Group-wide initiatives serve to promote health awareness and health literacy among our employees. 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 health promotion program also includes courses on nutrition, exercise, and relaxation (stress prevention, mindfulness, etc.). As well as action days such as Mindfulness Day or Mental Health Day, there are open lecture series, individual offerings (e.g., sleep advice, nutrition advice sessions), and digital solutions such as the Fitmit5 app to promote healthy break management. Our employees can use the corporate health promotion options free of charge, generally during working hours.

In addition, with our Germany-wide employee and executive advisory service, we offer a range of support services in the area of psychosocial health, but also crisis prevention and advice in the event of personal hardship and extreme incidents. Since 2022, we have been offering an advisory service for international employees affected by the war in Ukraine. We also provided special support for employees and their families impacted by the disastrous earthquakes in Turkey and Syria in 2023.

Standards have been put in place in Germany 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. Examples of these include driver safety training for certain areas of work or special safety training for employees who are deployed to work at cell tower sites. As well as preventing accidents, the aim is to promote the health and motivation of employees and therefore also increase the health rate.

Several key figures validate our performance in terms of corporate health management services: the total number of work-related accidents decreased slightly compared with the previous year. The accident rate in Germany was 5.2 accidents (resulting in more than three days of absence) per thousand employees (prior year: 5.5). At Telekom entities in Germany, the health rate in 2023^a, including long-term illnesses, was 94.3 % (prior year: 93.8 %). Excluding long-term illnesses, the health rate in 2023 stood at 95.8 % (prior year: 95.2 %).

The health index, which is measured as part of the employee survey, most recently recorded a slight increase of four points to a score of 69 (on a scale of 0 to 100) in 2021 in comparison with the previous survey. Preparations for the next round of surveys began in 2023.

Aspect 3: Social concerns

Access to state-of-the-art information technology is key to participating in the information and knowledge society (Access). Ensuring that products and services are affordable is also important so that people can participate equitably (Affordability). We also want to develop their skills and motivation to use digital media proficiently (Ability). The internet is supposed to be a space in which all people 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 civil courage online.

We aspire 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. As a relevant player in society, and committed as we are to exercising social responsibility, we also provide help in emergencies. There was particularly high demand for this help in the reporting year in light of the war in the Middle East, the forest fires on Maui, and the earthquakes in Turkey, Syria, and Morocco.

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

Network access and digital responsibility

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.


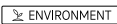
Demand for faster data services with full-coverage availability is growing continuously. Group-wide, we invested more than EUR 16 billion in 2023, primarily in building and operating networks, with around EUR 4.6 billion of this figure earmarked for the Germany operating segment alone. This is in addition to the investments that we make in acquiring mobile spectrum. Hence, the majority of the Group's investment volume in Germany is for the build-out of broadband networks. 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. The strategy is founded on the two pillars of building out mobile and fixed networks, with the focus of the former being on 5G coverage – the most powerful technology standard currently available. In the fixed network, we are focusing on rolling out our optical fiber to provide our customers with a reliable connection at gigabit speeds. As well as the pure fiber-optic lines, we are also offering other innovative products: for example, our hybrid router, which combines the transmission bandwidths of fixed-network and mobile communications, thus attaining higher transmission speeds – particularly in rural areas.

Our goal is to ensure a clearer focus on the contributions of the segments. That is why we are presenting the network build-out metrics at segment level in the combined management report. As a consequence, we no longer report on the number of households in Germany covered by optical fiber-based technology. For further information on the corresponding metrics and the network build-out, please refer to the sections “Group strategy” and “Forecast.”


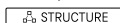
^a The health rate covered 98.5 % of the workforce in the reporting year. Five companies are not included in the health rate as they do not use a technical time management system which allows for this kind of reporting. This concerns 1.5 % of the workforce in Germany.

In order to improve accessibility to our digital products and services, the Board of Management decided in July 2022 to integrate the Design for All approach into product development. In the reporting year, we then developed the Design for All guide together with the segments and published it internally. We want to use this guide to avoid marginalization, stigmatization, and discrimination at an early stage in the product development process and include everyone in the digital transformation. It was very important to us to ensure that various diversity dimensions are covered by the guide.



We will publish detailed information on this in our [2023 CR Report](#).

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 5G build-out, 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. In June 2023, the four mobile carriers operating in Germany made a new self-commitment to the Federal Government. Among other steps, they commit themselves to continue operating the joint 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. Since 2022, the platform has been cooperating with the Federal Government's communication initiative "Deutschland spricht über 5G" (Germany is talking about 5G), for example, by supporting initiatives to establish a dialog with citizens. In the reporting year, we updated our Group-wide EMF Policy (EMF being short for "electro-magnetic fields") dating back to 2004. The EMF Policy defines standard requirements – which considerably exceed the applicable national legal requirements – for addressing mobile communications and health-related matters.  

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 feature of an ever-growing number of ICT products and services that often goes unnoticed. It opens up opportunities, but also presents challenges. Back in 2018, under the auspices of Compliance Management, we were one of the first companies worldwide to adopt Digital Ethics Guidelines on AI. These guidelines provide a framework for a responsible approach to AI. To supplement them, in 2021 we worked with experts to draw up professional ethics guidelines for all developers and product managers working with AI. The guidelines provide best practices, methods, and tips for transferring the Digital Ethics Guidelines on AI to application in development processes.  



We founded the Digital Ethics interdisciplinary working group in 2022 that addresses the development, monitoring, and implementation of digital ethics, further anchoring the topic within the Group. The working group is also preparing the implementation of the planned EU AI Act. To ensure that AI is developed that complies with our high ethical requirements in the supply chain, too, our Supplier Code of Conduct has since early 2020 included relevant content from our AI Guidelines.

In January 2023, we established the ChatGPT/GenAI expert group as part of the Digital Ethics working group to consider the emergence of generative AI such as ChatGPT and its impacts. In February 2023, this group published a Group-wide framework of action for employees providing guidance for the use of the free trial version of ChatGPT. Initially, the mission of the expert group was to support our functional units in assessing the ethical and legal requirements for the integration of generative AI into our business. The expert group now meets to identify cross-divisional synergies and integrate appropriate solutions into existing standard processes. In the reporting year, we also introduced a large number of training offerings on the potential, functioning, and risks of generative AI. In September 2023, we organized the first Prompt-A-Thon on how to use prompts – i.e., instructions or research questions to an AI system – to introduce employees to the topic of generative AI.  

We at Deutsche Telekom are committed to bringing about digitalization that focuses on people and values. Corporate digital responsibility (CDR) refers to efforts to manage the opportunities and risks of the digital transformation responsibly. The goals of our CDR activities are twofold: to prevent negative impacts, and to help shape the digitalization process in a positive way. In our Corporate Digital Responsibility framework, which we published in 2022, we set forth our perspectives on the far-reaching subject area of digital responsibility.

We will publish detailed information on this in our [2023 CR Report](#).

Connect the unconnected

The ability to use digital media safely, responsibly, and to the benefit of all is becoming increasingly important. That is why we are working to build media literacy and democracy skills in the population.  

The implementation of digital participation projects is the responsibility of the individual national companies. With the “Changemaker Challenge,” T-Mobile US is mobilizing the next generation to imagine and plan how to create positive change in their communities. Teams compete across three categories: Digital Equity, Diversity, Equity & Inclusion, and Sustainability. Project 10Million, which was launched by T-Mobile US in 2020, aims to overcome the digital divide in education with a commitment to offer up to 10 million disadvantaged student households with free connectivity for five years. Across its education programs, including Project 10Million, T-Mobile US has worked with parents, schools, and community organizations to connect 5.8 million of students through the end of 2023.

All media literacy initiatives for various target groups in Germany can be found on the website [Media, sure! But secure](#), where we provide information material for all target groups. Our multiple award-winning Teachtoday initiative promotes the safe and competent use of online media by children and young people. A toolbox is provided by the initiative for multipliers and teachers. It comprises more than 140 formats that deal mainly with media literacy and democracy skills. The initiative additionally publishes the interactive digital children’s magazine SCROLLER, which also provides material and background information to be used in media literacy lessons. The Teachtoday Academy is a platform for people who want to expand their knowledge and skills in various areas of digital education. As part of the Bitkom Digital Day in June 2023, we organized various media literacy activities, including on the topic of AI for All, in which the risks and potential of AI were explored interactively.

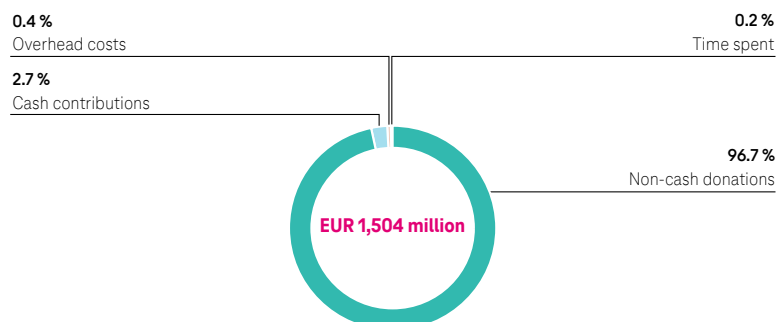
In 2023, we continued our No Hate Speech initiative – with the message “No Hate Speech – Our decision!” For example, the accompanying campaign ad shows what a single positive comment can achieve against hate speech. We also tackled hate speech in a joint campaign with FC Bayern München. As part of this campaign, we showed realistic hate comments and called for a stronger stance. We want to encourage people to actively combat hate speech and abusive language online. As in the previous year, the initiative focused on issues such as gaming and e-sports. In the reporting year, we worked with the esports player foundation to develop ten principles for fair play, the FIFA Fairplay Guide. We reached around 865 million media contacts in the reporting year with our No Hate Speech initiative. We reached 5.7 million people directly or through multipliers such as parents and educators (e.g., in workshops) in 2023 alone (prior year: more than 4 million). We have labeled the initiative with #GoodMagenta. We also won various awards and prizes in the reporting year for the No Hate Speech campaign.

The topic of data privacy is part and parcel of using digital media safely and securely. Our “Digitally secure” online guidebook offers practical advice on how to use digital media safely and securely. This is why we launched the international ShareWithCare campaign in 2023, which addresses the topic of “sharenting” – a combination of “sharing” and “parenting.” Using the deepfake video “A message from Ella” based on this, we want to raise people’s awareness of how important it is to protect children’s photos and data online.

We measure the impact of our social commitment with a set of three ESG KPIs. The Community Contribution ESG KPI maps our social commitment in terms of financial, human, and material resources: in 2023, it amounted to around EUR 1,504 million (prior year: EUR 2,346 million). A particular effect in 2022 was our support for Ukrainian refugees in the form of free or heavily discounted telecommunications services (EUR 550 million in Germany). We continued to offer telecommunications services at lower-cost rates in 2023, albeit to a lesser extent (EUR 24 million in Germany). The Reach – Focus Topics ESG KPI shows the number of media contacts we have reached with our communication on our focus topics of digital society (with the subtopics digital participation and digital values) and low-carbon society. This includes, for instance, the people we reached in 2023 with advertising and content on socially relevant topics, such as online hate speech: we recorded a decrease to around 1,734 million people compared with the prior year (2,070 million). The Beneficiaries ESG KPI shows the number of people who have benefited directly or indirectly (based on assumptions) from our commitment to digital participation and the low-carbon society, for example, workshop participants and users of lower-cost rate plans, including other household members, and many more. In 2023, the number of beneficiaries was around 51 million (prior year: 41 million).

We will publish detailed information in our [2023 CR Report](#).

Community Contribution ESG KPI



Emergency disaster aid

It is especially important in disaster situations that people who are affected and their relatives can communicate with each other. The comprehensive aid measures for Ukrainians in need launched in Europe in spring 2022 were partly continued in the reporting year. Ukrainian citizens were again eligible to receive a discounted prepaid card in 2023.

As a gesture of solidarity with Israel, Telekom Deutschland enabled free phone calls and text messages to and from Israel and within the country via the mobile and fixed network from October 12 to 31, 2023, including roaming for data, text messages, and voice services in Israel.

Following the powerful earthquakes in Syria and Turkey in spring 2023, we enabled phone calls to and from the affected countries free of charge for three weeks in February. On top of this, the Group donated EUR 1 million to the “Aktion Deutschland Hilft” relief coalition for direct disaster aid in response to the earthquake. And following the earthquake in Morocco, we also enabled phone calls free of charge to and from Morocco and within the country via the Deutsche Telekom network in Germany and at T-Mobile US for three weeks in September 2023, and offered free roaming for data and voice services.

T-Mobile US also offered its customers support in 2023 so that they could stay in touch with people affected by disasters and severe weather. During the August 2023 wildfires on the island of Maui in the U.S. state of Hawaii, T-Mobile US worked quickly to restore network connectivity in affected areas. T-Mobile US provided unlimited talk, text, and data to T-Mobile US customers with Maui addresses, distributed activated phones with service and charging supplies, as well as set up Starlink Wi-Fi hotspots to support, e.g., residents, evacuees, and first responders, with high-speed internet. Also, the company raised donations from employees and customers through matching, text to give, and other programs.

Also in 2023, T-Mobile US' emergency teams prepared for or responded to several additional incidents including Hurricane Idalia in Florida, Georgia, and South Carolina; tornados in Alabama, Georgia, Mississippi, and Texas; winter storms in California and across the Northwest and Midwest; Typhoon Mawar in Guam; flooding in Vermont; wildfires in Oregon and Washington; and Hurricane Hilary near Southern California.

Data privacy and data security

People will use ICT solutions if they trust that their personal data will be kept secure. These solutions can then also unleash their 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 privacy and compliance culture, which has been built up over many years, sets national and international standards. The data privacy management system outlines the measures, processes, and audits we use to ensure compliance with laws, regulations, and self-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, the research community, business, and independent organizations.

Through our global data privacy organization, we are continually pursuing the objective of a transparent, high level of data protection in all of the Group companies. As far as legally possible, the companies of the Deutsche Telekom Group have additionally committed to the Binding Corporate Rules Privacy, which are intended to ensure a uniform high level of data protection for our products and services in accordance with ISO 27701.

The Group Security Policy contains significant security-related principles valid within the Group, which are based on the international ISO 27001 standard. Similar to the data privacy organization, the Group has established a global security organization which operates both on a centralized basis and in all Group entities. These elements lay the foundation for ensuring an adequate and consistent level of security within our entire Group.

We issue an annual transparency report – since 2014 in Germany, and since 2016 in our other national companies in Europe – 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, audits and certifications are carried out regularly 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 and respond to requirements at Group or entity level at an early stage.

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 around 21,000 Deutsche Telekom employees (excluding T-Mobile US) on topics related to data privacy and data security. Of the employees invited to take part in 2022, around 16,000 responded. The data protection level in the units is determined on a scale of 0 to 100 % on the basis of employees' answers regarding their thoughts, actions, and knowledge around data privacy. The resulting Data Protection Award indicator was calculated most recently in 2022 at 88 % (2020: 86 %).

We use our Online Awareness Survey (OAS) as a tool for collecting indicators on security awareness within the Company. Some 43,700 employees (excluding T-Mobile US) across all levels of the hierarchy were invited to take part in the survey in 2023. Around a third responded. With academic support, we use the results from this survey to determine the Security Awareness Index (SAI). In 2023, the index was 80.6 (2021: 80.9) of a maximum of 100 points, higher than in any other company in the benchmark. 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.

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 international subsidiaries. Where there is a greater risk of data such as customer or employee information being misused, we also offer 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.

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 50 million attacks per day on our honeypot systems (prior year: 54 million). At its peak, the number of attacks per day reached up to 95.6 million. Of course, not all of the attacks picked up by our sensors are high-level. Most are automatic scanning processes to detect potential vulnerabilities. While these do not necessarily count as fully fledged attacks, they are still to be seen as relevant early-stage activities. Deutsche Telekom Security even develops its own malware in a shielded environment and uses it to test whether new systems can reliably detect and mitigate these attack vectors. In this way we ensure our own critical IT infrastructure is protected. We also offer other operators of critical infrastructure advisory services, for example energy providers.

Our security experts use their experience to help develop security solutions. Deutsche Telekom Security's portfolio was systematically refined in 2023. In light of the ever-increasing number of complex threat scenarios, the focus was on the continued automation and standardization of solutions. This enables our customers to react even faster if they are attacked using Managed Detection and Response (MDR) and to stop processes in time if necessary. Our SASE (Secure Access Service Edge) solutions offer our customers comprehensive cloud-based protection so that they can work securely wherever they are.

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 for new and 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®, an established standard 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 that aim to make the internet a safer place for children and young people.

We work with research institutes, industry partners, initiatives, standardization bodies, public institutions, and other internet and telecommunications service providers worldwide with a view to fighting cybercrime and enhancing internet security together. For instance, we collaborate with the German Federal Office for Cybersecurity throughout Germany, and with the European Union Agency for Cybersecurity (ENISA) at EU level. We have also been involved in other national and international organizations for many years, such as the Federation of German Industries, Bitkom, and the Munich Security Conference. 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.

Aspect 4: Respecting human rights

There are still places in the world where human rights are not a given. As a responsible, globally active company, we take internationally recognized human rights and environmental concerns seriously and acknowledge our corporate responsibility. This not only applies within the Company, because we also take our responsibility to and with our business partners and our more than 20,000 direct suppliers in more than 150 countries seriously.

In our Code of Human Rights, we spell out in detail our commitment to respecting and promoting human rights and environmental concerns everywhere we operate – including our suppliers and business partners. We take into account the legal requirements when developing the Code of Human Rights. It was expanded in the reporting year by incorporating the content of the existing Employee Relations Policy, among other aspects. The Code also commits us to internationally recognized human rights and environmental law benchmarks, such as the United Nations International Bill of Human Rights, the core labor standards of the International Labour Organization (ILO), the OECD Guidelines for Multinational Enterprises, and the United Nations Guiding Principles on Business and Human Rights. In addition to this self-commitment, we also recognize the minimum social safeguards which, in line with the provisions of the EU Taxonomy, are necessary conditions for the taxonomy alignment of economic activities. The principles and expectations described in the Code are aimed in equal measure at our employees and at our suppliers and business partners. We review the Code and the due diligence processes it describes each year and publish the results of the human rights and environmental risk analyses conducted in mandatory and voluntary reporting formats, such as the annual report in accordance with the Supply Chain Due Diligence Act or the UNGC Communication on Progress.

All Group companies in Deutsche Telekom AG's business area have implemented the Code of Human Rights. We revised the Code of Human Rights in the reporting year so as to better reflect, for example, legal requirements such as the German Act on Corporate Due Diligence in Supply Chains (Lieferkettensorgfaltspflichtengesetz – LkSG). Together with the annual report on the results of the risk analyses, the Code of Human Rights forms our human rights policy statement within the meaning of the LkSG.

The revised Code of Human Rights was adopted by the Group Board of Management in 2023 and subsequently published; adoption of the revised Code by the management bodies of the Group companies included began in 2023.

Due diligence processes in the Group

We reviewed and enhanced our human rights and environmental due diligence processes in 2022 and 2023 to better reflect the new statutory requirements among other factors, e.g., under the Supply Chain Due Diligence Act. We could be exposed to country- and supplier-specific risks in particular because of our global procurement activities.

For further information, please refer to the section ["Risk and opportunity management."](#)

The Board of Management of Deutsche Telekom AG and the management of the individual Group companies are responsible for implementation of and compliance with our due diligence processes. Periodic and/or event-driven internal reporting on human rights and environmental results in decision-making bodies (e.g., management bodies) is designed to ensure that informed decisions can always be made.

We will publish detailed information on the results of the annual risk analysis in our [2023 CR Report](#) and in our 2023 LkSG Report.

In order to implement our self-commitments and the legal requirements, we have introduced a comprehensive program for minimizing risks, which we are constantly updating. The core elements of the program are regular risk analyses in our own business area and at our suppliers⁴; a policy statement on human rights; awareness-raising among employees, suppliers, and business partners; a mechanism for lodging complaints; and reporting. We derive appropriate preventive and remedial measures from the results of the annual and event-driven risk analyses. We also perform verification and effectiveness audits. Examples of these include on-site auditing measures at our own Group companies in our own area of business or at suppliers, e.g., in the form of human rights impact assessments (HRIAs)/social audits, as well as certification in the area of occupational health and safety. The focus here is on respecting human rights in relation to working conditions. These systematic and comprehensive audits give us a deeper insight into the actual conditions on site, enable us to respond even more specifically on an event-driven basis and to develop and implement solution concepts in partnership with all parties involved. Based on the analysis results from 2023, we will examine whether, and to what extent, such on-site audits are necessary in 2024. There were no grounds for risk-related on-site audits in our own business area in the reporting year. We performed extensive auditing measures at our suppliers.



For further information, please refer to the section "[Labor standards at our suppliers](#)."

As a U.S.-listed company, T-Mobile US conducts a risk assessment using its own methodology, on which it regularly reports to the relevant bodies, which also include representatives of Deutsche Telekom AG. Before T-Mobile US selects suppliers, a centralized Third-Party Risk Management (TPRM) process screens for anti-corruption, global sanctions, and human rights violations, as well as financial, security, reputational, and environmental risks. Supplier risk assessments are performed on an ongoing basis depending on the risk profile of the supplier.

Via the TellMe whistleblower and complaints portal, employees and external third parties can submit information and report complaints – anonymously, if needed. A total of five reports and complaints relating to human rights or environmental law were received via TellMe in the reporting year. In particular, risks relating to civil engineering work for the rollout of optical fiber were derived from the complaints and tip-offs received and factored into the annual risk analysis.

Labor standards at our suppliers

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. We have anchored the topic of sustainability and the resulting requirements in all procurement processes (excluding T-Mobile US). Procurement is responsible for implementation. Group Corporate Responsibility works with the procurement function to strategically enhance sustainability in procurement.

Our sustainability principles and their application in procurement are set out in the Procurement Practices in the Global Procurement Policy. In addition, there is a policy giving purchasing officers an overview of the CSR criteria that are to be taken into account at each stage of the procurement process. In the reporting year, we rolled out various sustainability materials and training courses to our employees in the context of the Supply Chain Due Diligence Act.  

We will publish detailed information on activities relating to implementation of the Supply Chain Due Diligence Act in our [2023 CR Report](#).

We require our suppliers to accept the principles of our Supplier Code of Conduct and meet the associated requirements. To minimize any risks relating to sustainability shortcomings and support suppliers in further developing their sustainability performance, we use a comprehensive risk management system for suppliers. We start by performing a risk assessment of all product groups. We then carry out a comprehensive risk analysis for all suppliers in every category. Specialized companies assess our suppliers with regard to financial, CSR, and compliance risks (excluding T-Mobile US). We also generally apply a 20 % weighting to environmental objectives, our suppliers' carbon footprint, and, in the case of individual product groups, other criteria, such as social sustainability. In this way, we discover if there is any increased risk in terms of specific sustainability aspects at any of our suppliers.

Sustainability assessments and reviews are additionally conducted for selected suppliers of product groups in high-risk categories. Depending on their individual sustainability performance and risk classification, we use a range of instruments, for instance, sustainability ratings by external providers, mobile employee surveys, and on-site supplier audits (social audits). Our focus here is not only on our direct suppliers but also, to the extent possible, on downstream suppliers. We enhance the effectiveness of our audits through our cooperation with the Joint Alliance for CSR industry initiative (JAC, formerly Joint Audit Cooperation), which comprises 27 globally active telecommunications companies. In 2023, we carried out a total of 150 audits (prior year: 98) – 137 social audits (prior year: 83) and 13 mobile surveys (prior year: 15) – of which 62 (prior year: 40) at our direct and 88 (prior year: 58) at our indirect suppliers. Since 2010, we have carried out 1,060 audits (prior year: 910) within the framework of the JAC.

We work closely with selected suppliers to steadily improve their sustainability performance. Our previous Supplier Development Program, which we used to encourage the continued development of strategically relevant suppliers in key sustainability issues such as environmental protection, working hours regulations, and health and safety, was transitioned to the JAC industry initiative in the reporting year. The program is currently being refined in the JAC. We hosted the JAC General Assembly in the reporting year and participated in an industry dialog with other telecommunications companies. Issues discussed in the dialog included the further development of auditing requirements, improvements in transparency, and the effective identification of measures for telecommunications-specific industry risks. One outcome of this dialog was the establishment of dedicated working groups, in which Deutsche Telekom will participate in 2024.

Sustainability in procurement is measured based on the following ESG KPIs: the Procurement Volume Without CR Risk ESG KPI – for which the target is 95 % by 2025 – measures the procurement volume from direct suppliers on whom an established external service provider carried out checks in the reporting period^a 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 99.98 % in 2023 (prior year: 99.6 %). The Procurement Volume Verified as Non-Critical ESG KPI – target for 2025: 60 % – by contrast, measures the share accounted for by suppliers checked for social and ecological criteria by means of dedicated reviews – e.g., through EcoVadis, the CDP, social audits, or supplier visits. In 2023, the share of these CR-verified suppliers was 66.17 % (prior year: 64.1 %). In each case, the calculation is based on the Group-wide procurement volume that is already uniformly mapped to a large extent (excluding the Network Capacity category and T-Mobile US), but on different levels of supplier relationships.

Aspect 5: Fighting corruption

Corruption violates national and international law. We take a clear stance against any form of corruption in the public and private sector, whether this is active corruption in the form of bribery, or passive corruption in the form of bribe-taking. For this reason, our compliance management system (CMS) is particularly geared towards preventing corruption.

Compliance management system

Our compliance culture is a key component for corporate governance based on integrity and respect. We have expressed our Group-wide commitment to complying with ethical principles and both legal and statutory requirements. We have incorporated this pledge in our Guiding Principles and our Code of Conduct.

We implemented a CMS with the aim of minimizing risks arising from systematic infringements of legal or ethical standards that could result in regulatory or criminal liability on the part of the Company, its executive body members, or employees, or result in a significant loss of reputation. The Board of Management considers its overall responsibility for compliance as a key leadership task. Our Chief Compliance Officer is responsible for the design and management of the CMS. Compliance officers implement the CMS and our compliance goals locally at the level of our operating segments and national companies.

Our CMS is based on the Compliance Risk Assessment (CRA), which we use to identify and assess compliance risks and introduce appropriate preventative measures. To this end, we have introduced a process to be carried out at regular intervals. The companies that take part in the CRA are selected using a risk-based approach according to the level of maturity of their compliance management system (maturity-based model).

The CRA methodology was adjusted in the reporting year and a focus CRA carried out. The focus CRA is a further evolution of the existing CRA approach. Under the new approach, the goal is to assess the effectiveness of the control environment in selected compliance risk areas. We piloted this approach in 2023, with the main focus being on our procurement processes. Ten international companies (the Europe and Systems Solutions operating segments) and one national company (Germany operating segment) participated in this focus CRA pilot project. The companies were selected according to risk, with a focus on international companies with their own procurement organization. Each of the Group companies was responsible for performing its own CRA. The central compliance organization managed the overall process, providing support and advice at all stages. Going forward, these focus CRAs will be alternated with the broader-based standard risk assessments using the existing methodology.

^a The total value is calculated using actual data from January 1, 2023 to November 30, 2023 and an estimate for December 2023 based on the prior-year figures, since the data for December 2023 was not available at the time of publication.

As a U.S.-listed company, T-Mobile US conducts a risk assessment using its own methodology, on which it regularly reports to the relevant bodies, which also include representatives of Deutsche Telekom AG.

We regularly engage external auditors to audit our compliance management system in accordance with Auditing Standard 980 laid down by the Institute of Public Auditors in Germany (Institut der Wirtschaftsprüfer in Deutschland e.V. – IDW) focusing on the fight against corruption. A total of 22 domestic and international companies were therefore successfully audited in the 2020 and 2021 financial years and the effectiveness of their respective CMS verified. Alongside compliance processes, the audits focused in particular on processes that are exposed to an increased risk of corruption, for example, in procurement, sales, events, donations, sponsorships, mergers and acquisitions, and human resources. A further IDW AuS 980 audit of Deutsche Telekom AG and of selected Group companies is planned for the 2024 and 2025 financial years.

We regularly provide risk-oriented and target group-specific compliance and anti-corruption training. We rolled out an e-learning course on the fundamentals of compliance, including the fight against corruption, for all Group employees nationally and internationally (excluding T-Mobile US) in the reporting year; it is available in 14 languages. Employees can also obtain advice on compliance matters and on conduct based on our values and in line with the law on the AskMe advice portal.

Despite all precautions, we are not always able to prevent breaches of law or violations of regulations at the Company. Our TellMe whistleblower portal enables employees and external third parties to report potential breaches of compliance to the Compliance unit fully confidentially and, if needed, anonymously. We systematically investigate all tip-offs to the extent allowed by law – including those that reach us through other channels. We take actions against misconduct that are appropriate to the facts and degree of fault in line with the relevant laws and regulations. We have introduced a Group-wide reporting process to control and monitor these activities. In 2023, 85 compliance-related tip-offs were submitted via the TellMe portal (prior year: 81 tip-offs). Over the course of the year, 29 of these were confirmed to be cases of misconduct and dealt with accordingly.

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 requirements, refrain from any kind of corruption or conduct that could be interpreted as such. We select our business partners based on compliance criteria and, where required, conduct risk-oriented integrity checks and/or compliance business assessments. We have also been offering e-learning on compliance to our suppliers since 2014.

SDG 17 RELATIONSHIPS

We will publish detailed information on our Supplier Code of Conduct in our [2023 CR Report](#).

Employees

Supporting people. Driving performance.

We at Deutsche Telekom are actively shaping the digitalization of society and, at the same time, we are engaged in the cultural and digital transformation. 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 transformation process and, in doing so, shift the focus of attention to people. As HR, our vision is to create the Best Team in the Industry. On the one hand, this requires us to safeguard the competitiveness of our organization, further enhance our attractiveness as an employer, and create a working environment capable of responding dynamically to changes in how we work today. On the other, it means establishing powerful HR IT systems with which we can become even more efficient and agile. We continue to focus on strengthening a culture of diversity and participation in which all employees have the opportunity to unlock their full potential.

SDG 5 EMPLOYEES

Above and beyond this, we place a particular emphasis company-wide on building and extending urgently needed technical and digital skills to systematically shape up our company in readiness for the challenges that lie ahead.

Our people strategy is thus central to the implementation of our Group strategy to become the Leading Digital Telco. We bundle our programs and initiatives into five **strategic priorities**, which we further refined in the reporting year and present in the following for illustrative purposes.

1. Future-proof organization
2. Top tech and digital skills
3. Best place to work
4. Leadership in digital tomorrow
5. HR IT & data-driven HR

Our HR work based on the priorities

1. Future-proof organization

Our ambition for a future-proof organization is to build competitive structures which serve both our corporate targets and our workforce. That means aligning employment conditions with the market while systematically tapping efficiency potential by improving the quality of our products and services, and by automating and digitalizing processes in a targeted way. At the same time, we are taking steps in all areas to permanently adapt our structures, processes, and ways of working to changing market conditions. It is our responsibility to place employees with the right skills in the right jobs and continue to support their development in line with future needs. In addition to the technology-induced transformation initiatives, the crisis-induced need to adapt, and the competition-induced staff restructuring, the decisive tools in achieving this goal are proactive total workforce management, the ongoing digitalization of our core processes, and investments in skilling – with the aspiration of safeguarding competitive employment conditions for our employees in the long term.

Transformation initiatives. Over the course of the reporting year, we once again implemented essential transformation programs in the Group's business areas, e.g., at Group Headquarters, within Telekom Deutschland's business customer segment, as well as at Deutsche Telekom IT, the Group's internal IT service provider. Care is always taken to implement all restructuring activities in a socially responsible manner. In August 2023, T-Mobile US shared its plans to make organizational shifts, including reducing some corporate, back-office, and technology roles. These shifts impacted close to 5,000 positions, a little under 7 % of our total employees. Impacted roles were primarily duplicative to other roles or were aligned to systems or processes that are changing or did not fit with the current company priorities. In September 2023, these shifts were completed. In addition to severance payments based on tenure, impacted employees were given 60 days minimum of transition leave, during which time they remain part of our company headcount. Impacted employees were also offered a lifetime T-Mobile discount for service, up to 2 years of access to tuition assistance, and for long time employees (20 years+) an enhanced tuition payment.

The Group continued its efforts in the reporting year to build towards modern, fit-for-purpose organizational models, such as agile or flexible organizational structures to meet the different needs of business. In Germany, for instance, global organizational structures and agile workflows in the T-Systems corporate customer segment were continually refined, and an IT solution was piloted to transparently map agile working structures. A number of our national companies in Europe, too, including Magyar Telekom in Hungary, Slovak Telekom, and T-Mobile Polska, have already implemented agile working across broad swaths of the organization. We thus not only promote sustainably customer-oriented and agile working methods, but are also able to respond quickly to change.

New employment prospects. Since the start of 2022, the next.JOB unit has been offering employees in Germany who are seeking a new professional challenge outside of the Group opportunities to enter the public sector. The placement service is available to both civil servants and non-civil servants and coordinates closely with the Group segments. In 2023, next.JOB significantly expanded its collaboration with Digitalization HEROES, an initiative of Deutsche Telekom IT (DT IT). The initiative offers employment prospects in the public or private sectors to DT IT employees whose skills are falling out of demand or are no longer needed at Deutsche Telekom due to the technological transition, but which are sought after outside of the Company. Together, next.JOB and Digitalization HEROES have organized numerous events and info calls for interested employees. In 2023, next.JOB enabled 276 successful permanent placements, many of which were with the German Federal Employment Agency.

As a founding member of the initiative Allianz der Chancen, we are actively shaping the transformation of the working world. Member organizations of the alliance offer their employees economically and socially sustainable employment prospects across many different industries. The aim is to make people aware of new opportunities and lower the threshold for change: from one job to another. To this end, in 2023 the relevant companies rolled out numerous internal projects and also formulated common areas of operation and recommendations for action for a new working world.

2. Top tech and digital skills



According to a Korn Ferry Institute study, there will be 4.3 million vacant technical positions in the technology, media, and telecommunications industries by 2030. Yet we need highly skilled employees, many of whom with technical, digital, and IT profiles, to help us achieve our Group strategy. In times of shortages of skilled labor, this not only puts us in direct competition with our industry peers, but in particular with tech and software companies, as well as the automotive sector, all of which have a strong demand for technical and digital skills. We respond to this challenge by ramping up our investments in recruiting, developing, and retaining talents with the requisite skills. In the reporting year we increased the percentage of digital experts within our workforce at the Group to 22 %, up from 19.7 % in the prior year. Thereby, we have already significantly exceeded our promise we made to the capital markets of reaching 17 % by 2024.

Employer brand. Competition on the labor market remains intense, especially in the IT and tech field. The employer market is increasingly turning into an employee market. Employers are now in a war for talent on a global stage and across multiple industries. In parallel, the needs and expectations of this sought-after target group have changed – a development that was further heightened by the experiences from the coronavirus pandemic. Not only are these talents becoming more and more demanding, but other topics like flexible working models, international mobile working, innovative projects, and new technologies remain front and center.



Our employer value proposition (EVP) is aligned with the goal of strengthening our position as an international, attractive employer for top tech and digital talents. The EVP describes what current and prospective employees can expect from working at Deutsche Telekom. Building on this, our international employer branding campaign “Question today, create tomorrow.” profiles current employees and invites talents to join us in questioning the status quo and to find the answers for the future together. Using messages tailored to specific audiences, an eye-catching look and feel, and a strong content strategy, we help IT experts to discover career opportunities at Deutsche Telekom on various social media channels. The campaign was launched in 18 of our national companies in 2022, with further national companies added in the first half of 2023 (Slovakia, Greece, Romania, Czech Republic, and Hungary).

We deploy a broad spectrum of HR marketing measures oriented to specific target groups with the goal of filling vacancies with the ideal candidates as rapidly as possible. University partnerships and cooperation with strategic partners have been bundled under the Magenta Campus team with the aim of connecting with students directly. This team has initiated target group-specific measures at selected universities in Germany, and is set to scale up the campus portfolio throughout Europe. A Magenta Campus tour designed to strengthen our on-campus contact was held at seven locations, generating over 2,400 contacts and more than 150 recommendations for the Telekom Talent Pool. We also remain committed to existing partnerships, including with Femtec, with the goal of attracting women into STEM professions at Deutsche Telekom.

A strong employer brand pays off: in the reporting year, Deutsche Telekom once again won the Institute of Research & Data Aggregation's Leading Employer Award. Our efforts to tailor our communication to specific target audiences are also bearing fruit: we were ranked #1 in Potentialpark's Social Media Communication 2023 and Talent Communication studies, and took the top spot in the NetFed HR Benchmark. Our national companies also received accolades for their appeal as employers: for example, T-Mobile Austria received the Kurier seal of quality “Favorite Employer 2023,” PwC named Magyar Telekom the most attractive employer in the telecommunications and media industries in Hungary, while T-Mobile Czech Republic won the prize for top employer in the telecommunications sector.

Talent attraction. In the reporting year, despite the challenging situation on the global labor market, we attracted 10,725 new employees (excluding T-Mobile US). Germany accounted for the largest share of these new hires, with 2,472 new team members. A sizable portion, namely 797 new technicians and 1,174 experts, were recruited for the fiber-optic build-out in Germany. A further 1,168 new employees were hired in India, primarily with the job profiles software developer, tester, technical product manager, and project management, making India one of the most important locations for attracting tech and digital talents. We also welcomed 1,916 new apprentices and dual students, a high percentage of whom with technical, digital, and IT profiles.  

For further information on training at Deutsche Telekom, please refer to the section “[Investing in young talents](#).”

T-Mobile US also made significant advances in recruitment and retention over the course of the reporting year.   The company invested in programs intended to enable different routes to employment, since people often choose to press pause on their careers due to important life events or professional shifts. The Returnship program allows them to hit the start button again. Participants are provided with a dedicated career development and support system in order to build specific skills, take advantage of coaching and mentoring opportunities, and put together their own résumé over the course of the six-month program.

Our comprehensive recruitment strategy unites digitalization with personal commitment. We highly value direct exchange, so we attend careers fairs, networking sessions, and other events. Personal contact plays a key role, and we reward the successful recommendation by employees through our ExpertsHireExperts program with a EUR 2,500 bonus. This approach resulted in 788 new employees in 2023. We also rely on innovative recruitment measures such as events in the metaverse, and make use of artificial intelligence (AI). Our sourcing team placed 348 potential candidates onto the recruitment pathway using tools such as the AI-powered recruiting platform Eightfold. Assessment centers are integral to our recruitment strategy and serve as a powerful tool for selecting skilled employees and leaders. We also offer our employees seamless onboarding through our dedicated onboarding app (6,451 users in 2023), alongside innovative onboarding events, where we welcomed 772 people. Not only are these measures essential for integrating new employees rapidly, they also help us retain our talents long term. This combination of initiatives is a reflection of our forward-looking approach and empowers us to attract talents effectively.

We use a blend of traditional and innovative approaches to recruitment to strengthen our position as a global employer. Our T-Hub strategy in Europe aims to unlock new labor markets using a cross-segment structure with attractive locations. These hubs offer a home for top tech and digital talents. Our goal is to offer these talents an inspiring work environment, challenging projects, and cross-segment training and career opportunities. The existing hubs are being optimally networked to effectively serve future demand for tech and digital skills. By strategically linking our locations, we are creating an optimized talent attraction strategy that strengthens our global presence and ensures that we can continue to satisfy the growing demand for tech and digital skills.

In 2023, T-Mobile US' Being Un-carrier onboarding program provided support for over 1,558 new hires and their managers in the form of streamlined communication, online resources, live orientation sessions, and special offerings on benefits as well as diversity, equity, and inclusion. Furthermore, a new leader onboarding program was developed in October 2022 for new hires joining in leadership roles as well as internal employees that are promoted into leadership roles. The program supported 159 new leaders in 2023 with targeted communication, online resources, and live orientation sessions.

Investing in young talents. Investing in our own young employees is key to safeguarding the skills we need as a company. We welcomed 1,916 new apprentices and dual students in Germany, a high percentage of whom with technical and IT profiles. We believe the key to attracting the younger generation is to understand what they want and need from their work, and systematically act in alignment with this. To this end, we worked with leading social and educational research scientist Prof. Klaus Hurrelmann and the FiBS Research Institute for the Economics of Education and Social Affairs to survey all young professionals at Deutsche Telekom. Our representative study, Be A Future Maker, gives us valuable insights into what Gen Zers expect from their future employers. As a training provider, we addressed both the study findings and the fact that a large portion of the younger generation is worried when it comes to choosing their professional training by incorporating the following changes and offerings in the reporting year: Under the motto "new recruiting," we integrate career guidance directly into the recruitment process. Applicants can now apply to work for us without having decided for a specific career. Together with the applicant, we find the best fit for them in our training and study portfolio. This approach puts applicants at the center of the process, removes the need for a cover letter, for example, and expedites our selection process. New Recruiting is also receiving industry accolades: our paradigm shift won us first place in the Trendence Award in the category Best Candidate Experience. Thanks to our DiscoverMINT@Telekom orientation program offering internships in the STEM field, we won the Personalwirtschaftspreis in the category Training and Studies. For the fourth time in succession, Capital magazine validated our keen efforts to advance young employees working at our company and offer them opportunities for success by ranking us "Germany's best training provider" in the categories "Vocational training" and "Dual studies" in 2023. We were also ranked Germany's best training provider by Focus Money magazine, and received the seal of quality Top IT training provider from Chip magazine. We additionally won accolades for our marketing to school students: in March 2023, we came top in Potentialpark's Talent Communication Study, with awards for our career website, online application, and social media platforms.

Our Start up! trainee program has been championing young talents since 2008, with a focus on university graduates in the STEM fields as well as business and economics. A total of 622 graduates have already joined Deutsche Telekom via this program, which has a current cohort of 83 trainees. We plan to hire 77 new Start up! trainees each year over the coming years as a further long-term investment in young talents. The 18-month program starts on a rolling 3-month basis and offers plenty of scope for trainees to develop in their own direction and flexibly shape their own learning path. As part of an elective focus subject – including public and regulatory affairs, technology and innovation, Group Development/M&A, finance, in-house consulting, Human Resources, and more – our trainees go through five core phases. An intensive onboarding bootcamp is followed by various project assignments, work with customers, exploratory work in new business areas, and a project phase at one of our national companies. Trainees are encouraged to grow and develop continually through access to a variety of modern learning formats. Their professional and intercultural skills are nurtured in domestic and international projects and experiences abroad. In 2023, we placed 56 % of program graduates in positions in the future-relevant fields of technology and digitalization.

Investing in young talents is also of particular importance for our Europe operating segment, and remains a key priority in our commitment to promoting growth and innovation. The diversity of our initiatives reflects the diversity of our national companies: Since 2006, T-Mobile Austria has provided 590 young people with training as customer experts/retail sales specialists with a focus on telecommunications. The goal of the vocational training program Magenta Lehre is to safeguard the best retail employees both now and in the future. Around 800 people applied for the 40 positions across Austria in 2023. The IT INCUBATOR trainee program at T-Mobile Czech Republic and Slovak Telekom aims to secure young talents for the future. 29 people were hired in key positions across all areas of the company in 2023, including IT and tech. Bridging the gap between academia and the business world has always been a priority for the OTE group. Every year, it takes part in over 50 careers events organized by local universities, offers scholarships to 30 students each year (with over 750 scholarships provided to date in the context of a program), organizes company visits to leading Greek and U.S. universities, and provides placements for more than 620 interns. The OTE group's project "Strong links with Academic & Tech Communities" developed targeted strategies for recruiting and acquiring talents with IT and digital profiles, for which it won bronze at the 2023 HR Awards in Greece. Magyar Telekom in Hungary launched the fourth edition of its Kickstart trainee program in September 2023. University graduates meeting specific profiles (focus on tech and digital) can apply for the 12-month learning journey, at the end of which the goal is to win them long term for the company. Crnogorski Telekom works closely with local universities, including the University of Montenegro and Cortex Academy, to attract young tech talents by offering students internship opportunities, project experience, mentoring, and participation in trade fairs. Crnogorski Telekom is also a partner of the Erasmus+ program, which aims to strengthen the dual study model in Montenegro. T-Mobile Polska is driving innovation with the introduction

of a year-long program for high-potential university graduates, called Magenta Talents Squad. The first cohort graduated in March 2023 and 6 talents were taken on as permanent employees in various different functions. The second cohort began in September 2023. Of the 282 candidates who applied, 7 were selected. With the goal of building up a broad-based pipeline of leadership talents with a focus on covering a wider age spectrum, our Europe operating segment offers the “30 under 30” program for young talents with leadership potential from all national companies. The 9 first-wave participants set out on their full-time learning journey in September 2022 and will finish in March 2024. The selection process for the second wave began in 2023.

Against the background of the tense market for skilled professionals, the Graduate program at T-Systems is a talent initiative designed to attract and retain employees. Participants of the five-month program for STEM graduates can elect to pursue one of two paths: tech or digital. During both learning journeys, participants obtain relevant certifications and gain initial professional experience through project assignments in which they train to become our future IT consultants or IT architects. The Graduate program launched in 2023 with 34 participants. T-Systems also supports STEM skills prior to joining the company. T-Systems is a founding partner to “42 Berlin,” a coding academy that opened in Berlin in early December 2022. The academy follows an innovative concept that does not involve professors, exams, or lectures. Instead, it creates a framework in which students can develop their own projects, individually and in groups. Age, origin, and previous education are explicitly ignored; everyone gets a chance to start programming. T-Systems hired eight interns from “42 Berlin” in the reporting year, two of whom started in March and have since been taken on permanently. We have eight expert fellows who represent T-Systems in schools, support the interns, and provide mentoring.



T-Mobile US’ Apprenticeship program helps individuals who may not have a degree from a university or meaningful work experience gain relevant skills through classroom instruction and hands-on experience by working at the company. T-Mobile US gained a total of 16 employees in 2023 thanks to this program. The Explorer Prep high school program, completed by 36 students during the reporting year, enables high-performing high school students to participate in a certificate program with local community colleges to earn college credits and a certificate in a technology-related focus.

Employee development and skilling. We have laid the foundation for the necessary skill transformation in our Company by creating central HR instruments including the Global Job Architecture (GJA), strategic HR planning, and strategic skill management.

The GJA simplifies existing function structures and consolidates them in future-proof job profiles. Our strategic HR planning enables us to identify reskilling needs early on and, taking changing market conditions into account, plot the right course for targeted investment in the skills that will be needed going forward. Skill management is supported by a digital tool to pinpoint where personal skills are present or lacking, and development plans are continuously adapted by means of tailored training programs. This offered skill transparency and guidance for some 68,000 employees in the Group in 2023. The central HR instruments thus form the basis Group-wide for comprehensive training tailored to specific business requirements. The majority of our employees’ development takes place in the respective segments of Deutsche Telekom. Targeted skilling initiatives in these areas in the reporting year resulted in 8,600 new- and upskilling measures, such as in academies run by our Technology and Innovation Board of Management department, or in the Systems Solutions and Germany operating segments. A key focus was on developing and enhancing technical and digital skills (top tech and digital skills) of our employees. Of particular relevance are the following job profiles: DevOps, software and cloud engineers; solution architects and designers; and data scientists.

With a view to building towards these future profiles, another massive push was made at Group level in 2023 to promote basic understanding in these areas. The internationally available Explorer Journeys deliver initial insights and knowledge in the areas of software development, AI, data analytics, digital market, and user experience. The program has attracted over 21,000 employees since it was launched in 2021. A major focus in 2023 was on generative AI. Almost immediately following the market launch of AI chatbot ChatGPT, initial learning sessions were offered to all employees starting June 2023. A total of over 66,000 employees took part in training courses on AI in 2023. In pursuit of strategically important job profiles, further skilling measures that build on the Group-wide offerings are being implemented in special programs at segment level.


In other words, Deutsche Telekom invests a great deal in making learning as attractive as possible for employees. In the reporting year, employees in Germany and our national companies in Europe invested a total of 3.8 million learning hours, of which 52 % were specifically devoted to technical and digital skills. With a learning rate of around 73 %, digital learning is firmly established as a learning tool at Deutsche Telekom. Over 164,000 employees can take advantage of a whole range of digital and state-of-the-art learning offerings provided on the intelligent learning platform Percipio, dubbed the Netflix of learning, and through the integration of education platforms such as Coursera, a provider of digital further-training courses offered by top-ranking universities. The 2018 employee initiative Learning from Experts (LEX) has since become the largest peer-to-peer learning community at Deutsche Telekom and contributes immensely to informal learning. In 2023, experts shared their knowledge with other colleagues in over 5,650 online LEX sessions.

T-Mobile US also offers a wide range of learning and development opportunities and thus encourages each and every employee to keep learning and developing their skills over the course of their whole career. Through strategic investments in key areas of their professional development and learning, employees are well-equipped for their current tasks and growth opportunities at T-Mobile US. T-Mobile US offers a line-up of development programs and resources to build diverse talent and empower employees to succeed through every step of their career. This includes access to thousands of topics, trainings, resources, and learning paths, primarily through two learning platforms Percipio and FranklinCovey. The “new! Magenta U” learning experience platform allows learners to choose from a range of popular topics such as developing emotional intelligence, inspiring innovation and creativity, expert insights on mentoring, and much more. Employees invested a total of 4.4 million hours in training and upskilling in 2023.  

T-Mobile US also offers its employees the chance to take part in a Day of Learning, which a large number of learners took advantage of in the reporting year. Employees have the opportunity to hear from external experts about relevant, timely topics which were chosen to strengthen their skills. The day is not only inspiring but gives employees tools and ideas that can be used right away, regardless of their role in the company. 32 people took part in 2023, CareerTraX, a nine-month cross-functional rotational program that gives employees the opportunity to get to know another part of the business and gain new skills. This development program, which focuses on skills and strengths, drives career mobility within the company, while also allowing employees to make career shifts and apply their skillset to tackle new challenges. This strengthens the workforce and also helps the company retain talent over the long term. T-Mobile US' Career Ride-Along program offers a similar opportunity, giving employees the chance to spend multiple days job shadowing, with networking, coaching, and one-on-one time with employees and leaders from the team they aspire to work in. 34 employees took advantage of this opportunity during the reporting year. The Early-in-Career Experience program is a two-year, full-time experience that prepares participants to transition into an associate role within T-Mobile US' technology team. Within the framework of this program, which over 220 participants completed in 2023, employees receive ongoing career development through technical boot camps, workshops, and training certifications.

3. Best place to work

It is our strategic goal to create a motivating work environment where all employees can live up to their full potential. We strive not only to drive forward technical solutions to shape the new, hybrid working worlds, but also to create an inclusive environment and a culture of trust and responsibility that unites all employees in pursuit of a common corporate purpose. In the reporting year, we once again aligned various initiatives with this goal.

Culture.   We believe that our culture is Deutsche Telekom's DNA and an essential factor in safeguarding our long-term success. Building on the strong foundation of our Guiding Principles, corporate culture must also reflect the changing needs of customers and employees. For this reason, we understand culture to be a constantly evolving process. At Deutsche Telekom, we therefore also talk about our “living culture.” Our Guiding Principles act as our compass, leading us to reflect on our behavior on a daily basis and helping us to make the right decisions. We use the Living Culture day and the Telekom Team Award each year to devote attention to this subject in a special setting. Under the theme “The Power of We – Connections,” this year's Living Culture Day took place at a location outside Germany again, this time in Košice. More than 6,500 teams and participants watched the live stream of the event. There was a strong social media presence on external networks, with around 47,500 posts, as well as comments and likes. Our internal communication platform YAM registered 82,000 views. The Telekom Team Award is an international award which is based on our Guiding Principles and aims to recognize outstanding performance as a team. In 2023, a total of 10 winning teams were chosen from among 199 entries from 15 countries. The winners will receive their awards at a special ceremony in February 2024.

Our six Guiding Principles



Delight our
customers



Get things
done



Act with respect
& integrity





Team together –
team apart



I am T –
count on me



Stay curious
& grow

Diversity, equity, and inclusion.   Fostering diversity, equity, and inclusion is an integral part of who we are and how we see ourselves. We support the different diversity dimensions such as age, national and ethnic origin, gender and gender identity, physical and mental abilities, religion and beliefs, sexual orientation, or social background. We firmly believe that this also increases our corporate success, because we consider diverse teams to be a driver of innovation. In respect of gender diversity, our goal of increasing the percentage of women in management positions to 30 % across the Group (excluding T-Mobile US) by 2025 still applies. With women occupying 45 % (December 31, 2022: 50 %) of positions on the Supervisory Board and 37.5 % (December 31, 2022: 37.5 %) of positions on the Board of Management of Deutsche Telekom AG at the end of 2023, we have already exceeded this target in these boards. Across the Group (including T-Mobile US), the proportion of women in middle and upper management stood at 27.9 % at the end of 2023 (December 31, 2022: 28.1 %). To ensure we reach our target in these management levels, we have worked with the different business segments to draw up concrete implementation plans. Specific measures are to be agreed aimed at increasing diversity in management teams depending on the situation in the respective segment, to be discussed by management on a regular basis. These measures are also particularly relevant in the context of our succession planning and recruitment activities. We strive to achieve balanced, diverse management teams, especially in respect of age, gender, and (inter)national origin.

T-Mobile US, too, strives to safeguard and further build on the diversity within its workforce in respect of gender, age, and national origin. As part of its Equity in Action approach, T-Mobile US continues to extend its employee reach and development programs targeting women and under-represented talent. This approach supports the inclusive values inherent in T-Mobile US' culture and creates a company environment of belonging. T-Mobile US has launched customized diversity, equity, and inclusion (DE&I) strategic plans for business functions that are aligned to the pillars of Equity in Action – talent, culture, brand, and digital equity. The DE&I strategic plans for the business functions include objectives, key results, measurements, and tactics to help close potential gaps. T-Mobile US' success measures include diverse talent slates (applicants, interviews, and hires), participation in development programs, internal career movement, employee engagement, supplier diversity, and investments in the community through Volun-T Grants and Project 10Million.

Furthermore, T-Mobile US has embedded the topic of DE&I into the learning opportunities offered to employees as well as intentionally integrated it into the promotion process: the One Team Together Learning Journey is a company-wide learning journey designed to strengthen the habits and behaviors needed to empower each other, build connections and belonging, and inspire one another to win together. With Lead Magenta Next, T-Mobile US has also initiated a program aimed at putting under-represented talent at the intersection of sponsorship, readiness, and opportunity. It is designed to help develop under-represented talents and strengthen diversity at leadership level. T-Mobile US also offers the McKinsey Executive Leadership program to support ethnic minorities, focusing on the development of executive leadership capabilities, while driving transformative personal and professional growth. Additionally, T-Mobile US demonstrates its commitment to diversity by supporting numerous employee networks which aim to celebrate the employees' diversity and backgrounds.

Germany, too, has many employee networks. Since 2023, these networks have been addressing all seven diversity dimensions. Our commitment is further underscored by international and segment-specific initiatives, such as our women's networks in the countries and segments. In 2023, the latter came together for a first-ever joint global network meeting.

We employ numerous measures and products to create an inclusive workplace for all. In 2021, we implemented a revised Group Policy on Diversity, Equity, and Inclusion internationally. We developed this further in 2022 by way of our Group Inclusion Agreement and the Action Plan 2.0, and thereby laid the foundation for a shared framework of values, which continues to apply for all employees. In this way, we help to support and safeguard compliance with our diversity values in all decision-making activities and actions at all Group levels.

We raise employee awareness through training courses on topics such as unconscious bias, anti-racism, and gender diversity. Additionally, we worked with our employees in the reporting year to develop and pilot accessible e-learning to deliver a basic understanding of diversity, equity, and inclusion. Global rollout in ten languages is planned for 2024. We sent a further signal of our commitment to diversity, equity, and inclusion with the publication of the Transgender Handbook in 2022, which was available to all employees in the reporting year. It aims not only to increase transgender visibility and awareness, but also to offer practical support. We are also taking action to improve inclusion in the workplace, for instance, by establishing gender-neutral restrooms, quiet zones, and prayer rooms, and by incorporating inclusion into our IT systems. Likewise, we actively support the career aspirations of women, for example, with the FOM/DTAG Women's Forum, or our women's network meeting with Deutsche Bahn, where we are promoting dialog and mutual learning in respect of the advancement of women under the motto "together for the future." We also offer general support through services such as mentoring programs ("Karriere mit Kind", child and career), flexible working models, child care services, and advisory services for those caring for family members.



Since 2022, we have included questions on employees' perception of equal opportunities and inclusion in our employee survey with the goal of making the effectiveness of our measures transparent and traceable. In the last survey from November 2023, the value for No Discrimination was 91% and for Equal Opportunities 86%. In the reporting year, we successfully piloted a voluntary, anonymous survey on self-identification in three countries to support data-driven decisions and measures. Over 50 % of employees took part. Implementation of this survey at global level is planned for 2025.

Shares2You. We strive to give all employees the opportunity to participate in the success of our business while also fostering an entrepreneurial culture, and to this end we once again offered our Shares2You share program for employees in 2023. In the reporting year, Deutsche Telekom AG ran the Shares2You program in Germany for a third time under which employees can acquire shares in Deutsche Telekom AG up to an amount of EUR 1,000. For every two shares they purchase, they receive another share at no cost. All shares received in this way must be held for a minimum of four years. The program is gradually being rolled out internationally, and in the reporting year was offered in a total of ten national companies in the Czech Republic, Slovakia, Hungary, and Romania. 38,637 employees invested a total of EUR 36.4 million under Shares2You in 2023. The shares were transferred in October 2023.

New work & hybrid working. Actively shaping an attractive, hybrid working world and providing our employees with comprehensive support during this journey remain one of our strategic goals. We have provided Group-wide collaboration tools to give our employees greater flexibility to structure their daily work schedules and to choose their physical workplace, and to collaborate even better across units and borders. At the same time, we continue to invest in transforming our offices into places of encounter, identification, and innovation. We took another step towards greater workplace flexibility with the Group works agreement on Magenta Office, which was signed in October 2023. The booking zones within the office buildings have been removed, and a large portion of our office spaces converted into shared spaces. Employees can now book workplaces and rooms via a standardized booking tool available to everyone. And with all Magenta Office buildings in Germany gradually being made available to employees, they will be able to work remotely at an office close to their home. Employees additionally have the option to work from other European countries for up to 20 working days a year.

Employee satisfaction. Our engagement score, which is our measure of employee satisfaction, is calculated from the data collected by the employee survey, which as of late is conducted every two years, and the pulse surveys (both excluding T-Mobile US). The employee survey was not carried out in the reporting year on account of a change in service provider, and has instead been rescheduled for 2024. The pulse survey is carried out twice a year, or once a year in years when the employee survey is carried out. The most recent pulse survey from November 2023 returned a high engagement score of 76 points (2022: 78 points). With employee participation of 77 % (2022: 76 %) and top values in areas such as Goals (92 %; 2022: 93 %), Code of Conduct (92 %; 2022: 91 %), No Discrimination & Safe Space (91 %; 2022: 92 %), Strengths (90 %; 2022: 90 %), Purpose (86 %; 2022: 86 %), and Failure Culture (86 %; 2022: 84 %), our results were outstanding. The question on Mood or Satisfaction remains at the high level of 78 % (2022: 81 %) and is above comparable benchmarks. To allow for qualitative answers, the survey included a free-text box in which employees could suggest things that would reinforce their commitment to their work. Three further free-text boxes were added in 2023 which employees can use to give feedback on the topics of Career Development, Culture of Trust, and Team Attractiveness. We continue to pursue a range of initiatives to further increase employee satisfaction.

T-Mobile US conducted an employee survey in April 2023 covering a wide range of topics which helped to gauge employee engagement and the prevailing corporate culture. 60 % of employees participated in this survey (2022: 54 %). The results show a high level of employee satisfaction: 86 % (2022: 86 %) said that their own team offers an inclusive working environment which is accepted by all colleagues, 82 % (2022: 79 %) are proud to work for their company, and 80 % (2022: 76 %) would recommend T-Mobile US to others as an attractive employer. This has also been confirmed by the many prizes T-Mobile US has scooped up in the past few years as an employer of choice: T-Mobile US took first place out of the 400 companies included in USA Today's very first America's Climate Leaders list, reflecting the company's commitment to reducing its ecological footprint. T-Mobile US was also included in CDP's Supplier Engagement Leaderboard and counts among the top 8 % of companies assessed for supplier engagement around climate change. In the Axios Harris Poll on the most visible brands in the United States in 2023, T-Mobile US was ranked as best telecommunications service provider with regards to the company's reputation. Furthermore, T-Mobile US is one of 545 companies which received a score of 100 in the Human Rights Campaign's Corporate Equality Index 2023/2024. T-Mobile US has once again been designated a Military Friendly Employer and received a score of 100 % in the Disability:IN Disability Equality Index.

Employee health and well-being.   Our company health management strategy is designed to maintain and promote our employees' health and performance. We view occupational health and safety legislation as minimum requirements. We foster a corporate culture that encourages our employees to take responsibility for their own health, and offer services and other measures to help improve their well-being.

The health rate in 2023 was 94.3 % (including long-term illnesses). Since 2023, following the end of the coronavirus pandemic, our employees began returning in greater numbers to the office, while continuing to work partly remotely. In response to the greater flexibility of our employees in the face of changed conditions, we made changes that included adapting the fire safety assistant concept, and developed and introduced an app for our employees to call first aiders. We won a business award for this app: the German Stevie Award.

We continue to support our employees and managers by providing them with classroom and increasingly with online formats covering topics such as leadership, hybrid collaboration, and preserving and enhancing resilience, and by offering confidential, anonymous advice on psychosocial problems via a dedicated helpline. The advisory service set up in 2022 for international employees affected by the war in Ukraine was expanded in 2023 to include, for example, support for employees or their relatives affected by the catastrophic earthquakes in Turkey and Syria.



For further information on emergency aid provided in the Group, please refer to the section "[Combined non-financial statement](#)."

Our portfolio also includes courses on nutrition, exercise, and relaxation (stress prevention, mindfulness) to support employees' mental and physical well-being. In 2023, we implemented organizational well-being initiatives to support our culture, transformation, and leadership, including action to promote emotional intelligence. Teams were guided through incorporating mindfulness habits and emotional intelligence skills, with the goal of improving commitment. We also use mini-interventions as organizational development techniques designed to have a positive impact on the workday. The One Minute to Arrive initiative won the Merits Award. On an international level, for example, our OTE group in Greece received ten awards relating to health, safety, and well-being. These included accolades for its health and safety culture in the workplace, and the development of individual measures to improve employees' physical and mental health and well-being. Awards were also received for initiatives on health and well-being, behavioral risks, and crisis management.

In July 2021, T-Mobile US was the first mobile provider to receive the WELL Health-Safety seal, which it has maintained ever since. The seal is awarded based on a global rating for ensuring spaces and sites adhere to science-backed health and safety standards.

4. Leadership in digital tomorrow

Further developing the digital and tech skills of our managers makes a crucial contribution to our Group strategy. Not only that, but a modern leadership culture based on diversity and humanity is essential both for our Company's long-term commercial success and for attracting and retaining talents. We continued to pursue this strategic priority during the reporting year through the continual evolution of our leadership culture and through a range of leadership skilling programs.

Leadership culture.   We believe that the ongoing development of our leadership culture within the Group has a positive effect on our employees and thus also on our success as a company. This is further borne out by the findings from the most recent pulse survey, which identifies team attractiveness and a culture of trust as key factors driving employee satisfaction. Essentially, this culture must also be directly palpable in the interpersonal interactions of managers and employees. The cultural guidelines for our managers are contained in our Leadership Anchors, which were implemented Group-wide in the reporting year, and serve to translate our Guiding Principles into leadership action. As role models, our managers must meet high cultural expectations within the organization in line with their role and responsibility.

Our six Leadership Anchors





We value highly an environment in which our managers feel part of a leadership team. This drives us to invest not only in the transfer of skills and the teaching of methodologies, but also in strengthening our leadership communities, such as the Telekom Transformation Team (T³). T³ is a group of around 250 top-level managers from the Board of Management and the business leader team, as well as top talents from across all functions and segments of Deutsche Telekom. Its role, alongside members' regular line responsibilities, is to drive forward the transformation of the organization. We support this community year-round with a combination of broad-based leadership programs and individual measures. Our current range of programs – EQ Master, Mountain Wisdom, and Leadership Presence – are specifically designed to enable our top-level managers to unlock their full leadership potential. The digital format series, De-Mystifying Digital, which addresses digital innovation topics and provides a platform for discussion, also continued in 2023.

Under the motto “out of the comfort zone,” the Board of Management and the BLT visited Finland at the start of the reporting year to gain ideas and inspiration – for the journey to become Leading Digital Telco – from the nation's innovation ecosystem and vibrant start-up scene, its advanced digitalization and training, as well as from its culture and nature.



T-Mobile US' approach to leadership, “How we lead,” ensures that every leader is operating from the same playbook, creating consistent, positive experiences for employees. It is grounded in T-Mobile US' corporate values and focused on helping leaders meet both their teams' and customers' expectations as well as expectations concerning their own personal development in order to guarantee the company's continued success.

Performance management. WeGrow, our modern performance management system that enables ongoing development dialog between managers and employees, focuses on our employees' personal development. Annual talent conferences, or People Days, additionally provide a dedicated platform for dialog on talents and candidates who are ready for the next development step. This enables management teams to take targeted action to promote employee skilling in their areas in line with future challenges, and ensure the right people are placed in the right jobs. Close integration with the skill management system rolled out in many areas further helps WeGrow to position the future skilling of employees front and center. Following the first rollouts in 2022, WeGrow was implemented in 2023 for the around 70,000 employees covered by collective agreements and active civil servants in Germany, and is now used for around 133,000 employees in over 20 countries. In other words, Deutsche Telekom has its first-ever consistent and standardized performance development system. Internal customer satisfaction is once again up year-on-year to 7.1, putting it slightly above the target value of 7.0.

Since 2023, a team has additionally been working to deliver methods for the structured development of team performance, e.g., for analyzing and improving team dynamics. The plan for 2024 is to further integrate these approaches in the existing HR product portfolio and ensure customer-centric availability. Managers and employees will thus have access to a systematic approach to promoting and developing the performance of both individuals and teams at Deutsche Telekom through targeted action.

Leadership skilling.   As technology advances and digitalization continues apace, managers must possess skills and methods that differ greatly from those needed in the analog world. To this end, we continued to support all managers in the reporting year with a wide range of services through levelUP!. The number of leaders registered on the platform grew to over 8,500 in 2023. A key focus in the reporting year was on teaching more about AI. Our leaders were able to access a wide variety of training courses on a dedicated AI hub page. We also offered the speedUP! format once again in 2023, this time with the spotlight on AI: at this two-day learning and networking event, participants had the opportunity to attend workshops and speak directly with AI experts to extend their digital skills, hone their thought processes, and learn new methodologies. The AI Explorer Summit presented a range of work- and customer-related AI topics, and described the associated concepts and development processes involved. More than 500 leaders at Deutsche Telekom took part in this virtual event.

Alongside AI-specific training courses, the levelUP! platform offered training on further digital hard skills in the reporting year: these 60- to 90-minute sessions were held online and in-person, and offered leaders the opportunity to learn about data science, critical and computational thinking, cloud computing, cybersecurity, and more. The new virtual long-term learning format Accelerate Yourself is designed to help leaders further strengthen their digital skills. The program customizes to the needs of the individual leader in line with their role.

T-Mobile US offers a range of leadership skilling programs to promote a variety of talents and empower employees to achieve success at every stage of their career. Leadership development is supported by way of immersive and needs-based learning experiences across a portfolio ecosystem that covers everything from onboarding and in-role development, to transition/top talent programs, coaching, assessments, and mentorships. The goal is to offer programs which champion courageous, inspiring, purpose-driven leaders who can bring out the best in themselves and others. BetterUp provides leaders with an opportunity to select and work with an external coach in order to set goals for themselves and create plans to meet those goals. 140 leaders took advantage of this offer in 2023. During the reporting year, a total of 131 leaders took part in the LeaderShift to People Manager training, a comprehensive career development program intended to help participants grow people leader skills. The monthly Manager Mastery deep dive session on advanced leadership topics such as team development, business acumen, and leadership communications was attended by 332 leaders in 2023. In addition to this, 199 leaders completed the ExecOnline program in 2023. This program supports leaders who are transitioning roles, readying for the next level, or are ready to increase leadership competencies.  

Talent development. On our journey to becoming the Leading Digital Telco, a key priority for us are the talents in our Global TalentHub (GTH). These talents are future managers and executives, and we help prepare them for the challenges ahead. The GTH consists of two pipelines: the “executive-ready pipeline” with no more than 200 talents at any one time who are immediately ready for and seeking an executive position within the company, and the “raw diamond pipeline” with a maximum of 100 talents who have demonstrated leadership potential early on in their careers and are being guided under the talent program towards an executive position by way of a relevant career stepping stone. At present, 190 talents are being actively supported as part of this process. In both talent pools, we focus on employees in all positions who are striving to pursue a global, cross-segment, cross-border career within Deutsche Telekom. We also evaluate these talents with respect to their digital skills and mindset. Our talents are developed with an equal focus on their personal career advancement and on our ability to fill key positions within the Group with GTH talents faster. Specially trained talent brokers are invaluable in this context: they draw up personal development plans together with the talents, discuss career paths, facilitate networking among talents, raise their visibility, and actively recommend them for executive positions when a vacancy arises. In 2023, 35 Global TalentHub participants signed an executive contract, i.e., 22 % of executive positions were filled with GTH talents in the reporting year (excluding T-Mobile US). We are also intensifying the connection between talent development and succession planning to identify career paths early on. In 2023, more than 79 % of our active talents are already on executive succession planning pathways.

After the successful launch of levelUP!NextGeneration in 2019, we not only offered the program again in the reporting year in digital format, but went one step further and substantially expanded the scope. While still a program for talents, including (future) leaders, it is now also suitable for tech and digital experts who have no ambitions to solid-line leadership. This move has transformed this former dedicated leadership skilling program into a program which supports a variety of career paths within the Group. A total of almost 900 employees from across the globe, including around 594 (prospective) managers and just under 260 tech and digital experts from 18 countries, completed the four-month skilling program. Its primary focus is on teaching innovative, inspirational, and tangible leadership topics and skills relating to digitalization and technology.

Alongside the central initiatives, our Germany, Europe, and Systems Solutions operating segments, plus the Technology and Innovation Board department, also offer their own talent programs which specifically prepare employees to take on their first leadership duties within the segment. For example, the Europe operating segment runs a “30 under 30” program offering targeted support for very young leadership talents. In our Germany operating segment, the OSD Talent Reise springboard program is preparing 1,025 participants for the next phase of their career journey. This program teaches leadership skills in addition to focusing on expert careers.

5. HR IT & data-driven HR

Technology has proved to be instrumental in driving improvements in the efficiency, agility, and competitiveness of our organization. In Human Resources, powerful HR systems are essential for implementing our strategic priorities. Yet today’s HR IT landscape within the Group is shaped by heterogeneous legacy structures and disparate data models. In the reporting year, we defined a simplified HR IT target architecture. We have also seen AI emerge this year as a force to be reckoned with in the technology world. From selecting applicants to developing employees, AI is capable of improving HR process efficiency across the board. We began looking at the opportunities and risks of AI early on and have already integrated initial elements into the blueprint for our future HR IT. Several of the elements of this IT architecture are described below for illustrative purposes.

Implementation of AI applications. We introduced Eightfold in selected companies in the reporting year. Eightfold is a talent intelligence platform that enables us to make recruitment and skill management more dynamic and personalized through the use of AI. In the solution’s marketplace, AI matches requirements profiles from advertised positions and projects with the profiles of employees and applicants in a pre-selection phase. The tool identifies individual training recommendations based on skill profiles to support employees’ individual and personal development. Another example of how we use generative AI in HR is the pilot of a chat-based employee concierge, which can answer general questions relating to HR products and services. This is yet another example of how Deutsche Telekom uses AI responsibly. While we leverage the benefits offered by a large language model available on the market for text generation, the database is subject to strict data privacy requirements.

T-Mobile US, too, is concentrating on the transition to an AI-enabled, data-driven future. AI and data are used within HR to improve the employee experience, reshape the way we work, and elevate the corporate culture. AI is currently being leveraged in all kinds of ways, e.g., to enhance the search functionality on various platforms, to provide customized and personalized experiences, for in-depth data analysis, to automate predictable tasks using bots, or to write complex code. One example of this is the Mentor Match platform, which uses machine learning to review user profile information and suggest strong mentoring matches based on user needs and requests. This allows for the most profound and meaningful mentoring experience for employees.

Data-driven HR work. In addition to integrating AI, we also use extended analytical models to analyze large data volumes with greater precision and gain the necessary insights for sound decision-making in HR management and development. One outcome in the reporting year was the introduction in some companies of a system for analyzing employee departures and making predictions about, e.g., unwanted staff churn. This also involves developing a standardized data catalog as the basis for a uniform data pool within the Group. The next step is to implement and establish further reporting and analytics capabilities in 2024.

People experience. As all areas of life become digitalized, what employees need and expect from HR products and services is changing significantly. We respond to this by explicitly focusing on the people experience as integral to the further development of our HR products and services. Through specifically promoting the people experience in the HR portfolio, employees and managers are able to complete their HR tasks with greater productivity and efficiency. A positive people experience helps us to strengthen the employer brand, enhance employee loyalty, and improve the attractiveness of the workplace. We have introduced apps in several international units to give our employees quick and easy access to our HR products and services. With 33 services, the most extensive of these apps is currently available in Germany and is used regularly by more than 52,000 employees – a real success story.

Headcount development

The Group's headcount fell by 3.4 % compared with the end of the prior year. In our Germany operating segment, the number of employees increased by 1.2 % against year-end 2022, mainly due to the transfer of employees of Multimedia Solutions (MMS) from the Systems Solutions operating segment. The total number of full-time equivalent employees in the United States operating segment decreased by 6.6 % compared with the end of 2022, primarily due to the workforce reduction program implemented in the third quarter of 2023. In our Europe operating segment, the headcount was down by 3.4 % compared with the end of the prior year, in particular in Slovakia, Poland, and Greece. The headcount in our Systems Solutions operating segment was down 5.0 % against year-end 2022, mainly due to the transfer of MMS into the Germany operating segment. In the Group Development operating segment, the sharp year-on-year decrease in headcount of 87.0 % was mainly due to the sale of GD Towers as of February 1, 2023. The headcount in the Group Headquarters & Group Services segment was down 0.9 % compared with the end of 2022, mainly due to the continued staff restructuring measures at Vivento. This decrease was offset by the increase in the number of employees in the Technology and Innovation Board of Management department.

Workforce statistics

Headcount development

	Dec. 31, 2023	Dec. 31, 2022	Change	Change %	Dec. 31, 2021	
FTEs in the Group	199,652	206,759	(7,107)	(3.4)	216,528	
Of which: Deutsche Telekom AG	10,789	12,302	(1,513)	(12.3)	13,897	
Of which: civil servants (in Germany, with an active service relationship)	6,891	8,381	(1,490)	(17.8)	9,653	
Germany operating segment	59,709	59,014	695	1.2	61,768	
United States operating segment	62,677	67,088	(4,411)	(6.6)	71,094	
Europe operating segment	32,932	34,083	(1,151)	(3.4)	35,319	
Systems Solutions operating segment	26,036	27,392	(1,356)	(5.0)	26,175	
Group Development operating segment	108	828	(720)	(87.0)	2,674	
Of which: GD Towers	0	762	(762)	(100.0)	775	
Group Headquarters & Group Services	18,190	18,353	(163)	(0.9)	19,498	
Breakdown by geographic area						
Germany	78,600	81,469	(2,869)	(3.5)	85,160	
International	121,052	125,290	(4,238)	(3.4)	131,368	
Of which: other EU member states	48,305	48,144	161	0.3	50,005	
Of which: rest of Europe	2,174	2,087	87	4.2	2,066	
Of which: North America	62,902	67,312	(4,410)	(6.6)	71,337	
Of which: rest of world	7,672	7,747	(75)	(1.0)	7,960	
Natural attrition^a	%	4.6	5.9	(1.3)	(22.0)	5.2
Of which: Germany	%	2.5	2.5	0.0	0.0	2.1
Of which: international	%	7.4	10.7	(3.3)	(30.8)	9.3
Productivity trend^b						
Net revenue per employee	thousands of €	547	542	5	0.9	488

^a Excluding T-Mobile US.

^b Based on the average number of employees.

Personnel costs



millions of €

	2023	2022	Change	Change %	2021
Personnel costs in the Group	19,083	19,446	(363)	(1.9)	18,463
Of which: Germany	8,201	8,389	(188)	(2.2)	8,461
Of which: international	10,882	11,057	(175)	(1.6)	10,002
Special factors ^a	1,557	1,367	190	13.9	906
Personnel costs in the Group (adjusted for special factors)	17,526	18,080	(554)	(3.1)	17,556
Net revenue	111,985	114,413	(2,428)	(2.1)	107,811
Adjusted personnel cost ratio	%	15.7	15.8		16.3
Personnel costs at Deutsche Telekom AG under German GAAP	1,964	1,936	28	1.4	2,176

^a Expenses for staff-related measures.

Technology and innovation

T&I strategy: digital transformation and human centrality



At Deutsche Telekom, innovation means creating the best possible (digital) customer experience on the basis of our multiple award-winning network – now and in the future. We believe our core competency consists in integrating the individual components (such as hardware and software in the mobile and fixed networks) so that, in conjunction with our own network and IT infrastructure and supported by partner companies, 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, which works in close cooperation with our operating segments. The Technology and Innovation Board of Management department 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 our employees, our partners, and our shareholders – in terms of network security and sustainability, too. Our Group strategy applies to high-speed broadband access, as well as responsible network production. That is an economic and ecological necessity, especially given growing cloudification, increasing data traffic, and the rising number and concentration of active components in our network.  

We are thus in a position both to enable Deutsche Telekom's current business and at the same time to shape the future. We are convinced that we can reliably deliver results, constantly develop product, industry, and technological innovations, and simultaneously hone and refine our ways of working. The following specific examples, which illustrate our improved network infrastructure, strong technology partnerships, and innovative services and customer experience, highlight how we want to safeguard and maintain our technology leadership among European network operators through technological progress and innovation.

- **Delivery Innovation:** Technology and Innovation is a supplier and service provider 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 unit. Constantly pursuing innovations that benefit our customers, the Group, and all other stakeholders 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.
- **Capability Innovation:** Continuing to turn Deutsche Telekom into a software-based company entails transforming our capabilities on an ongoing basis. 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. In 2023, some 2,000 employees attended our proven Skill Academies to gain training in topics including artificial intelligence (AI), DevOps, software development, and more. The focus was on significantly raising their seniority level and equipping them with skills for the future.  

Innovation priorities

Innovations can be produced 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 further built on our activities in the prior year to evolve our innovation priorities in close coordination with the operating segments.

- **Home experience & TV:** Our home experience product area bundles the topics of broadband connectivity, smart home, and TV and entertainment to better serve the increasing convergence of these applications and services in our customers' homes. We want to offer our customers a communication and entertainment experience from a single source, and plan to gradually roll out products and services that offer exactly this in all markets of our European footprint in the coming years. Our goal is to offer our customers the best devices (routers, mesh Wi-Fi, TV set-top boxes) and set ourselves apart from our competitors with data-driven applications as well as differentiated and personalized services.   To this end, we are developing for example our own router operating system for the digital future. This new router generation is based on a globally scalable reference system, which we are constantly fine-tuning together with other telecommunications providers – cloud-based and with standardized, intuitive access via app, PC, or television. Examples of customer applications include Wi-Fi management with on-premises troubleshooting, child protection functions, home security and automation, and more. In TV and entertainment, our focus is on consolidating the technical platforms, optimizing the customer experience, and improving the content offering through the further aggregation of renowned providers like Netflix and Disney+. Additionally, we continually work to improve our TV voice control and are set to roll this out to further markets outside of Germany.

- **Digital channels:** We are consistently optimizing our digital channels for our customers, with the goal of delivering a modern, superior digital experience based on state-of-the-art technology. One area of focus is our centrally developed sales and service app (MeinMagenta/OneApp), which is already established across all of our relevant markets and is used by more than two-thirds of our customers. It helps us monetize our product portfolio through up- and cross-selling, and bring down costs by reducing service cases through self-service and preventive maintenance. New services, such as through the Magenta Moments loyalty program, are continually being rolled out and optimized, to further drive up the already relatively high app penetration and customer satisfaction levels. We offer another possibility for interaction through our digital retail platform, OneShop, which is already in use in five countries. In customer interactions – whether digital or in person – we want to ensure that we can offer customers the best customer experience every time. To this end, we introduced, among other measures, new, targeted business processes with personalized offerings to enhance the customer experience. We have established Magenta View, a powerful support and troubleshooting channel that provides access to all internal technology and customer databases, and are set to gradually roll out this system in all of our European markets over the coming years.
- **AI Competence Center:** The AICC's mission is to use (generative) AI to unlock improvements in efficiency, the customer experience, and the employee experience. The AICC does this on the one hand by offering practical and technical support for all Deutsche Telekom units to help them quickly deploy generative AI in particular. On the other, the AICC advises colleagues on using AI ethically and securely, and assists with selecting suitable partners. By integrating (generative) AI, we will ensure that our products and services remain competitive into the future.   The focus of our activities in the reporting year continued to be on scaling up our AI-based Frag Magenta digital assistants for chat and telephone. The aim of these digital assistants is to further personalize all customer interactions across all points of contact. In November 2023, German computer magazine Computer Bild and market statistics company Statista once again named our Frag Magenta chatbot the best chatbot by a German telecommunications provider.
- **Telco-as-a-platform:** Under our strategic concept, Telco-as-a-platform, we are driving forward developments to disaggregate, cloudify, and automate our network production making increased use of data and AI. This approach aims to both improve the customer experience considerably and increase flexibility and scalability, while simultaneously lowering costs. We will achieve this with software solutions for automated error detection, analysis, and correction based on machine learning, among other solutions. Together with other network operators as part of the O-RAN Alliance, we are working towards defining a global standard for an open, intelligent, virtualized, and interoperable radio access network. The i14y Lab in Berlin offers a testing ground for the interoperability of O-RAN components. The innovative approach to network production unlocks new opportunities to directly monetize the network, for instance, via network application programming interfaces (APIs). An initiative in this area was set up in 2022: CAMARA – The Telco Global API Alliance. Its goal is to identify the needs of the developer community and, on this basis, to specify and implement open, globally standardized APIs to enable simple, uniform, codable access to network functionalities across all telecommunication providers. In addition to innovating and evolving the fixed and mobile networks, we also analyze which benefits we can generate for our customers from the appropriate integration of satellite-based access networks into our portfolio. Example applications include coverage for regions previously in dead spots, or the rapid provision of communication services following natural disasters or other emergencies.
- **Standalone 5G:** The 5G radio access network has been integrated with the new 5G core network to create 5G standalone. This core network is the source of crucial innovations and benefits, because it removes the need for terminal devices to connect to the 4G and 5G networks in parallel. The 5G core network is based on a cloud platform with virtualized core network functions, such as, e.g., network slices, which are discrete logical networks with individual, application-specific characteristics such as bandwidth, latency, or security, that allow applications always to be provided with the appropriate (virtual) network. Network slices could therefore be used, for example, for applications where bandwidth and latency are critical, such as augmented/virtual reality; for communication among authorities where security is critical; or for secure, high-availability applications for business customers.
- **Sustainable Telco:**   This innovation area is devoted to making the telecommunications industry more sustainable. With a view to safeguarding long-term access to affordable green energy, our main focus is on energy efficiency and energy resilience. This includes location-based usage of regenerative energy with dynamic energy storage management for load balancing, as well as AI-powered, load-dependent energy-saving mechanisms. For example, rapid, temporary mobile network coverage following natural disasters or for large-scale events is already being successfully delivered by mobile cell towers with hydrogen-based fuel cell technology.



Three-pronged innovation strategy

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

1. In-house developments



In 2023, we continued to pursue our current innovation topics and developed new products.

T-Labs is the research and development unit of Deutsche Telekom, focusing on translating new technology trends into tangible results for our innovation portfolio. Supportive co-research is the key objective for the T-Labs team, with the vision of achieving a superior customer experience and exploring disruptive technologies for future telecommunications infrastructures. Our current research activities focus on the networks of the future, spatial computing, decentralized systems, and network security and digital twins. From its base in Berlin, T-Labs cooperates with multiple universities around the world.

Active cooperation with universities and academia in general has the goal of turning ideas into action. As a trusted interface between academia and business, we provide fast access to scientific innovation and R&D, enabling various co-creation formations.   In addition to actively promoting cooperation between T-Labs and universities, we also work closely with our HR department as part of the Magenta Campus Team to anchor the topic of talent attraction. A multitude of local initiatives with our partner universities, our involvement in events such as the Girls' Day 2023 and Long Night of the Sciences in 2023, as well as social media campaigns, serve to benefit the Group by attracting talents and strengthening brand awareness of the company in the R&D community. With our insights into future technology innovations, we thus also contribute to society by encouraging young people, in particular girls and young women, to pursue the STEM subjects.

In November 2023, T-Labs and T-Mobile US launched the fourth edition of the T Challenge, a global innovation competition for start-ups, developers, and research institutions. The aim of the competition is to promote innovative solutions and approaches based on AI for telecommunications, which are presented to an international audience of experts. T-Labs and T-Mobile US collaborate closely with intragroup stakeholders on the T Challenge in order to develop specific solutions for Deutsche Telekom. The goal is to strengthen the company's competitiveness and develop new business opportunities. In the past, selected teams received investment, contracts have been concluded, and promising pilots were carried out.

| You can find more information on the T Challenge on the [website](#).

Future networks.   The Future Networks unit focuses on unlocking the potential of technologies to significantly enhance the future performance of telecommunications networks. This includes, for example, quantum technologies, which require further exploration to determine their value added for communication networks and how this translates into tangible, real-world benefits. Another field relates to the technologies and concepts for the coming generations of mobile communication technologies which are being debated across all industries, e.g., disaggregation, integrated communication and sensing, and security-by-design. A major milestone achieved in 2023 was the opening of the Quantum Lab in Berlin: a test lab with its own fiber-optic network as a live testing ground where our customers can see the latest concepts and hardware for quantum communication technology and quantum security in action. We are now pushing the conventional boundaries of network technology in respect of security, capacity potential, and resilience through a synergy of interdisciplinary approaches and close partnerships. We also remain dedicated to continuing our work as part of our established portfolio, which is closely linked with the Federal Republic's publicly funded programs, such as the Innovation Hub for Quantum Communication and 6G industry projects.

Spatial computing. Spatial computing is focused on enabling advanced user interaction at higher standards for various customer segments by using next-generation XR technologies and human-computer interfaces. Our activities in smart media will provide a seamless and consistent experience when using future Deutsche Telekom products and services. Our mission as innovators, researchers, and developers is to create an exciting, immersive world for our customers and to lay the technological foundation for immersive services of the future. To this end, together with the Korea Evaluation Institute of Industrial Technology and other national and international partners, we have launched a project on digital twin systems with autonomous, mobile industrial robotics in 5G campus networks. Our collaborative work as part of the 6G NeXt national research project, under which use cases were defined and implemented with network requirements that go well beyond the possibilities offered by 5G networks and which we coordinate as consortium leader, were presented at various conferences including the 2023 Digital Summit in Jena.

Decentralized systems.   Deutsche Telekom already began establishing a European identity network at the end of 2022 as a founding member of the European cooperative IDUnion. In 2023, together with further IDUnion industry partners, Deutsche Telekom put a pre-production network into operation, developed the associated governance framework, and worked on the identity network's GDPR-compliant regular operations. Many of the accomplishments and technological advancements in the identity field which are now being posited in the EU's Architecture and Reference Framework stem from the IDUnion's research project and are incorporated directly into the consultation process. Not only that, we also developed the first prototype of a European digital identity wallet and are beginning to see some initial commissions and commercial success for digital identities. Our efforts in this regard play a major role in digitalizing Germany and spreading digital identities to millions of customers.

Network security & digital twin. This unit focuses on creating scientifically valuable tools and methodologies to help safeguard the secure, efficient, and stable operation of future telecommunication networks. Since most of its research centers on the use of AI, the key driver of innovation in 2023 was responding to the “ChatGPT revolution” with the appropriate expertise. For instance, our security research team designed an AI-powered code completion filter at extremely short notice, to prevent sensitive information from being passed on unintentionally. Under the Federal Republic’s CampusOS funding project, procedures for trusted cloud computing were developed which are highly universal and relevant for national IT sovereignty. In the network simulation field, a tool was developed which enables the direct evaluation of AI algorithms for network management. The goal of further developing this work is to provide from the outset comprehensive virtual quality assurance for the telecommunication network. In summer 2023, this unit additionally hosted the international conference Berlin Open RAN Working Week on disaggregated network architectures.

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, China, Korea, India, Germany, and other innovation hotspots across the globe. The following are some examples of successful partnerships:

- Our strategic partnership with **SK Telecom** reached a milestone in the form of the joint development of an industry-specific voice model for telecommunications companies. We will tailor this model specifically to the needs of digital assistants in customer service. Implementation is set to take place as part of the Global Telco AI Alliance, announced by Deutsche Telekom, e&, Singtel, and SK Telecom in summer 2023. The goal of collaborating with AI companies like **Anthropic** and **Meta** is to create a multilingual voice model (German, English, Korean, etc.) and improve our generative AI tools.
- In the 5G field, we are working with **Blue Planet**, **Ericsson**, and **Mavenir** to demonstrate ground-breaking multi-domain orchestration with open APIs. This is realized through a proof of concept, which showcases the benefits of this orchestration for companies’ services. The feasibility study highlights how enterprises can order a product in Deutsche Telekom’s customer portal, which starts the automatic configuration of a secure, dedicated network slice with guaranteed Quality of Service levels. This slice is delivered dynamically and automatically in line with the customer’s specific connectivity requirements. The 5G network enables the end-to-end service offering to be activated in minutes, from the user equipment to the company’s application. To implement this use case for company services, the partners worked together to deploy a 5G standalone network infrastructure in test mode at Deutsche Telekom’s labs in Darmstadt and Bonn.
- In collaboration with **Google** and **GSMA**, we have developed an industry-wide standard for transferring eSIMs between mobile devices and are the first mobile communications company to use this standard globally. The new process enables customers to transfer their mobile contract to their new device with just a few clicks. All they need is their old and new mobile phones in close proximity to each other. This fast, secure solution takes place in seconds directly in the setup wizard, no app, website login, or phone call to customer service needed.
- Our partnership with **Google** has been further strengthened with the aim of minimizing the digital divide and making the most of the benefits of connected technologies. This extends to the development of our own brands – the T Phone and the T Phone Pro. The development of these mobile devices was made possible by uniting Google’s expertise in adapting operating systems and developing apps end to end with Deutsche Telekom’s 5G network infrastructure. Their design was also influenced by the expert knowledge and economies of scale from T-Mobile US’ REVVL smartphone series. The seamless integration of hardware, software, and network guarantees unlimited 5G access for all users. What’s more, a new T Tablet was introduced over the course of the reporting year with the new version of the T Phone.
- Deutsche Telekom has teamed up with the **European Space Agency (ESA)** with a focus on maximum network resilience. Under the leitmotif “Always on,” we signed a memorandum of understanding at Mobile World Congress 2023. Together, we will work on the development of hybrid networks of the future, which will enable seamless connectivity between terrestrial networks and alternative networks in space and in the air. Natural disasters, such as the recent earthquakes in Turkey and Syria, show how important it is to have resilient connectivity. The integration of non-terrestrial network components, such as satellites or flying antenna platforms in the stratosphere, into a hybrid network can take the place of infrastructure on the ground to maintain contact with the people affected and rescue teams. Deutsche Telekom has already successfully achieved an orchestrated 5G connection across different network layers for the first time worldwide.

3. Start-up funding

As Deutsche Telekom’s leading start-up program, the **hubraum** tech incubator 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 established a strategic investment portfolio of over 30 companies and worked together closely with more than 350 further 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). The hubraum campus in Berlin – with one of Europe's first 5G networks and edge cloud infrastructure – and the campus in Krakow offer 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. The hubraum 5G prototyping initiative from 2021 was continued in 2023 with the opening of the 5G Testing Lab in Krakow. Start-ups and hyperscalers can now test 5G APIs at both sites using a fully functional, 5G standalone core network. These activities were expanded further in 2023 with a focus on developer relations in collaboration with T-Mobile US. The interaction with developers and the systematic analysis by the hubraum research team make a valuable contribution to the ongoing evolution of our API products.

The hubraum 5G prototyping initiative was also accompanied by other programs and initiatives in 2023:

- **Developer Relations:** Until now, it has been difficult for developers to integrate telecommunications services into their applications, as the current network architecture does not support it. To address this problem, hubraum and Vonage have teamed up to support the launch of the Magenta Business APIs. The 4G APIs will enable companies for the first time ever to prioritize certain network traffic in their services and applications on a test basis.
- **IoT Space Challenge:** At the start of 2023, hubraum and ESA kicked off a joint prototyping program combining the Internet of Things (IoT) with earth observation data. The areas of focus were environmental protection, smart infrastructure, smart city, smart agriculture, security, and space-based IoT. A total of ten start-ups were selected, and the best six were given the opportunity to present their solutions at the ESA closing event in Paris.

The following start-ups received investment funding from us in the reporting year:

- **Audiotool** (United States) offers a sophisticated social platform for producing music that runs in a browser and is free to access for music creators worldwide.
- **DeepSkill** (Germany) is a tech-driven agency and interactive cloud learning platform that enables employees to benefit from tailored training programs thanks to modular learning paths and intelligent algorithms.
- **Phelas** (Germany) has developed affordable and sustainable energy storage technology that uses a thermodynamic process to store energy in liquid air in a modular container design.
- **Salvador Technologies** (Israel) has designed a security and recovery platform to safeguard business continuity in the event of a cyberattack and protect operational technology and critical business systems.

We additionally built up the following portfolio of investments in 2023 as part of the **Venture Studio** – a joint venture of hubraum and Founders Factory:

- **Bondio** is a platform that makes it possible to provision connectivity anywhere and everywhere.
- **Wandra** offers an end-to-end travel solution for effortless travel preparations and organization.

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. Investment decisions regarding our multi-year innovation priorities are based directly on the recommendations of an internal venture capitalist. Funding is allocated according to success, similar to the approach used for start-ups and among venture capital investors, whereby new funding from capital investors is made available 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.

Corporate Innovation Fund (CIF)

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 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. For new business and product ideas to qualify for CIF funding, they must solve pertinent customer problems, be implemented jointly with the business areas, and support our strategy.

Deutsche Telekom Capital Partners


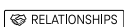
The investment management group Deutsche Telekom Capital Partners invests on behalf of Deutsche Telekom and other investors. DTCP invests in venture and growth capital and acquires companies in Europe, the United States, and Israel. Its investments are both financially and strategically motivated. DTCP also plays an active role in establishing business relations between the innovative portfolio companies, Deutsche Telekom, and other partner corporations, in order to create added value for all sides.

Advised by the T-Capital business area at Deutsche Telekom Capital Partners, Deutsche Telekom – through the strategic investment fund Telekom Innovation Pool (TIP) – invests in and promotes business start-ups that have a strategic focus and support the Group's long-term targets through collaboration with the respective business areas. The goal is to actively pursue long-term innovations for the Group, particularly in the areas of wireless infrastructure, decentralized services, Internet of Things, digital transformation, artificial intelligence, and ESG. In 2023, TIP made five new corporate investments: Airalo (eSIM store for global roaming solutions), Mento (Web3 digital asset solutions-as-a-service), Desquared (Magenta App development and hosting), Pachama (carbon offset provider), and Meridian (merchant payment solution for shop.telekom.de).

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, we want to protect the results of our own research and development, and to use these in cooperation and partnership with other companies. National and international patent rights are vital for these types of activity. We are therefore strongly dedicated to developing, granting, and maintaining our own patents. In the reporting year, Deutsche Telekom held a total of 7,875 patent rights. We are firmly committed to expanding our patent portfolio, taking relevant current and future technologies into account. This will secure the value of our innovations in a dynamic world and bolster the Group's competitiveness. We predominantly license our patents through our membership of patent pools.

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 25 million in 2023 (2022: EUR 30 million). As the parent company, Deutsche Telekom AG bears part of the Group's research and development expenditure. The expenditure was down year-on-year at EUR 11 million. In 2023, our Group's investments in internally generated intangible assets to be capitalized were slightly up year-on-year at EUR 708 million compared with EUR 702 million for the previous year. These investments predominantly relate to internally developed software, mainly in our Group Headquarters & Group Services segment. In 2023, Deutsche Telekom AG's investments in internally generated intangible assets to be capitalized were EUR 2 million compared with EUR 28 million for the previous year.

Forecast^a

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

The qualities that mark us out as an anchor of stability in difficult times remain in demand in a geopolitically and macroeconomically challenging environment. Our results for 2023 and our sound plans for sustainable growth once again demonstrate these capabilities and the trust that is placed in them. In the reporting year, significant transactions were closed and we secured a majority stake in T-Mobile US. 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 contribute to the implementation of our Leading Digital Telco vision.

^a 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, service revenue, adjusted EBITDA after leases, adjusted core EBITDA after leases, EBIT, ROCE, cash capex, free cash flow after leases, rating, and adjusted earnings per share, as well as non-financial performance indicators such as customer and employee satisfaction, energy consumption, and CO₂ emissions. 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.

This ties in with our financial targets for the period through 2024, which we communicated at our [Capital Markets Day](#) in May 2021. From 2020 through 2024, we aim to achieve the following compound annual growth rates (CAGR) or targets for our key financial performance indicators (U.S. dollar exchange rate of USD 1.14):

- **Revenue** is expected to increase by an average of 1 to 2 %; **service revenue** by an average of 3 to 4 %.
- **Adjusted EBITDA AL** is expected to increase by 3 to 5 % on average; adjusted core EBITDA AL, i.e., adjusted EBITDA AL excluding revenues from terminal equipment leases in the United States, is expected to increase by 5 to 6 % on average.
- **Free cash flow AL** (before dividend payments and spectrum investment) is expected to increase steadily, exceeding EUR 18 billion in 2024.
- **Earnings per share** (adjusted for special factors) is expected to exceed EUR 1.75 in 2024.

For 2024, we expect to post the following year-on-year trends, assuming a comparable consolidated group and constant exchange rates (U.S. dollar exchange rate of USD 1.08):

- **Revenue** is likely to increase in 2024. We also expect **service revenue** to increase.
- **Adjusted EBITDA AL** is expected to be around EUR 42.9 billion in 2024. In the reporting year, adjusted EBITDA AL came in at EUR 40.5 billion; on a like-for-like basis, i.e., adjusted for comparability with the adjusted EBITDA AL forecast for 2024, adjusted EBITDA AL stood at EUR 40.6 billion. We expect adjusted core EBITDA AL to increase significantly in 2024.
- **Free cash flow AL** is expected to amount to around EUR 18.9 billion in 2024. Free cash flow AL in 2023 was EUR 16.1 billion; on a like-for-like basis, i.e., adjusted for comparability with the free cash flow AL forecast for 2024, free cash flow AL stood at EUR 16.2 billion.
- We are anticipating **earnings per share** (adjusted for special factors) of over EUR 1.75 in 2024.

Economic outlook

The global economy continues to be beset by the challenges of relatively high interest rates and dampened growth prospects. In its economic forecast from January 2024, the IMF expects global economic growth in 2024 to remain at the prior-year level of 3.1 %. Tougher financing conditions, weak trade growth, and diminished business and consumer confidence are negatively impacting the economic outlook. Growing geopolitical tensions are further contributing to increased uncertainty about the economic outlook. Despite these challenges, we expect moderate growth for our core markets for the full year 2024.

The following table shows the expected GDP growth rate trends and the change in harmonized consumer prices in our most important markets for 2024 and 2025.

%	GDP for 2024 compared with 2023	GDP for 2025 compared with 2024	Consumer prices for 2024 compared with 2023	Consumer prices for 2025 compared with 2024
Germany	0.3	1.2	2.5	2.1
United States	1.4	1.7	2.6	2.3
Greece	2.3	2.2	2.8	2.1
Romania	3.1	3.4	5.9	3.4
Hungary	2.4	3.6	5.2	4.1
Poland	2.7	3.2	6.2	3.8
Czech Republic	1.4	3.0	3.2	2.4
Croatia	2.5	2.8	2.4	1.6
Slovakia	1.7	2.0	5.2	3.0
Austria	1.0	1.3	4.1	3.0

Sources: European Commission, November 2023; Consensus Economics, January 2024.

Expectations for the Group

Expectations up to 2025. 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 Capital Markets Day in May 2021.

We expect our **financial performance indicators** to develop as follows in 2024 and 2025 on an organic basis, i.e., on a like-for-like basis with the prior year:

- We expect **revenue** to increase both in 2024 and in 2025 on the back of the positive development of service revenue. The primary driver of this trend will be the United States operating segment, where we likewise expect revenue to grow in both 2024 and 2025. We expect revenue in the Germany and Europe operating segments to increase slightly in both 2024 and 2025.
- **Service revenue** is projected to increase in both 2024 and 2025. This trend will be influenced by the growth expected in the United States operating segment for 2024 and 2025. In the Germany and Europe operating segments, we expect a slight increase in both 2024 and in 2025.

- **Adjusted EBITDA AL** is expected to increase to around EUR 42.9 billion in 2024 and to increase substantially in 2025. In particular, revenue and the realization of synergies from the business combination of T-Mobile US and Sprint will have a positive impact. The gradual withdrawal 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, is expected to be almost completed from 2024. The resulting impact on the development of adjusted EBITDA AL will therefore only be minimal in 2024. Terminal equipment leases were a major pillar, in particular, at Sprint. In its place, marketing activities have shifted increasingly toward the Equipment Installment Plan.
- We expect **adjusted core EBITDA AL** to increase substantially in both 2024 and 2025, driven by the realization of synergies from the business combination of T-Mobile US and Sprint. Adjusted core EBITDA AL is distinguished by excluding revenues from terminal equipment leases in the United States from adjusted EBITDA AL, thereby presenting operational development undistorted by the withdrawal from the terminal equipment lease business model. For this reason, we are adding adjusted core EBITDA AL to our financial performance indicators for the years of the withdrawal from the business model of terminal equipment leases in the United States for explanatory purposes – likely for the final time.
- We anticipate a sharp decrease in **profit/loss from operations (EBIT)** in 2024 followed by a sharp increase in 2025. Expected EBIT will benefit overall from the positive trend in adjusted EBITDA AL, developing accordingly. However, it is expected to decline initially in 2024 – on account of the large positive effect recorded in 2023 due to the income from the sale of shares in GD Towers that has been recognized as a special factor.
- **ROCE** is expected to decrease significantly in 2024 before rising again sharply in 2025, due to the effects described for the development of EBIT. We expect to achieve our target for ROCE to be higher than the expected weighted average cost of capital (WACC) for future years, following the increased burden 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 investments) – are expected to decline to around EUR 15.9 billion in 2024 on account of the largely completed network integration in connection with the business combination with Sprint in the United States. In 2025, cash capex (before spectrum investment) is expected to remain stable. 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 increase significantly to around EUR 18.9 billion in 2024. We also expect a further strong increase in free cash flow AL in 2025 due to sound operational development.
- At the end of 2023, the **rating** agencies Standard & Poor's and Fitch gave us a rating of BBB+, and Moody's of Baa1. All three rating agencies gave us a stable outlook. 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 anticipating **earnings per share** (adjusted for special factors) of over EUR 1.75 in 2024, based on the sound expected business development. We expect to see adjusted earnings per share increase again in 2025.

Our debt issuance program puts us in a position to place issues in the international capital markets at short notice. T-Mobile US is being refinanced primarily in the form of senior unsecured notes. We can also issue short-term papers in the money market through our Deutsche Telekom and T-Mobile US commercial paper programs.

Bonds and other financial liabilities in the total amount of EUR 5.8 billion and EUR 6.5 billion will fall due for repayment in 2024 and 2025, respectively, of which around EUR 3.3 billion and EUR 5.0 billion, respectively, relate to T-Mobile US. 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. We also intend to cover part of our liquidity requirements by issuing commercial paper. In January 2024, T-Mobile US issued bonds with a total volume of USD 3 billion to cover some of its refinancing needs in 2024 at an early stage.

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.

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, we also cannot rule out the possibility of deviations.

The following tables summarize the forecasts for our financial and non-financial performance indicators up to 2025. They assume a comparable consolidated group and constant exchange rates, i.e., an organic basis. In order to create a comparable basis with the forecast period, the results of the 2023 financial year have been adjusted for significant changes in the composition of the Group which have been included in the planning, and for changes in the organizational structure in the pro forma presentation. Thus, the expectations for 2024 are based on the pro forma figures for 2023; expectations for 2025 are based on expectations for 2024. To indicate the intensity and trends of our qualified comparative forecasts, we apply the following aspects: strong decrease, decrease, slight decrease, stable trend, slight increase, increase, strong increase.

Financial performance indicators

		Results in 2023	Pro forma in 2023 ^a	Expectations for 2024 ^b	Expectations for 2025 ^b
Net revenue					
Group	billions of €	112.0	112.2	increase	increase
Germany	billions of €	25.2	25.2	slight increase	slight increase
United States (in local currency)	billions of \$	78.3	78.6	increase	increase
Europe	billions of €	11.8	11.8	slight increase	slight increase
Systems Solutions	billions of €	3.9	3.9	slight increase	stable trend
Service revenue					
Group	billions of €	92.9	93.2	increase	increase
Germany	billions of €	22.1	22.1	slight increase	slight increase
United States (in local currency)	billions of \$	63.3	63.6	increase	increase
Europe	billions of €	9.7	9.8	slight increase	slight increase
Systems Solutions	billions of €	3.8	3.8	slight increase	stable trend
EBITDA AL	billions of €	51.2	51.1	strong decrease	strong increase
EBITDA AL (adjusted for special factors)					
Group	billions of €	40.5	40.6	around 42.9	strong increase
Germany	billions of €	10.2	10.2	10.5	increase
United States (in local currency)	billions of \$	28.6	28.8	30.8	strong increase
Europe	billions of €	4.1	4.1	4.3	slight increase
Systems Solutions	billions of €	0.3	0.3	0.3	slight increase
Core EBITDA AL (adjusted for special factors)^c					
Group	billions of €	40.2	40.3	strong increase	strong increase
United States (in local currency)	billions of \$	28.3	28.5	strong increase	strong increase
Profit (loss) from operations (EBIT)					
Group	billions of €	33.8	33.8	strong decrease	strong increase
ROCE					
Group	%	9.0		strong decrease	strong increase
Cash capex (before spectrum investment)					
Group	billions of €	16.6	16.6	around 15.9	stable trend
Germany	billions of €	4.6	4.6	slight increase	slight increase
United States (in local currency)	billions of \$	9.8	9.8	decrease	stable trend
Europe	billions of €	1.8	1.8	slight increase	slight increase
Systems Solutions	billions of €	0.2	0.2	stable trend	stable trend
Free cash flow AL (before dividend payments and spectrum investment)					
Group	billions of €	16.1	16.2	around 18.9	strong increase
Rating					
Standard & Poor's, Fitch		BBB+		from A- to BBB	from A- to BBB
Moody's		Baa1		from A3 to Baa2	from A3 to Baa2
Other					
Dividend per share ^{d, e}	€	0.77		Dividend payout ratio of 40 to 60 % of EPS (adjusted for special factors), minimum € 0.60	Dependent on finance strategy ^f
Earnings per share (adjusted for special factors)	€	1.60		> 1.75	increase
Equity ratio	%	31.4		25 to 35	25 to 35
Relative debt		2.82x ^g		around 2.75x ^g	around 2.75x

^a Significant changes in the organizational structure and in the composition of the Group included (e.g., the sale of shares in GD Towers, the sale of the Wireline Business, and the acquisition of Ka'ena in the United States).

^b On a comparable basis.

^c Adjusted core EBITDA AL is distinguished by excluding revenue from terminal equipment leases in the United States from adjusted EBITDA AL, thereby presenting operational development without distortion. For this reason, we are adding adjusted core EBITDA AL to our financial performance indicators for the years of the withdrawal from the business model of terminal equipment leases in the United States for explanatory purposes.

^d The expectation regarding the dividend per share refers to the respective financial year indicated.

^e Subject to approval by the relevant bodies and the fulfillment of other legal requirements.

^f We will provide information about the further development of our finance strategy for the years following 2024 at our Capital Markets Day, which is planned for 2024.

^g 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 until year-end 2024.

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

Non-financial performance indicators

		Results in 2023	Pro forma in 2023 ^a	Expectations for 2024	Expectations for 2025
Group					
Customer satisfaction (TRI*M index)		76.2		stable trend	stable trend
Employee satisfaction (engagement score)		76		stable trend	stable trend
Energy consumption ^b	GWh	12,241		slight increase	slight increase
Of which: excluding T-Mobile US	GWh	4,567		increase	stable trend
CO ₂ emissions (Scope 1 and 2) ^c	kt CO ₂ e	217		decrease	decrease
Of which: excluding T-Mobile US	kt CO ₂ e	171		decrease	decrease
Fixed-network and mobile customers					
Germany					
Mobile customers	millions	61.4	61.4	increase	increase
Fixed-network lines	millions	17.3	17.3	stable trend	stable trend
Retail broadband lines	millions	15.0	15.0	slight increase	slight increase
Television (IPTV, satellite)	millions	4.3	4.3	strong increase	increase
United States					
Postpaid customers	millions	98.1	98.1	increase	increase
Prepaid customers	millions	21.6	24.5	slight increase	slight increase
Europe					
Mobile customers	millions	47.9	47.9	slight increase	slight increase
Fixed-network lines	millions	8.0	8.0	stable trend	slight increase
Broadband customers	millions	7.0	7.0	increase	increase
Television (IPTV, satellite, cable)	millions	4.3	4.3	slight increase	slight increase
Systems Solutions					
Order entry	billions of €	3.6	3.6	slight increase	slight increase

^a Significant changes in the organizational structure and in the composition of the Group included.

^b Energy consumption, mainly: electricity, fuel, other fossil fuels, district heating for buildings.

^c Calculated according to the market-based method of the Greenhouse Gas Protocol.

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

Our **customer satisfaction** – which is expressed using the **TRI*M index** performance indicator – is expected to remain stable in both 2024 and 2025 against the baseline that is already at a high level in the benchmark and has been recalculated for 2024. The values achieved in particular for our Germany and Systems Solutions operating segments, as well as across most of the Europe operating segment, put us in a leading position relative to the respective benchmarks. With the exception of the Europe operating segment, where our goal is to post slight improvements in some areas, we plan to maintain these positions for 2024.

Having achieved a high level of 76 points – on a scale of 0 to 100 – on the **engagement score** in the 2022 and 2023 pulse surveys, we expect the positive response of our employees regarding our Company to remain stable in the next surveys in 2024 and 2025.

For further information about the results of the employee surveys, please refer to the section "Employees."

We expect our **energy consumption** to increase slightly at Group level in both 2024 and 2025. Excluding T-Mobile US, we expect it to increase in 2024 and then remain stable from 2025. In both 2024 and 2025, we expect **CO₂ emissions** (Scope 1 and 2) to decline both at Group level and excluding T-Mobile US. Since 2021, 100 % of the electricity requirements for all Group units have been met from renewable sources. As such, the majority of emissions have been eliminated.

For further information on our ESG KPIs, please refer to the section "Combined non-financial statement."

Our planning is based on the following exchange rates:

Currency	Exchange rate	
Polish zloty	PLN	4.54
Czech koruna	CZK	24.00
Hungarian forint	HUF	381.97
U.S. dollar	USD	1.08

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.

Since 2021, subject to approval by the relevant bodies and the fulfillment of other legal requirements, the amount of the dividend is based on a dividend payout ratio of 40 to 60 % of adjusted earnings per share, with a lower limit fixed at EUR 0.60 per dividend-bearing share. For the 2023 financial year, we propose a dividend of EUR 0.77 for each dividend-bearing share.

Deutsche Telekom AG's unappropriated net income exceeded the prior-year forecast. It includes, among other factors, the positive effects on earnings from the sale of 51.0 % of the shares in companies of the German and Austrian cell tower business as well as income from the repayment of capital by a subsidiary which was partially recognized in income. For 2024, we do not expect any significant changes in the contributions of the subsidiaries to operating results. For the 2024 financial year as a whole, we expect an unappropriated net income that will allow the distribution of a dividend of 40 to 60 % of adjusted earnings per share.

Expectations for the operating segments

Below, we explain the market expectations and the expectations for the financial and non-financial performance indicators of our operating segments. We assume a comparable consolidated group and constant exchange rates for the development of our performance indicators.

| We presented more information on the expected development of the operating segments at our [Capital Markets Day](#) in May 2021.

Following the sale of T-Mobile Netherlands as of March 31, 2022 and 51.0 % of the shares in GD Towers as of February 1, 2023, our Group Development operating segment no longer makes a significant contribution to the expectations of the Group's significant performance indicators. For this reason our forecast does not provide a separate presentation of the figures for this segment or a corresponding explanation.

Germany

Following the increase in revenue in the German market for telecommunications services in the reporting year, market research company Analysys Mason forecasts further revenue growth in 2024, albeit at a slower pace. Demand for mobile and fixed-network communications is expected to remain stable in an environment of moderate economic recovery. Declines in revenue due to intense price competition, negative regulatory effects from reduced mobile termination rates, and the decline in traditional fixed-network telephony will be more than 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 0.9 % and service revenues to fall by 0.1 % in 2024 (source: Analysys Mason). In the Germany fixed-network business including television, the number of broadband lines will continue to rise; revenues are expected to grow by 1.1 % (source: Analysys Mason).

The mobile communications market in Germany is currently dominated by three providers, each with nationwide network infrastructure, deploying 4G/LTE and 5G technology to ensure that the majority of the population has access to mobile internet. In December 2023, Drillisch Netz AG, a subsidiary of United Internet AG, began to market mobile rate plans on its mobile network. To do this, it largely makes use of wholesale national roaming services provided by Telefónica Deutschland, having fewer than 100 own cell towers in operation. As the build-out of this fourth mobile network continues, infrastructure competition is expected to increase. Furthermore, competition from mobile providers without their own network infrastructure is also likely to increase further.

In mobile communications, we lead the market for network coverage: At the end of 2023, 95.9 % of the population in Germany had access to our 5G network. With the continued build-out, we want to further improve our network quality. To this end, we will increase network density and capacity further both in rural areas and in cities.

The market for fixed-network broadband hosts a large number of players with differing infrastructures. We are assuming that competition from cable network operators will remain intense and that the number of providers who have their own fiber-optic networks will increase. In addition to the established telecommunications companies, there are more and more public utilities, municipalities, and special purpose associations, as well as investor-driven network providers active in the market with FTTH infrastructure.

In the fixed network, we want to provide fiber-optic-based products to more and more customers. Our Germany-wide IP-based network achieves high transmission bandwidths of up to 2 gigabits per second. In order to always offer our customers competitive high-speed lines, we increasingly invest in digital infrastructure. We accelerated our FTTH rollout in the reporting year and enable a total of around 8 million households to directly connect to our fiber-optic network. Our build-out will benefit both people in towns and cities and those in rural areas. We are set to maintain our rapid FTTH build-out pace over the coming years by building out on our own, but also through partnerships, with the addition of around 2.5 million households per year. Our goal is to roll out fiber-optic lines to more than 10 million households and companies by the end of 2024. We will use a wide range of partnership models to increase the utilization rate of our broadband infrastructure by our own retail business as well as through partnerships with wholesale providers in broadband marketing.

The number of TV households in the German TV market is stable. In summer 2024, the privilege for property owners to pass on cable TV and internet service fees as ancillary rental costs to tenants will be abolished. It can be expected that the willingness of these customers to switch provider will increase. With MagentaTV, we provide a wide variety of entertainment “from a single source” and want to further grow our TV customer base with an attractive offering. In order to offer our customers the best possible user experience, we are also engaging in partnerships, for example with RTL, Disney, Netflix, Prime Video, Sky/WOW, DAZN, and Apple TV+. We are constantly enhancing the functions of MagentaTV and complementing the portfolio with exclusive content. For instance, in Germany, we will broadcast every match of UEFA EURO 2024, including pre- and post-match coverage.

Our goal is to continue expanding our position as the leading integrated telecommunications provider in the German market by providing innovative and competitive products and services. We aim to further reduce the complexity of our products and processes through automation and digitalization. We want to deliver the best customer experience with perfect service and turn our customers into fans. To this end, we invest systematically in our networks and the brand experience. We improve the service and shopping experience through our digital channels by creating more opportunities to offer customized and contextualized products and services. For our business customers, we position ourselves as the preferred partner for digitalization.

In our Germany operating segment, we expect slight growth in revenue and service revenue in both 2024 and 2025, primarily due to growing mobile and broadband revenues. We expect customer numbers to grow in both business areas. In mobile communications, we expect an increase in the high-value business with our own mobile brand. In broadband, we expect a further increase in the number of customers with high-speed lines. We want to continue expanding our fiber-optic services, both by means of business models with wholesale products and through further partnerships.

Thanks to our excellent network quality and the progress we are making with fiber-optic build-out, we expect to see a further increase in both 2024 and 2025 in the number of mobile customers as well as slight growth in our broadband lines, fueled by demand for TV and high-speed products.

In each of the next two years, we expect to post year-on-year increases in earnings in our Germany operating segment. For 2024, we expect adjusted EBITDA AL of around EUR 10.5 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 expected to rise further in 2025.

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 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 capital expenditure (cash capex before spectrum investment) to increase slightly year-on-year in both 2024 and 2025.

United States

The overall ICT market continues to grow in the U.S. revenue increase is forecast at CAGR of 7.5 %. The U.S. ICT sector is considered to be the backbone of the country's economy and underpins the operations of all enterprises, public safety groups, and the government. Overall the ICT market remains highly competitive. (Source: Mordor Intelligence)

According to GSMA overall mobile revenues are expected to increase annually with continued subscriber growth, data consumption increases, and growth in the device market. Monthly data usage per smartphone is forecast at 66 GB in 2029. Leading industry associations such as GSMA expect the United States to continue to lead global migration to 5G. 5G subscription uptake in North America continues – expected to be at a globally-leading 61 % (or 260 million total) by the end of 2023, with the global average at 54 %. That North American figure is expected to be around 430 million by 2029 – which would be 92 % of mobile subscriptions. (Sources: Ericsson Mobility Report, GSMA)

More mid-band spectrum has allowed for higher quality multi-band 5G. As in 2022, in 2023 Fixed Wireless Access (FWA) for home and Enterprise is the main tech behind fixed broadband growth. 5G is also growing in Enterprise, with deployments of wireless WAN to offices. (Source: Ericsson)

GSMA still expects over half of all mobile connections running on 5G networks by 2025, and Ericsson forecasts 90 % by 2027. T-Mobile US expanded its 5G network leadership, by reaching 330 million people, utilizing the 600 MHz spectrum holdings it acquired in April 2017. Deployment of recently-released mid-band licenses by T-Mobile US should also drive the operator's expansion of 5G coverage.

After completing the merger of T-Mobile US and Sprint, T-Mobile US continued to execute its profitable growth initiatives, carrying great momentum into 2024. T-Mobile US continues to focus on creating shareholder value and providing a combination of best network and value experience in the U.S. wireless industry. Key elements of the company's focus include consistently and profitably outgrowing the competition, and making the necessary investments to position the company for long term success. T-Mobile US customer growth initiatives center on attracting and retaining a loyal customer base by providing plans that are simple, affordable and without unnecessary restrictions to deliver value-added experience in wireless. T-Mobile US further extends this winning formula by combining this best value proposition in the market with its leading network experience.

T-Mobile US expects continued increases in postpaid and slight increases in prepaid customers in 2024 and 2025. Subscriber growth is based on further expansion in underpenetrated growth vectors, such as smaller markets and rural areas, enterprise and high-speed internet, which helped fuel industry leading growth over the last few years while allowing T-Mobile US to deliver very good financial results in industry comparison.

T-Mobile US expects an increase in total revenues in 2024 and 2025 driven by increasing service revenue growth primarily from postpaid account and ARPA growth offset by lower revenues in the wholesale base. Total revenues are expected to increase, albeit, at a slower pace than service revenues as 5G device upgrade rates remain low tempering equipment revenues.

For 2024, T-Mobile US expects adjusted EBITDA AL of USD 30.8 billion and a strong increase in 2025. Revenue growth is expected to outpace increases in expense as T-Mobile US focuses on delivering profitable customer growth and driving further operating efficiencies in the business. However, success-based investments to further unlock growth vectors, such as smaller markets and rural areas and enterprise, may impact adjusted EBITDA AL. Adjusted core EBITDA AL, i.e., adjusted EBITDA AL excluding revenues from handset leasing, is expected to increase strongly in 2024 and 2025.

Excluding expenditures relating to spectrum, T-Mobile US reached peak levels of cash capex in 2022 from its accelerated network integration and the rapid pace of its 5G network deployment. The company saw a decrease in 2023. T-Mobile US expects a continued decrease in cash capex in 2024 and stable investment in 2025, reflecting greater capital efficiencies from its 5G network build.

Europe

Geopolitical tensions continued to have a negative impact on the economic development of the countries of our Europe operating segment in the reporting year, while financing conditions for private households and businesses deteriorated on the back of higher interest rates, putting overall economic demand under further pressure. As well as the general uncertainty on the markets, which mostly has a negative effect on the economy, economic outlooks are also coming under pressure from the current ongoing high rates of inflation in the EU. The European Commission expects consumer prices to rise significantly again in 2024. This trend is not expected to let up until the following year. This renewed economic uncertainty could have a negative impact on household and business expenditure for telecommunications services and thus reduce in particular revenues from business customers, roaming, and prepaid.

Analysys Mason expects total revenue for telecommunications services to remain stable for the countries of our operating segment in 2024 and 2025. Customer demand for a fast and reliable broadband connection will continue to be the driver of total revenue growth over the next two years – for example, broadband revenues are expected to rise by around 2 %. The trend towards increased data usage will continue, especially in households that have not previously had sufficiently fast broadband lines. 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. For TV revenues, Analysys Mason sees little growth potential in traditional pay TV business and expects TV revenue to grow by just under 1 % in both 2024 and 2025. For mobile revenues, Analysys Mason forecasts a stable development in 2024, and in 2025, they are expected to decline for the first time by around 1 %.

We aspire to continue developing into the Leading Digital Telco in the coming years. All national companies in the Europe operating segment except for Romania are integrated providers of telecommunications services, have high brand recognition levels, and are very significant players in their respective home markets. We always put our customers at the heart of everything we do. In the consumer segment, for example, we want to create the best customer experience by further developing products and services in convergent product packages in our mature markets, using data and AI to better tailor them to specific target groups and increase their personalization. Since, as a key factor of our FMC business, the TV business makes our network quality tangible, we will continue to invest in the (co-)exclusive acquisition of broadcasting rights for national or international sports events, such as soccer leagues or the rights to TV movies/series, depending on the respective local competitive conditions and price levels. We also plan to continue engaging in partnerships with local and international OTT providers. In order to improve the TV experience in households while at the same time realizing synergies, we are gradually standardizing both the TV platforms and terminal equipment (set-top boxes) in our TV markets. This enables us to roll out new features as well as updates in a more dynamic way and thus to make new content, whether linear or on-demand, available to our customers faster.

Digital interaction with our customers is a key factor in meeting customer needs in a more personalized and efficient way, and positioning products and innovative services on the market more quickly. Our service app is already used by more than two thirds of our customers. It helps us monetize our product portfolio and bring down costs by reducing service cases through self-service and preventive maintenance. We offer another possibility for interaction, for example, through our digital retail platform OneShop. In customer interactions – whether digital or in person – we want to ensure that we can offer customers the best customer experience. Thus, we believe we can retain and further build on our first place in customer satisfaction rankings of telecommunications companies in the respective countries (as measured by the TRI*M index, which is based on empirical research).

We are able to do all this because we use our network infrastructure efficiently based on different technologies. With our fast fiber-optic networks and the accelerated rollout of 5G, we are making our contribution to digitalization. In all our footprint countries, we will gradually reform the spectrum that is currently still used for 3G to increase LTE and 5G capacity. The build-out of fiber-optic technology is also progressing further. By the end of 2024 and 2025, respectively, we will add around 3 million more households, increasing fiber-optic coverage from the current level of 9.1 million households (around 35 % network coverage) to a level of 40 % and 46 % network coverage, respectively. We plan to increase the number of connected households to around 4 million and thus to achieve a utilization rate of 36 % by 2024 and 35 % by 2025.

In the B2B area, the ever more complex requirements of digitalization are putting pressure on companies and the public sector to act. Here, we want to provide our customers with digital offers for every customer segment – with innovations beyond the core offering of connectivity – and create sustainable business models. We enable this by way of a future-proof omnichannel experience and digital capabilities, such as 24/7 support, self-service portals, and customer success managers. These also include modern digital infrastructure for integrated IT and communications solutions, scalable and modular services enabled through platform-based offers, and a software-defined environment that can cope with the growing needs of companies (e.g., SD-X, cybersecurity) via next-generation cloud and data centers. We will continue to build out these functions, constantly expand our portfolio for all company sizes, and optimize our advisory approach with expert teams.

In our Europe operating segment, we expect a positive trend in customer numbers in the next two years, primarily thanks to the focus on delivering the best network experience, the best customer experience in interaction with us, and the best FMC experience for consumers and business customers alike. We expect the number of mobile customers to increase slightly in both 2024 and 2025. We expect fixed-network lines to remain stable in 2024, and forecast a slight increase for 2025. We expect the number of broadband customers to grow in both 2024 and 2025. For TV customers, we forecast a slight increase in both years.

We expect revenues for our Europe operating segment to increase slightly in both 2024 and 2025 – measured on a comparable basis, i.e., at constant exchange rates and market conditions, and given an unchanged organizational structure – despite pressure resulting from decisions by regulatory authorities, such as the supplementary telecommunications tax imposed in Hungary, and the reduction in mobile termination rates. We also expect service revenues to increase slightly in both years.

We assume that prices on the energy market will remain at a high level for the time being. The associated higher inflation in the countries of our operating segment could increase pressure in future collective negotiations with employees' representatives. In addition, highly intense competition in the markets of our operating segment could potentially put pressure on our margins. In order to realize cost-cutting potential, we intend to increase our productivity and exploit the benefits of digitalization, for instance by automating processes. In order to be better prepared for rising energy prices, we concluded long-term power purchase agreements in the reporting year with local suppliers in the respective European countries. Accordingly, we expect adjusted EBITDA AL to grow to EUR 4.3 billion in 2024 and then to increase slightly in 2025.

To maintain our technology leadership, we continue to invest in our integrated networks and plan to maintain the high overall level of investments over the next few years. We expect cash capex (before spectrum investment) to increase slightly in 2024 and 2025.

Systems Solutions

Overall, growth in the IT market is expected to continue at roughly the same rate over the coming years, while cost pressure and intense competition are likely to persist. Nevertheless, we expect ongoing digitalization to drive further growth in demand for solutions from the areas of cloud services, big data, and automation of business processes using artificial intelligence (AI), as well as IT security (cybersecurity).

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, and AI. Traditional IT business will continue to decline, while cloud services and cybersecurity may achieve double-digit growth rates. With the aim of achieving a significant shift in the revenue mix towards our growth areas, we are continuing to drive forward expansion of the growth business (e.g., digitalization, public cloud, sovereign cloud, cloud migration), while at the same time stabilizing and making further cost savings in established IT business (e.g., infrastructure solutions). In line with this, our plan is to continue investing increasingly in growth markets – especially in digitalization (e.g., AI, SAP S/4HANA), multi- and hybrid cloud services, and cybersecurity.

In terms of revenue and market share, we are among the top IT service providers in the European IT market and in Germany. Our very high levels of customer satisfaction – with a TRI*M score of over 90 – are a core element in maintaining this position in the long term as well as in playing a leading role in digitalization.

Overall, we forecast slight growth in order entry for the Systems Solutions operating segment in 2024 and again in 2025. Revenue is expected to increase slightly in 2024 and then to remain stable in 2025. Revenue primarily comprises service revenue, and as such, service revenue trends are key. Adjusted EBITDA AL is expected to increase slightly in 2024, reaching around EUR 0.3 billion. We expect adjusted EBITDA AL to increase again slightly in 2025. We expect cash capex (before spectrum investment) to remain stable in both 2024 and 2025.

Group Headquarters & Group Services

At Group Headquarters & Group Services, we have raised our efficiency ambitions and introduced further steps to reduce costs in the coming years. This will primarily involve reallocating human resources, further enhancing the value of our real estate portfolio by means of innovative space and workplace concepts, and simplifying product services for the Group. In addition, we have also questioned seemingly smaller cost items in order to achieve strict cost efficiency across all areas. Our operating segments also benefit from the ability to provide our services more cost-effectively thanks to the cost-cutting measures. In facing up to our responsibility to a sustainable future, we decided to offset our entire carbon footprint by way of central procurement of carbon certificates for the entire Group. In addition, we are still focusing on converting our vehicle fleet to e-mobility and, through numerous construction measures, setting the course to ensure that our real estate portfolio satisfies the high ESG requirements.


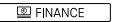
In the coming years, too, our Board of Management department Technology and Innovation will drive not only the development of innovative technologies, products, and services, but also IT standardization and the ongoing establishment of centralized production platforms. Major areas of capital expenditure in the years 2024 and 2025 will include technology development, the implementation of our IT strategy, artificial intelligence (AI), and IT security. We expect this to reduce overheads, mainly driven by the reduction in IT operating costs, the ongoing standardization of IT infrastructure and platforms – mainly through cloudification, automation, and retiring – and by standardizing IT interfaces. Further efficiency enhancement measures will be drawn up in order to remain competitive in the future in the area of our internal IT service provider.

In the long term, these savings will help the Group finance its innovation endeavors. We are focusing on innovation topics such as (generative) artificial intelligence, telco-as-a-platform (including application programming interfaces (API), Open Radio Access Network (O-RAN), and vertical cloud production for the Group's own network), as well as the evolution of the campus networks, which are designed to improve the integrated automation of our international industrial customers' production processes. We are also working on improving and further developing customer experience by introducing an enhanced, uniform router operating system based on the Reference Design Kit (RDK, an open source initiative of network providers, system integrators, and equipment manufacturers), simple customer interaction via the OneApp and OneShop, and our entertainment/TV portfolio. Technology innovations will serve to safeguard the network and technology leadership of our German, Europe, and United States operating segments in the long term. Ultimately, in addition to enhancing customer experience, every one of our investment projects revolves around people.

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 has deteriorated compared with the prior year due to a potential expansion of the ban on Chinese network components, the growing threat level imposed by cyberattacks, the enduring pressures on global economic development, and the tense geopolitical situation. Our major challenges particularly include the regulatory factors, economic uncertainties, and intense competition and the associated pressure on profitability in the telecommunications business, as well as the pressure to change arising from new technologies and strategic transformation. At the time of preparing this report, neither our risk management system nor our management could identify any material risks or developments that threaten the continued existence of Deutsche Telekom AG or a significant Group company 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 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.  

For further information on sustainability, please refer to the section "[Combined 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 anticipate potential developments at an early stage and systematically identify, assess, and manage the resulting risks and 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) and (3) 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 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. Under § 317 (4) of the German Commercial Code (Handelsgesetzbuch – HGB), the auditor of listed companies should assess whether the board of management has taken the measures incumbent upon it under § 91 (2) AktG in a suitable form, and whether the monitoring system stipulated by this paragraph is calculated to meet its objectives, including the early detection of developments that could put the continued existence of the company at risk. Our system complies with the statutory requirements for a risk early detection system. Furthermore, an external audit of risk and opportunity management in accordance with IDW Auditing Standard 981 carried out at the end of 2022/start of 2023 for selected parts of the organization and risk categories did not uncover any findings that would cast doubt on its appropriateness or effectiveness.

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 are intended to 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. The Group Policy on Risk Management was further refined in 2022 and adapted to the current circumstances.

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 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 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.

Our Group-wide risk and opportunity management system covers strategic, operational, regulatory, legal, compliance, and financial risks and opportunities for our consolidated and major non-consolidated entities. The standard process described below provides a framework. The starting point for the identification of risks and opportunities is the deviation from a planned value or company target. Once risks and opportunities have been identified, we move on to analyze and assess them in more detail. 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 evaluates, implements, and monitors the associated measures. After taking mitigating measures into account, these risks are summarized in the risk reporting, which is submitted to the decision-makers in the company and/or the relevant supervisory body. This also enables transparent monitoring of the development of individual risks, as well as of the overall risk situation, including the mitigation measures taken. Our risk culture, the manner in which we deal with risks, is a key component and embedded in all parts of the Company.

The risk and opportunity management process is described below using five elements. For purposes of simplification, “risks” is used in the following, instead of referring to “opportunities and risks” in each case. The document nonetheless focuses on both positive and negative deviations from the planned value. Risk management is therefore always a matter of opportunity and risk management.

The risk and opportunity management system



Risk culture

Our risk culture includes the basic attitudes in relation to risks and forms the basis and the framework for everyday business, for being able to make risk-oriented decisions. The risk culture is closely interlinked with Deutsche Telekom's corporate culture, which requires risks and opportunities to be dealt with in a positive and transparent way. At the core of our risk culture is the motto "Everyone is a risk manager," which means that, in principle, every employee takes responsibility for their risks, and handles them in accordance with the defined process.

Corporate targets

The corporate targets (or targets for the relevant individual unit derived from these) serve as the starting point for the identification of risks as deviations from planned values. These include both quantitative and qualitative targets. In order to assess the threat to the continued existence of the Company, we implemented the concept of risk-bearing capacity. Risk-bearing capacity encompasses the assets for covering possible losses. These assets are defined through equity and liquidity.

Risk analysis

Risk identification. Each segment produces a quarterly risk report or risk notification in accordance with the standards laid down by the central risk management and based on specific materiality thresholds. These reports or notifications 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. Qualitative factors affecting our strategic positioning and reputation are taken into account. 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 and documented on an ongoing basis. In addition, on an annual basis, we consider "emerging risks," which are primarily derived from external studies. These are risks and opportunities that are developing at considerable pace, and in some cases are difficult to assess. These risks are either new or becoming substantially more significant for our company over time. Risks and opportunities like these are triggered primarily by technological developments (e.g., digitalization), environment (e.g., climate change), geopolitical tensions (e.g., wars or trade disputes), macroeconomic factors (e.g., shortages of skilled labor or pandemics), or threats (e.g., cyberattacks).

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

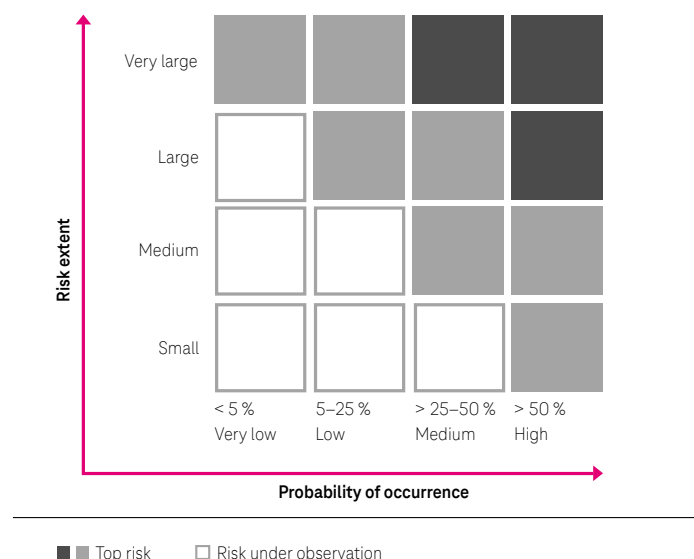
Probability of occurrence		Description
< 5 %		Very low
5 to 25 %		Low
> 25 to 50 %		Medium
> 50 %		High

Risk extent	Description
Small	Limited negative effects on business activities, results of operations, financial position, and reputation; individual EBITDA AL risk < € 200 million
Medium	Negative effects on business activities, results of operations, financial position, and reputation; individual EBITDA AL risk ≥ € 200 million
Large	Significant 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
Very large	Damaging negative effects on business activities, results of operations, financial position, and reputation; individual EBITDA AL risk ≥ € 1.0 billion, and/or affects more than one Group entity

Risk extent is primarily assessed based on EBITDA AL. If relevant, other indicators are to be used for the assessment, e.g., financial risks based on cash flow, which can also be used to assess the categories of risk.

On the basis of our assessment using the criteria described above, we categorize the individual risks in our risk and opportunity management process as top risks or risks under observation, as shown in the graphic below. Top risks are managed with priority.

Risk portfolio



We generally report the top risks (gray and dark gray shading). Exceptions are possible, for example, risks from prior years that we continue to list for the sake of reporting continuity although they are classified as “risk under observation” (white shading) 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.

For the aggregate disclosure of an overall risk position, Group Risk Governance performs an “EBITDA AL at risk” and a “cash flow at risk” calculation for Deutsche Telekom. This states that, with a particular probability of occurrence, the risk extent ascertained using the simulation will not be exceeded. The risk aggregations are carried out using a technique that has become known as Monte Carlo simulation, in which a large number of risk-related potential future scenarios is considered. The overall risk positions are set in relation to the assets for covering possible losses. The risk-bearing capacity analysis is carried out once a quarter as part of risk reporting.

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. 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 handling

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.

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.

Risk containment measures.   The risk owners 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 risks from the market environment with comprehensive sales controlling and intensive customer management.
- We deal with risks arising from brand and reputation by continuously analyzing the market and communications.
- 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, 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 minimize legal risks by ensuring suitable support for proceedings and by designing contracts appropriately in the first place.
- We manage interest and currency risks by means of systematic risk management and hedge them using derivative and non-derivative financial instruments.
- 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.

Risk monitoring

The Group risk report, which presents the major risks, is prepared for the Board of Management on a quarterly basis. The Audit Committee of the Supervisory Board of Deutsche Telekom AG also examines this report at its meetings. Furthermore, the Board of Management informs the Supervisory Board. In addition, the emerging risks are presented once a year as part of the risk report. Among other benefits, the Group risk report ensures transparent monitoring of the development of individual risks, as well as of the overall risk situation. This is supported by the Group-wide risk management tool. If any unforeseen risks arise, they are reported ad hoc (even outside of regular reporting). 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.

Risks and opportunities

In the following section, we present all risks and opportunities of significance to the Group – including emerging risks – 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 only consider risks and opportunities after the mitigation measures taken (net assessment). 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 assigned the individually assessed risks to the following categories. Where multiple individual risks are assigned to one risk category, we calculate the risk significance on the basis of risk aggregation carried out using a Monte Carlo simulation, in which we consider the individual risks along with their individual extent and probability of occurrence. The outcome, or risk significance, is the “value at risk.” This states that, with a particular probability of occurrence, the risk extent ascertained using the simulation will not be exceeded. An expert assessment is used for risk categories that have not been quantified.

The resulting risk significance for the risk categories is broken down into four levels:

Risk significance	Description
Low	< € 200 million value at risk
Medium	≥ € 200 million value at risk
High	≥ € 500 million value at risk
Very high	≥ € 1.0 billion value at risk

Corporate risks

	Risk significance	Change against prior year
Strategic risks		
Macroeconomic environment, Germany	Medium	Unchanged
Macroeconomic environment, United States	Medium	Unchanged
Macroeconomic environment, Europe	Medium	Unchanged
Market environment, Germany	Low	Unchanged
Market environment, United States	Very high	Unchanged
Market environment, Europe	Low	Unchanged
Strategic implementation and integration	Very high	Deteriorated
Brand and reputation	Low	Unchanged
Sustainability and social responsibility	Medium	Unchanged
Health	Low	Unchanged
Operational risks		
Technology, Germany	Low	Unchanged
Technology, United States	Medium	Unchanged
Technology, Europe	Low	Unchanged
Procurement and suppliers	Medium	Deteriorated
Data privacy and data security	Very high	Deteriorated
Other operational risks	Medium	Unchanged
Regulatory risks	Medium	Unchanged
Litigation and anti-trust proceedings	See “ Litigation and anti-trust proceedings ”	
Compliance risks	See “ Compliance risks ”	
Financial risks	Medium	Improved

Strategic risks and opportunities

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.

Uncertainty over the global economic outlook remains high. The war in Ukraine and/or the conflict in the Middle East could intensify and further drive up energy and food prices. War-related embargoes could push up energy prices further and lead to supply shortages, especially for our Germany and Europe operating segments. China's central role for global supply and value chains also poses a risk. Greater geoeconomic fragmentation poses the risk of increased distortions and political uncertainty. If the crisis in the Chinese real estate sector intensifies, it could further slow economic growth in China, with potential cross-border effects. Current high interest rates are expected to lead to a downturn in economic growth in the United States in 2024. In Europe too, the impact of companies, households, and state finances adapting to the high-interest environment could prove more severe than expected. Germany could see recession again in 2024 as a result of declining business investments on account of poor conditions in global trade and budgetary consolidation. A rise in company insolvencies could have a negative impact on our business customer segment. A potential decrease in household income could trigger migration to lower-cost rate plans in the consumer segment, as well as larger numbers of customers defaulting on payments. Additional risks could result from other geopolitical conflicts, for instance between China and Taiwan, and the uncertainty from international trade conflicts. Furthermore, extreme risks with a high impact of loss and a very low probability of occurrence could in principle have a substantial impact on the global economy and our business. Examples of these are extensive extreme weather events (e.g., tsunamis, solar storms), disruptive new technologies, further armed conflicts, or new pandemics.

These risks are counterbalanced by opportunities. In particular, the economy could perform better than expected, if inflation declines faster and benchmark interest rates are lowered sooner than expected.

Risks from the market environment. The main market risks we face include the steadily falling profitability of 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 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 revenues. 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 could put further pressure on prices by increasing the willingness of customers to switch providers.

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 is active in a market environment that is characterized by intensive competition. Alongside traditional telecommunications providers that deliver bundled offerings including content and mobile video services, there is additional competition, as mobile, fixed-network, and satellite industries increasingly converge. Additionally, potential market saturation in the United States may cause the wireless industry's customer growth rate to decline in comparison with previous years. The industry is also highly competitive in spectrum positions, which are crucial to improving existing offerings and introducing new services. T-Mobile US, through its strategic acquisition of spectrum, enabled the capabilities to offer high-speed internet. High-speed internet allows our U.S. subsidiary to offer its own access product and provide a basis on which to continue the business with bundled offerings. Furthermore, T-Mobile US continues to develop and maintain strategic partnerships and MVNO relationships. T-Mobile US must continue to successfully refine and implement its market strategy as Value Leader, Customer Service Leader, and 5G Network Leader to attract and maintain private and business customers. Increasing competitive pressure due to attractive bundle offers and device promotions could lead to difficulty in achieving targets in terms of business, financial, and operating results in the future. Furthermore, social instability may cause protests or demonstrations that could escalate and lead to business disruptions such as store closures or inventory theft.

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 relation to the services offered, such as telephony, internet access, or television – right through to full substitution by new, global providers. These substitution risks could impact our revenue and earnings. We deal with the impact of substitution risks by, for example, offering integrated solutions with hyper-personalization, contextualization, and consistent interoperability of our products, in order to “turn customers into fans” and thereby secure their loyalty. In terms of building out fiber-optic networks, more and more new competitors are entering into the markets, which could lead to longer payback periods for all market players. A strategic rivalry is growing between the “West” (predominantly the United States) and the “East” (predominantly China), which could accelerate various technological areas (e.g., the further development of standards for telecommunications networks).

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 strongly capitalized competitors to enter the market. This might lead to revenue losses and declining margins at T-Systems.

Opportunities from the market 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](#).”

Apart from the risks described, there is the possibility that our customers could move to higher-value rate plans since the data volume of the applications used is rising steadily. Likewise, further growth could be generated by tapping into new customer segments, especially in the United States (e.g., for business customers and small and medium-sized enterprises). In addition, ever-shorter innovation cycles could 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, with the growing convergence of networks, IT, and products, our innovation and technology activities are decisive when it comes to identifying opportunities and making the most of them in an increasingly competitive environment. Hence, our Technology and Innovation Board of Management department has joined all relevant functions under a common leadership to ensure a close integration of technology, innovation, IT, and security. By doing so, we are putting the development of human-centered solutions and outstanding, seamless customer experiences front and center, and in the reporting year we won multiple awards, for example, for our digital assistant Frag Magenta.

For further information on our innovation activities, please refer to the section “[Technology and innovation](#).”

The substantial increase in capacity, bandwidth, and availability, and the lower latencies provided by the 5G mobile standard we have rolled out offer greater reliability, security, and guaranteed service quality, for example, for industrial use cases. 5G enables increased requirements for existing business models to be managed more cost-efficiently going forward. In addition, it offers opportunities for further business models, by marketing improved network capabilities (e.g., network access, localization, security, identity, storage location, temporary storage) to relevant partners. We have already implemented many use cases with 5G, such as 5G campus networks, applications for extended reality (XR), and support for autonomous driving. Together with other technologies like the NarrowBand Internet of Things (NB-IoT) and artificial intelligence (AI), 5G provides the underpinnings for the further digital transformation of society. To further develop telecommunications networks, we are working with industry and researchers on new standards that aim to address a number of current challenges facing communications networks: the connection between all people, the orchestration of various access networks, sustainability, and carbon neutrality, and the further underpinning of data privacy, trust, and security.



Furthermore, opportunities for new project business are arising in our systems solutions business from data sovereignty, innovation areas such as AI, and industrial IoT initiatives.

Risks relating to strategic implementation 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.

As a part of the business combination of T-Mobile US and Sprint, numerous commitments were made to secure approvals. Most commitments have been accomplished. Nevertheless, should any remaining commitments not be achieved, litigation or financial consequences could be a result. In the United States, growth opportunities in the wireless business are becoming more difficult and expensive due to market saturation. Non-core and emerging businesses may be relied on to continue subscriber growth. T-Mobile US is currently integrating, upgrading, and replacing many existing applications and systems, including numerous legacy systems from previous acquisitions. This process is complex and involves challenges in integrating and modernizing outdated IT infrastructure within a limited time frame. The success of these efforts depends on the effective allocation of resources, expansion of our development capabilities, leveraging artificial intelligence and emerging technologies, and ensuring access to subject-matter experts. Any delays or failures in these initiatives could impact the ability to comply with legal or regulatory requirements, ensure reliable system performance, recover promptly from system outages, and maintain

satisfactory customer and employee experiences. These issues could also hinder the capacity to meet customer expectations in terms of service capabilities and offerings, potentially affecting T-Mobile US' operational, financial, and reputational standing.


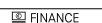
Collaboration with Chinese suppliers is being impeded by the enduring trade conflict between the United States and China. Since 2020, the United States has restricted the use of U.S. technology for and by Chinese suppliers on account of security concerns. They also put pressure on other countries to do the same. In Germany, the legislator adopted the Second Act to Increase the Security of Information Technology Systems, or the IT Security Act 2.0 (IT-Sicherheitsgesetz 2.0), in 2021. All 5G operators must notify the authorities of new critical components and the suppliers thereof in accordance with the catalog of security requirements pursuant to the Telecommunications Act and prior to first-time operation. If the Federal Government has security concerns, it can introduce a blanket ban on using certain manufacturers. Deutsche Telekom itself has long been scrutinizing security-critical components prior to installation and on an ongoing basis once in operation. In 2023, under the IT Security Act 2.0, the Federal Ministry of the Interior and Community (BMI) asked German network operators to identify all 5G components from the Chinese suppliers Huawei and ZTE that have already been installed, and to notify the authority accordingly. Although BMI speaks of an impartial review, there is public speculation over the possibility that, in Germany, in 2024, the findings could lead to a ban or restrictions on deploying Chinese equipment in parts of the network, within certain time frames. In other countries, such as Austria, the Czech Republic, and Poland, it is still possible that components from critical infrastructure suppliers will have to be replaced within specific deadlines. Compared to 2022, we have raised the risk significance of the risk category "Strategic implementation and integration" from high to very high, due to the extensive costs that could be incurred should there be a retrospective order to remove components.

Opportunities relating to strategic implementation and integration.   In our Magenta Advantage strategic area of operation, we work with partners to develop new digital business models based on our assets or capabilities. These partnerships provide opportunities for us to increase revenue and strengthen customer loyalty on a sustainable basis. Since the start of 2022, we have offered our customers exclusive products, services, and benefits as part of our loyalty program Magenta Moments in the OneApp. Cooperations with partner firms like booking.com, Rituals, Netflix, Disney+, and Octopus Energy are a key component of our activities and will play an even more crucial role going forwards in light of the pan-European expansion of our loyalty measures in Europe.

The completed IP transformation (all IP) laid the foundations for the 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.

The disaggregation of the access networks (in mobile communications: Open Radio Access Network, O-RAN; in the fixed-network: Access 4.0) and core networks (e.g., the 5G core network) as part of our network differentiation strategy offers the opportunities of expanding the supplier ecosystem and, as a result, increasing competition, flexibility, and innovation. As we simultaneously drive forward automation and cloudification, we also expect a reduction in total costs and an increase in agility and speed in the provision of new services and features.

We are driving forward the transformation of our IT using agile development, decoupling, and cloudification. These approaches enable us to tap into new possibilities for accelerating developments and increasing the efficiency of IT production, by providing modular components, known as microservices, and APIs and producing them in a scalable cloud with state-of-the-art technology. Furthermore, agile and decoupled development makes it possible to reduce big bang risks in the delivery of major software releases by means of smaller, flexible software releases.

Risks and opportunities arising from brand and reputation. An unforeseeable negative media report on our products and services or our corporate activities and responsibilities may have a huge impact on the reputation of our Company and our brand image. Social networks may make it possible that such information and opinions can spread much faster and more widely. Ultimately, negative reports may 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.  

Risks and opportunities relating to sustainability and social responsibility. 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 along our entire value chain. 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: a document analysis, covering legal texts, studies, and media publications, amongst other things; our involvement in working groups and committees of (inter)national business associations and social organizations, e.g., GeSI, ETNO, BDI, Bitkom, Econsense, and BAGSO; stakeholder dialog formats organized by us; our various publications, such as the press review and newsletters; and workshops with experts from our Company. 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.

For further information on sustainability, please refer to the section [“Combined 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 among suppliers, conduct in relation to human rights, and ethical conduct in relation to and use of AI also entail reputational risks: if our brands, products, or services are connected with such issues in negative media reports, this may cause substantial damage to our reputation. As part of our sustainability management activities, we continuously review such potential risks and take mitigation 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.
- **Climate protection.** 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 CO₂ emissions in other industries as the growth in the ICT sector itself will generate, 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 CO₂ 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 and report on our corresponding successes using an enablement factor.

Climate change risks are already visible in the form of increasingly extreme weather conditions. Such storm events could damage our infrastructure and disrupt network operation. This would have a direct effect on our stakeholders, e.g., our customers, suppliers, and employees, and could result in revenue losses or lower customer satisfaction. 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. As a next step, we conducted a location analysis, with the example of Germany, of the physical climate risks in various scenarios (business as usual/4-degree scenario), which have now been internationalized as part of a transnational project encompassing our major companies in Germany, Hungary, Croatia, and Greece. In addition to the physical risks, transitory risks (threats arising from sudden adaptations to climate change made by economic sectors) were also analyzed in detail by means of a workshop. The full roll-out of the climate risk analysis and the measurement of vulnerability are set to follow in 2024.

We will publish detailed information on this in our [2023 CR Report](#).

We can take further preventive action in this area by also reducing our own CO₂ emissions. For this reason, in 2021 we set ourselves the ambitious target of cutting our CO₂ emissions across the Group (Scope 1 and 2) to net zero by 2025. Up to 95 % of these emissions will be actually cut. Any remaining emissions will be offset through compensatory measures. Climate protection also carries financial risks, whether from the introduction of levies on CO₂ emissions or increased energy costs, as well as stricter requirements for products, for example in relation to energy efficiency. The mitigation measures we are taking to counter these risks include measuring our own energy efficiency and finding ways to improve it. Our ESG targets agreed from 2021 for Board of Management remuneration in relation to the respective annual energy consumption as well as the planned annual CO₂ emissions for Scope 1 and 2 also contribute to achieving the climate targets and energy efficiency measures. We have a Group-wide program to specifically address our supply chain and we are working to optimize our products and their packaging. Since 2021, the Group has covered 100 % of its electricity requirement with renewable energy. This is achieved through power purchase agreements and other forms of direct purchase, such as through guarantees of origin.

For further information on this, please refer to the section [“Combined non-financial statement.”](#)

- **Due diligence obligations in the Group (German Act on Corporate Due Diligence in Supply Chains (Lieferkettensorgfaltspflichtengesetz – LkSG)).** In 2022 and 2023, we reviewed and extended our human rights and environment-related due diligence processes, among others, in order to better accommodate new legal requirements, such as those arising from the LkSG. As part of our global procurement activities in particular, we could be exposed to country- and supplier-specific risks. These include, for example, inadequate local working and safety conditions. Violations could cause severe damage to those affected and could result in reputational damage and negative financial consequences for companies. Our LkSG risk management system includes due diligence processes directed at identifying risks or also violations related to human rights and environmental concerns and, building on this, taking appropriate preventive and/or corrective measures. It encompasses our own business areas, i.e., all Group companies over which Deutsche Telekom exercises a decisive influence (which in particular does not apply to T-Mobile US), and our direct and indirect suppliers. The LkSG risk management system is linked with various established risk processes in the Group, e.g., with the compliance risk assessment of our compliance management system. The annual risk analysis for Group companies belonging to our own business areas and their direct suppliers is a central component of the LkSG risk management system. In addition, ad hoc risk assessments are carried out for the entire value chain, for example, before acquisitions. In order to monitor the effective functioning of the LkSG risk management system, Deutsche Telekom AG has defined the roles of human rights officer and LkSG officer, which will be exercised by the Vice President for Group Corporate Responsibility. This person reports directly to the Chair of the Board of Management of Deutsche Telekom AG and has further supporting functions. Where required to under national regulations (e.g., under the German Act on Corporate Due Diligence in Supply Chains (LkSG)), Group companies have appointed monitoring roles in the same form for their business areas.

We will publish detailed information on the results of the annual risk analysis in our [2023 CR Report](#) and in our 2023 LkSG Report.



Health. 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 could 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. (Inter)national expert organizations will continue to regularly review the recommended thresholds.

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 scientific facts, 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.

Operational risks and opportunities


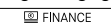
Risks arising from technology. We have an increasingly complex information/network technology (IT/NT) infrastructure, which we constantly expand and upgrade to ensure the best customer experience and consolidate our technology leadership. Outages in the current and also future technical infrastructure 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 technology, innovation, IT, and security 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, or to connectivity for business customers. In order to avoid the risk of outages, 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' IT infrastructure and applications. In cloud computing, all data and applications are stored at a data center. Our European 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.  

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, or other systems and IT failures, such as hardware or software failures, 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.

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, including through digital channels, 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.

Opportunities arising from technology. The utilization of large data volumes (big data) from our networks and their analysis using artificial intelligence (AI) or machine learning (ML) 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. In this way, ML can be used, for example, to manage the energy consumption of our technology in a forward-looking way based on the analysis of network data.

Our Systems Solutions operating segment covers innovative business areas in the digital transformation of business processes, such as cloud computing, AI, automation, and cybersecurity. These business areas could develop faster than expected. As a pioneer of the digital transformation, we have an opportunity to actively shape market trends through a variety of projects in the fields of healthcare, public administration, and the automotive segment. Under these data-based digital business models, our partner-oriented approach is a highly promising way of contributing our core competencies – in cloud computing, edge computing, and cybersecurity – to various projects. In addition, we have references regarding strategic engagements in our focal sectors. We also see potential for development in the sovereign clouds environment.  

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 launch of a Europe-wide toll collection system (Toll4Europe). This will help to give us an edge over our competitors.

Procurement and supply risks. Deutsche Telekom cooperates with a large number 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.

Deutsche Telekom's supply chains could be disrupted by a number of factors, such as geopolitical tensions, (e.g., the United States' technology sanctions against China), cyberattacks, or supply chain restructuring. Furthermore, additional risks may also result from the dependence on individual suppliers or from individual vendors defaulting. This applies in particular for Chinese suppliers of telecommunications technology. We employ organizational, contractual, and procurement strategy measures to counteract these challenges. At T-Mobile US, in certain areas such as terminal equipment, there are few suppliers who can provide adequate support, which may lead to unfavorable contract terms and decreased flexibility to switch to alternative third parties. Unexpected termination or difficulties in renewing the commercial arrangements with the suppliers, or any business disruptions at the suppliers could have a material adverse effect on T-Mobile US. We are therefore raising the risk significance of the risk category "Procurement and suppliers" from low to medium.

Risks and opportunities arising from data privacy and data security

Data privacy. All Group companies are subject to specific data privacy regulations (in the EU especially the General Data Protection Regulation (GDPR)). These requirements must be implemented and their compliance must be monitored. Data privacy incidents could be sanctioned with very high administrative fines (up to between 2 and 4 % of the total worldwide annual revenue of an undertaking). The European supervisory authorities' concept for administrative fines would apply. It stipulates high fines even for violations with a low criticality. The supervisory authorities' practice with respect to fines demonstrates that more and higher fines are being imposed. Despite mitigation measures and well-established data privacy management structures, it is not possible to fundamentally rule out data privacy incidents as almost all procedures/processes in the Group are relevant in terms of data protection. Errors might occur that are linked to reputation, cost, and sanction risks.

Since the introduction of the GDPR, data privacy law has been largely harmonized in Europe. Deutsche Telekom benefits from this as a Group, since the majority of special national data privacy regulations no longer apply and no longer have to be implemented in the individual entities in the European Union (EU). This has reduced the need for additional coordination. An appropriate level of security is also ensured when transmitting personal data to countries outside of the EU. Under the Schrems II ruling by the European Court of Justice (ECJ) from 2020, companies are subject to strict requirements for the transmission of data to third countries without the adequacy decision of the EU Commission, compliance with which entails a substantial workload for companies. Deutsche Telekom therefore welcomes the EU-U.S. Data Privacy Framework agreed between the EU and the United States, which is intended to provide greater legal certainty for collaborations with U.S. companies. A number of actions are pending against this agreement and more have been announced. By way of mitigation, Deutsche Telekom safeguards the transmission of personal data to companies in the United States, regardless of final legal clarification, by means of standard contractual clauses of the European Commission.

In the United States, the telecommunications industry is also examined closely by the Federal Communications Commission (FCC) and Federal Trade Commission (FTC) with regards to the state data privacy laws. Non-compliance with the stricter data privacy laws could result in high fines. The growing demand for data means the challenges with respect to the collection, usage, transfer, and management of customers' personal data are also growing.

Deutsche Telekom carefully examines technical developments and digital transformation projects on an ongoing basis to verify if they are in line with the Group strategy. For example, the use of IT systems with AI within the Group always complies with the applicable data privacy laws and provisions. The Privacy and Security Assessment (PSA) must be carried out as soon as a new AI solution is to be introduced in the Group. This process, which is now fully digital, meets the requirements of the GDPR with regard to carrying out a Privacy Impact Assessment for evaluating and documenting the risks posed by data processing. In the PSA process all data privacy and security requirements relevant to the system or project are automatically assigned and then worked through by the functionally responsible units. One new addition is the separate AI data privacy requirement, which helps to develop systems based on or using AI in a way that is data privacy-compliant. This takes account not only of general data privacy principles (legality, transparency, limitation of use, etc.), but also specific application scenarios, such as generative AI and profiling. These data privacy requirements also take an important first step in preparing for the European AI Act (EU AI Act).

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 AI applications in the field of telecommunications cannot realize the same kind of potential as those of companies that are only subject to the GDPR.

Another example of a major initiative with relevance for data privacy is the long-term partnership between T-Systems and Google Cloud, which began in 2021. In operation since April 2022, the shared T-Systems Sovereign Cloud powered by Google Cloud combines the open-source expertise of Google Cloud and the sovereign services of T-Systems and enables customers to manage their workloads in full compliance with German and EU regulatory requirements. Compliance with all three aspects of digital sovereignty (data sovereignty, operational sovereignty, and software sovereignty) is continuously monitored by T-Systems, such that even companies from regulated industries are able to confidently process their sensitive data in the cloud in accordance with the GDPR and Schrems II and at the same time profit from the scalability, innovative power, and reliability of public cloud functionalities.

Prior thereto, T-Systems signed the EU Cloud Code of Conduct (EU Cloud CoC) in 2021. After all, the EU Cloud is synonymous with something essential, namely, nothing less than the digital sovereignty of Europe in cloud services. This refers to the complete control of stored and processed data and independent decision-making on who can access the data. This requires clear rules and requirements, which the EU Cloud CoC offers. The European data protection authorities authorized this Code of Conduct. By becoming a signatory, the Company and hence also T-Systems undertakes to continue to increase the data protection level for cloud services in the interests of customers and European data protection. In this way they provide proof that data is processed in accordance with the requirements of the GDPR. Compliance with the rules is reviewed by an independent body. We will continue to support the development of the standard in 2024 and ensure further harmonization with ISO and internal standards.

Data security. 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. We are also currently seeing new developments in the increased and fast-growing use of generative AI, both on the part of criminal attackers and in terms of options for protection. Here, too, we are working to exploit the opportunities offered by the development and use of AI and to counter the potential new risks arising from this technology.

Cybercrime and industrial espionage are on the rise and they are becoming ever more complex due to rapidly advancing technologies and attack methods. As a result, we face constant challenges and adjustments to protect our customer and business partner data, as well as our networks, technologies, products, and services against these attacks. Such incidents can lead, among other implications, to business disruptions, embezzlement, or unauthorized access to confidential or personal information, and to loss of reputation. We are addressing this development with comprehensive mitigation measures, such as security concepts. In order to also 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. Furthermore, 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.

We provide regular updates on the latest developments in data protection and data security on our [website](#).

Due to the rise in successful cyberattacks against Deutsche Telekom in recent years, predominantly in the United States, and the growing overall threat level imposed by cyberattacks, as well as the supervisory authorities' tougher practice with respect to data privacy-related fines, the risk significance of the risk category "Data privacy and data security" is rising from high to very high.

Other operational risks and opportunities

Employees. Our employees play a crucial role in the transformation of Deutsche Telekom. Their skills are a key factor in our business success. Both this success and our service provision are dependent on the ability to acquire, retain, and develop specialist staff and talents. Growing competition throughout the entire labor market for experts (especially in technology and IT) and the war for talents, coupled with the need to offer increasingly flexible working conditions (e.g., remote working), could lead to key employees (in particular those in technical and IT-related roles) leaving the company, while demand continues to grow unabated. Sharply rising entry-level salaries could exacerbate the situation and increase costs further. The availability of staff with an appropriate skill set at nearshore and offshore sites is crucial when it comes to rendering services on budget, in line with requirements, and on time. The demands of the talents with regard to potential employers have also increased. Apart from remuneration, factors they care about include flexible working, environmental social governance, culture, diversity, and innovations. We systematically work to address these challenges head on, for example, by strengthening Deutsche Telekom and T-Mobile US as an attractive employer brand and by proactively seeking out new specialist staff and talents worldwide.

In 2023, we once again used socially responsible measures to restructure the workforce in our Group. Early retirement models such as phased and dedicated retirement, and severance payments have been largely taken up, but also the training and placement of civil servants and employees in the public sector by the next.JOB unit has proved very popular. The transformation with the associated staff restructuring is extremely important for achieving the Group's goals. Nevertheless, it is essential the restructuring is managed in a targeted way. That is why, for each request by an employee to take up a staff reduction instrument, it must be ensured on principle that the arrangement is voluntary on both sides (agreed by employee and manager), so as to avoid, for example, the loss of high performers.

The Company still employs numerous civil servants, who originally belonged to Group units of Deutsche Telekom that have since been sold. Where requested, these civil servants have been granted temporary leave from their civil servant status. 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, 1,041 civil servants are entitled to return from outside the Group in this way (as of December 31, 2023), thus posing a risk.



Risks and opportunities relating to regulation

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 the United States, Germany, and other European countries may also impact revenue and earnings trends in the medium to long term.

Changes in regulatory policy and legislation

European legislation constantly influences our pricing and product design. The main legal frameworks are the European Electronic Communications Code (EECC) and the EU Roaming Regulation. Further legislative initiatives are expected at a European level in 2024, such as the plans to adopt the Gigabit Infrastructure Act, which aims to reduce the costs of infrastructure build-out. It is also possible that the regulation of charges for phone calls between EU member states will be extended or tightened. The current regulation only applies until mid-2024.

Policy decisions can give rise to risks, but also opportunities. The Federal Government's Digital Strategy adopted in August 2022 is a first step for potential further measures, for example, in connection with digitalization projects in administration or a modern legal framework for the data economy. The Gigabit Strategy contained therein aims, among other goals, to ensure nationwide fiber-optic coverage and state-of-the-art mobile technology. To this end, measures are expected in relation to approval processes or the realignment of the subsidized build-out, which could significantly affect conditions for the continued network build-out. However, there is skepticism in the industry about the legislative proposals so far set out by the Federal Government in this regard and progress is expected to be tentative.  

In view of the highly topical debates regarding the network security of critical infrastructure, the legislator has already announced adjustments in this regard, which will be implemented by regulatory and other authorities. This will lead to new requirements, for which the costs of implementation for Deutsche Telekom are not yet possible to estimate.

In the United States, too, new or amended wireless-related provisions and laws can increase the complexity of processes and lead to higher costs for T-Mobile US.

Awarding of spectrum

Risks could arise from the fact that inappropriate auction rules or the conditions for extending awards, frequency usage requirements, excessive reserve prices, and disproportionately high annual spectrum fees could jeopardize our planned acquisition of spectrum or give rise to adverse effects from the conditions for the allocation 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). The specific details are down to the national regulatory authorities. 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. Changes to award procedures generally entail opportunities and risks. The upcoming award procedures mainly relate to the auctioning of spectrum in the 700 MHz, 800 MHz, 900 MHz, 1,800 MHz, 2,100 MHz, 3,400 to 3,800 MHz, and the 26,000 MHz ranges. In addition, spectrum licenses, especially in the 2,100 MHz and 2,600 MHz ranges, will expire by 2024 in some countries and need to be renewed. Major award procedures are currently being prepared, primarily in Austria, Poland, Slovakia, and the Czech Republic. In Germany, consultations were held regarding the 800 MHz, 1,800 MHz (partial), and 2,600 MHz bands to determine which award procedure to select (auction or extension) and the possible conditions of allocation. Up for discussion are, among other aspects, a potential tightening of the rules for network access in favor of service providers, and additional coverage obligations. The extension periods under discussion are for five or eight years. A final decision on this has not yet been made. In the United States, T-Mobile US acquired frequency in the 2.5 GHz range for approx. USD 300 million in an auction that ended on August 29, 2022. The receipt of these licenses was delayed after the FCC's authority concerning the organization of spectrum auctions had expired. However, on December 19, 2023, the 5G Sale Act, which had shortly before been adopted by the U.S. Congress, entered into force, which granted the FCC 90 days from that date to allocate the licenses to T-Mobile US.

For further information on spectrum auctions that were completed in 2023 or are still ongoing, please refer to the section "[Major regulatory decisions.](#)"

Areas in which national regulators may intervene

European and national laws and regulations grant national regulators extensive powers of intervention.

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.

In July 2022, the Bundesnetzagentur published its decision on the future **regulation of access to Deutsche Telekom's copper and fiber-optic network**. With this decision, rules for FTTB/H networks are laid down, the previous regulation for Layer2 (VDSL) is discontinued, and access to ducts and poles is also imposed. The precise access conditions will be set down in the subsequent procedures, by means of which the authority will influence Deutsche Telekom's pricing and product design.

For further information, please refer to the section "[Major regulatory decisions.](#)"

Regulatory requirements for mobile communications could arise from conditions imposed in connection with the allocation of frequencies. In Germany, a negotiation obligation for wholesale access has been in place since 2018, for which the Bundesnetzagentur can be called upon in cases of dispute. This can give rise to restrictions on our freedom of contract when concluding wholesale agreements with regards to wholesale customers, as well as in terms of scope of services and prices.

Within the scope of the subsidized network build-out, companies have an obligation to ensure access to the subsidized network. In addition, all operators of public supply networks have an obligation, among others, to ensure shared use of passive network infrastructure. The Bundesnetzagentur can be called on to settle disputes. Since 2021, termination rates have been determined directly by the European Commission by way of a **delegated act**. In addition, European and national **consumer protection regulations** apply.

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 TV programs.

Litigation and anti-trust proceedings

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 individual legal 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 originally in dispute totaled 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. Following an appeal from both parties, in February 2021, the Federal Court of Justice once again referred the proceedings back to the Frankfurt/Main Higher Regional Court for further consideration. In November 2021, Deutsche Telekom AG presented a settlement concept under which a concrete settlement offer is to be made to every eligible plaintiff. The settlement offers are made without any judicial decision and do not constitute an admission of liability on the part of Deutsche Telekom AG. Settlements have now been agreed with almost all of the eligible plaintiffs. Appropriate provisions for risk have been recognized in the statement of financial position for the remaining still pending actions. Given the very low residual risk, this matter will no longer be reported on in the future.

Claims relating to charges for the shared use of cable ducts. In 2012, Kabel Deutschland Vertrieb und Service GmbH (today Vodafone Deutschland GmbH (VDG)) filed a claim against Telekom Deutschland GmbH to reduce the annual charge for the rights to use cable duct capacities. In similar proceedings, the then Unitymedia Hessen GmbH & Co. KG, Unitymedia NRW GmbH, and Kabel BW GmbH (today all Vodafone West) 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, including in the future. The claims were rejected by the Frankfurt/Main Higher Regional Court (VDG) and by the Düsseldorf Higher Regional Court (Vodafone West) and an appeal was not allowed in both cases. In response to the complaints of the plaintiffs against non-allowance of appeal, the Federal Court of Justice allowed the appeal by VDG to the extent that it relates to claims dating from January 1, 2012 onward; the appeal by Vodafone West was allowed to the extent that it relates to claims dating from January 1, 2016 onward. The claims were rejected with legally binding effect for the time periods prior to this. In a ruling on December 14, 2021, the Federal Court of Justice referred the proceedings concerning the remaining claims back to the responsible Higher Regional Courts for a new hearing and decision. VDG has since updated its claim, which it now puts at around EUR 826 million plus interest for the period from January 2012 to December 2022. The plaintiff Vodafone West has also updated its claim, which it now puts at around EUR 418 million plus interest for the period from January 2016 to June 2022. It is currently not possible to estimate the financial impact of both these proceedings with sufficient certainty.

Sprint Merger class action. On June 1, 2021, a shareholder class action and derivative action was filed in the Delaware Court of Chancery against Deutsche Telekom AG, SoftBank, T-Mobile US, and all of our officers and directors at that time, asserting a breach of fiduciary duties relating to the purchase price amendment to the Merger Agreement, as well as SoftBank's subsequent monetization of its T-Mobile US shares. On October 29, 2021, the complaint was amended. The amended complaint is directed at the same defendants and the same underlying transactions as in the original action; however, it includes additional submission on alleged facts. It is currently not possible to estimate the resulting claim and financial risk of these proceedings with sufficient certainty.

Proceedings against T-Mobile US in consequence of the cyberattack on T-Mobile US in August 2021. In August 2021, T-Mobile US confirmed that their systems had been subject to a criminal cyberattack that compromised data of millions of their customers, former customers, and prospective customers. With the assistance of outside cybersecurity experts, T-Mobile US located and closed the unauthorized access to their systems and identified customers whose information was impacted and notified them, consistent with state and federal requirements. As a result of the cyberattack, numerous consumer class actions including mass arbitrations were filed against T-Mobile US. The class actions brought before the federal courts were consolidated into one action in December 2021. The plaintiffs are claiming damages in an as yet unspecified amount. On July 22, 2022, T-Mobile US entered into an agreement to settle the consumer class action in the Federal Court for USD 350 million. In addition, T-Mobile US committed to spending a total of USD 150 million in 2022 and 2023 on data security and related technologies. The settlement was approved by the court in June 2023. A member of the class action appealed against the final decision on approval and is objecting to the awarding of lawyers' fees by the court to the lawyer for the class action. This is further delaying the closure of the proceedings. T-Mobile US expects that the settlement of the consumer class action, together with further settlements already or still to be concluded with consumers, will satisfy essentially all claims

asserted to date by current, former, and potential customers affected by the cyberattack in 2021. T-Mobile US has recognized corresponding provisions for risks in the statement of financial position of around USD 0.3 billion (EUR 0.3 billion).

Furthermore, in November 2021, a derivative action was brought against the members of the Board of Directors of T-Mobile US and against T-Mobile US as nominal defendant. This action has since been withdrawn. In September 2022, a further purported shareholder filed a new derivative action against the members of the Board of Directors of T-Mobile US and against T-Mobile US as nominal defendant alleging claims for breach of fiduciary duties relating to the company's cybersecurity practices. It is currently not possible to estimate the resultant financial risk with sufficient certainty.

In addition, inquiries have been made by various government agencies, law enforcement and other state authorities, with which T-Mobile US is cooperating in full. It is currently not possible to estimate the resultant financial risk of these proceedings with sufficient certainty..

Proceedings against T-Mobile US in consequence of the cyberattack on T-Mobile US in January 2023. On January 5, 2023, T-Mobile US identified that a bad actor was obtaining data through an application programming interface (API). Investigations by the company have found that the affected API was only able to provide a limited set of customer account data, including name, billing address, email address, telephone number, date of birth, T-Mobile account number, and information such as the number of lines on the account and plan features. The results of the investigation indicate that, in total, around 37 million current postpaid and prepaid customer accounts were affected, although many of these accounts did not include the full data set. T-Mobile US assumes that the attacker retrieved data via the affected API for the first time from or around November 25, 2022. In accordance with federal and state requirements, the company has notified those individuals whose data was affected. In connection with this cyberattack, consumer class actions were filed against T-Mobile US and official inquiries were submitted to the company, to which it will respond and, as a result of which, it may incur substantial expenses. It is currently not possible to estimate the resultant financial risk with sufficient certainty.

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.

Major ongoing 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 anti-trust law or follow-on damage actions under civil law. In the following, we describe material anti-trust proceedings and resulting claims for damages. If, in extremely rare cases, required disclosures on individual anti-trust proceedings are not made, we concluded that these disclosures may seriously undermine the outcome of the relevant proceedings.

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 AG, which were paid in full in January 2015. After the General Court of the European Union partially overturned the European Commission's decision in 2018 and reduced the fines by a total of EUR 13 million, the legal recourse following the ruling of the European Court of Justice on March 25, 2021 is exhausted. 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. Three claims totaling EUR 219 million plus interest are currently pending. It is currently not possible to estimate the financial impact with sufficient certainty.

Claims for damages against Deutsche Telekom AG, including due to insolvency of Phones4U. Phones4U was an independent British mobile retailer, which declared insolvency in 2014. The insolvency administrator is pursuing claims before the High Court of Justice in London against the mobile providers active on the UK market at that time and their parent companies on the grounds of alleged collusion in violation of anti-trust law and breach of contract. Deutsche Telekom AG, which at that time held 50 % of the mobile company EE Limited, has rejected the claims as unsubstantiated. The High Court of Justice in London heard testimony from several witnesses and experts in the period between mid-May and the end of July 2022 with a view to establishing the legal basis for a claim. On November 10, 2023, the High Court of Justice in London rejected all claims made by Phones4U against all defendants. In December 2023, Phones4U filed an application for leave to lodge an appeal with the High Court of Justice in London. The hearing took place on December 19, 2023. The High Court of Justice in London rejected the application by Phones4U for leave to lodge an appeal. Phones4U is pursuing the application further with the Court of Appeal. It is currently not possible to estimate the financial impact with sufficient certainty.

Antitrust class action complaint following the merger with Sprint. T-Mobile US is defending against an antitrust class action complaint from June 17, 2022, in which the plaintiffs allege that the merger of T-Mobile US and Sprint violated the antitrust laws and harmed competition in the U.S. retail cell service market. Plaintiffs seek injunctive relief and trebled monetary damages on behalf of a purported class of AT&T and Verizon customers who plaintiffs allege paid artificially inflated prices due to the merger. It is currently not possible to estimate the financial impact with sufficient certainty.

Compliance risks

Compliance risks are risks arising from systematic infringements of legal or ethical standards that could result in regulatory or criminal liability on the part of the company, its executive body members, or employees, or result in a significant loss of reputation. In order to minimize these risks, we have set up a compliance management system.

For further information on the compliance management system, please refer to section [“Combined non-financial statement – Aspect 5: Fighting corruption.”](#)

Financial risks and opportunities

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.

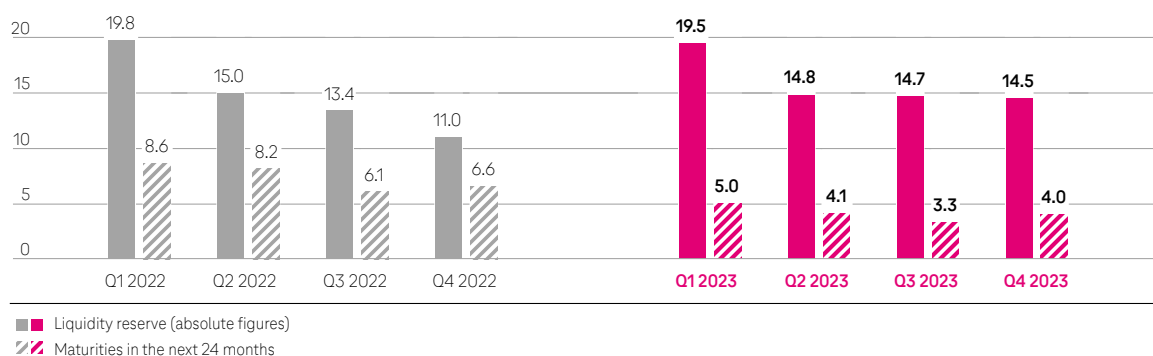
For further information on the risk assessment, please refer to the “Corporate risks” table above.

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.

Deutsche Telekom (excluding T-Mobile US): Primarily bilateral credit agreements with 20 banks with an aggregate total volume of EUR 12.0 billion were available as of December 31, 2023, which were not utilized. Our liquidity reserve covered maturing bonds and long-term loans at all times for at least the next 24 months (see graphic below).

Development of the liquidity reserve (excluding T-Mobile US), maturities in 2022/2023

billions of €



Furthermore, bilateral credit lines with an aggregate total volume of USD 7.5 billion (EUR 6.8 billion) plus a cash balance of USD 5.2 billion (EUR 4.7 billion) were available to T-Mobile US as of December 31, 2023.

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. At the level of operations, the outstanding debts are continuously monitored in each area, i.e., locally.

Currency risks. Currency risks result from dividend payments received, investments, financing measures, and operations. Risks from foreign currency fluctuations are hedged on a pro rata basis depending on their probability of occurrence, if they affect the Group's cash flows (transaction risks). However, foreign-currency risks that do not influence the Group's cash flows, for example, risks resulting from the translation of assets and liabilities of foreign operations into euros (translation risks) are generally 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 Group financing: On the one hand, we have an interest rate risk relating to the issue of new liabilities, and on the other, we have an interest rate risk arising from variable-interest liabilities. The euro interest rate position is actively managed as part of our interest rate management activities. Each year, a maximum is set for the percentage of variable-interest liabilities, taking into account the planned finance costs. Inflationary pressure in Germany, Europe, and the United States resulted in further interest rate hikes by central banks in 2023. Given the heavily inverted yield curve, the variable-interest debt portfolio and hence interest sensitivity further declined substantially. The USD debt position of T-Mobile US primarily comprises partially cancelable, fixed-income bonds.

For further information, please refer to Note 43 "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 and opportunities

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. Deutsche Telekom's credit rating affects our access to the capital markets, to the international finance markets, and our refinancing costs. A lower rating could impede access to the capital market and, over time, would lead to an increase in the cost of debt financing. We intend to maintain our rating in a corridor from A- to BBB and thereby safeguard undisputed access to the capital market. As of December 31, 2023, Deutsche Telekom AG's credit rating with Moody's was Baa1 with a stable outlook, while Standard & Poor's and Fitch rated us BBB+ with a stable outlook. From today's perspective, access to the international debt capital markets for both Deutsche Telekom AG and T-Mobile US is not jeopardized.

Control environment. Compliance with business and regulatory requirements, in particular for the internal control system, requires high efforts. Not meeting these demands could lead to difficulties or weaknesses in Deutsche Telekom's overall control environment and with regard to financial reporting.

Sales of shares by the Federal Republic or KfW Bankengruppe. As of December 31, 2023, the Federal Republic and KfW Bankengruppe jointly held 30.46 % 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.

Impact of the CR strategy on the value of the Company.   Growing numbers of investors take sustainability aspects into account in their investment decisions (Socially Responsible Investments, SRI). SRI investment products consist of securities from companies that have been reviewed based on environmental, social, and governance (ESG) criteria. The development of demand from socially responsible investors for the T-Share is an indicator we can use to assess our sustainability performance. The Socially Responsible Investment ESG KPI indicates the percentage of Deutsche Telekom AG shares held by such investors. Our commitment to greater sustainability is paying off: as of December 31, 2023, around 32 % of all T-Shares were held by investors who show concern for environmental, social, and governance criteria in their investment choices. We have refined the methodology and underlying data and have switched to monitoring the sustainably managed shares at fund level and no longer at an institutional level. For better comparability with other companies, the total number of shares given pertains to the number of Deutsche Telekom shares in free float.

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 that are also performed for the carrying amounts of investments in the annual financial statements of Deutsche Telekom AG prepared in accordance with German GAAP, 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.

In 2023, the price level on the world energy market declined compared with 2022. By taking account of fluctuating energy prices and the changes to the debt portfolio during the planning process, we were able to lower the risk significance of the risk category "Financial risks" from high to medium.

Governance and other disclosures

Governance

As of December 31, 2023, **Board of Management** responsibilities were distributed across eight Board departments.

Four of these Board departments cover the cross-functional management areas with the following departments:

- Chair of the Board of Management
- 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

Composition of the Board of Management as of December 31, 2023

Members of the Board of Management	Department
Timotheus Höttges	Chair 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

By resolution of February 23, 2022, Adel Al-Saleh was reappointed as the Board member responsible for T-Systems for the period from January 1, 2023 to December 31, 2027. By resolution of May 19, 2022, Dr. Christian P. Illek was reappointed as the Board member responsible for Finance for the period from April 1, 2023 to March 31, 2028. By resolution of December 14, 2022, Dominique Leroy was reappointed as the Board member responsible for Europe for the period from November 1, 2023 to October 31, 2028.

By resolution of October 13, 2023, Adel Al-Saleh's appointment as the Board member responsible for T-Systems was ended effective midnight on December 31, 2023. Also by resolution of October 13, 2023, Dr. Ferri Abolhassan was appointed as the Board member responsible for T-Systems for the period from January 1, 2024 to December 31, 2026.

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 7, 2023.

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 **remuneration system** for the Board of Management provides incentives to successfully implement the corporate strategy, to ensure a sustainable development of the Company, and is also focused on creating long-term value for our shareholders. The remuneration received by the members of the Supervisory Board is specified under § 13 of the Articles of Incorporation of Deutsche Telekom AG. Under the remuneration system, members of the Supervisory Board received fixed annual remuneration. The recommendations of the German Corporate Governance Code (GCGC), as published in the Federal Gazette on June 27, 2022, on "Remuneration of the Management Board and the Supervisory Board" (Section G) were complied with.^a

Detailed information on the remuneration of the Board of Management and the Supervisory Board is published in the separate [remuneration report](#).

Members of the Board of Management and Supervisory Board of Deutsche Telekom AG were reported to have purchased and transferred 412,132 shares (2022: 447,898) and sold 4,363 shares (2022: 65,460) inter alia under the Share Matching Plan and as personal investments in the course of 2023. Total direct or indirect **shareholdings** 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.

^a Information in this section is information extraneous to the management report as explained in the section "Introductory remarks."

Events after the reporting period

For information on events after the reporting period, please refer to Note 49 “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, 2023.

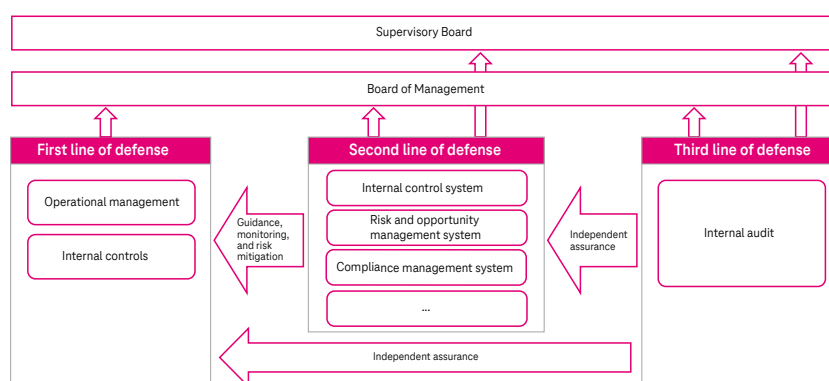
Integrated control and monitoring system^a

Sound corporate governance based on sustainable value creation is particularly important for an international group such as Deutsche Telekom, with its many subsidiaries and associates. The Supervisory Board and the Board of Management are convinced that such corporate governance, taking both company- and industry-specific issues equally into account, is an important building block for the future success of Deutsche Telekom AG. Accordingly, responsibility for compliance with the principles of sound corporate governance is vested in senior management.

Responsible, risk-appropriate handling of risks and opportunities is a core component of our corporate governance. The various systems implemented by the Board of Management (in particular the internal control system and the risk and opportunity management system including the compliance management system) to record and mitigate risks work together as part of a mutually complementary control and monitoring system and are subject to review by Internal Audit.

With this integrated system, Deutsche Telekom follows the Three lines of defense model. The operational units and their operational management, i.e., the risk owners, form the first line of defense. They are responsible for identifying, assessing, and continuously monitoring risks. The second line of defense primarily comprises the internal control system, the risk and opportunity management system, and the compliance management system, and it serves to manage and monitor the first line of defense. This includes defining requirements, guidelines, and processes, monitoring risks, and reporting to the Board of Management and to the Supervisory Board of Deutsche Telekom AG and its Audit Committee. The third line of defense is Internal Audit, which ensures the first and second lines of defense are audited and advised objectively and independently.

Three lines of defense model



The most important features of the internal control system and the risk and opportunity management system including the compliance management system are described below.

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 ICS is an integral component of the functional management of the Group.

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 in conjunction with § 107 (4) sentence 1 AktG. The Board of Management is responsible for defining the scope and structure of the ICS at its discretion in accordance with § 91 (3) AktG. The ICS supports the organizational implementation of the Board of Management's decisions. This includes achieving the business targets, proper and reliable accounting, and compliance with significant legal requirements and regulations. Sustainability aspects, which are continuously developed on the basis of regulatory requirements, are also taken into consideration.

Internal Audit is responsible for independently reviewing the appropriateness 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 and is involved across all levels of the ICS process.

^a Information in this section is information extraneous to the management report as explained in the section “Introductory remarks.”

In addition to protecting against financial reporting risks, the ICS also ensures general management of operational risks and compliance. Its functional and process-related focus is adapted to the Group's current risk situation on an annual basis. The ICS organization bundles and integrates the internal control processes and supports the Board of Management in designing, implementing, and maintaining an appropriate and effective control system. It comprises ICS Management at Group Headquarters and the local ICS management of each entity. Central ICS Management is responsible for managing and coordinating the ICS processes in their entirety.

The entities to be included in the ICS are also reviewed and identified annually on the basis of Deutsche Telekom's statement of investment holdings. All material entities are fully integrated in the ICS process. Consistent Group-wide minimum requirements for the entities' control systems are defined based on the key Group functions. These include, for example, accounting, IT, procurement, HR, security, data privacy, taxes, compliance, and also corporate responsibility.   The corresponding controls are documented in a Group-wide IT system and are reviewed for their appropriateness and effectiveness at least once a year.

Effectiveness is regularly reviewed applying the dual-checking principle and, depending on the risk exposure of the controls within the functional unit, across departments or (additionally) by Internal Audit. The aim is to identify control gaps and non-effective controls, in particular to analyze the impact on financial reporting and to initiate and monitor suitable countermeasures.

The ICS process is completed with a cascaded approval process, starting with the function owners in the entities and the local finance and managing directors, through to Group level. The ICS Steering Committee, with the involvement of the Group's most important function owners, then evaluates the results and makes recommendations to the Board of Management. Based on this, the Board of Management decides on the appropriateness and effectiveness of the ICS twice a year. The Audit Committee is informed in detail on the status and results of the ICS process at least three times a year and discusses the alignment of the ICS with management and the external auditors. Nevertheless, there are inherent limitations in every ICS. No control system – even if it is deemed to be appropriate and effective – can ensure that all relevant control risks are identified and are being completely and effectively addressed by means of controls.

All non-material entities exposed to risks with an extent that is deemed to be low from a Group perspective, are included in the Group-wide ICS as part of a simplified and standardized process. These entities must submit an annual self-declaration, based on a control risk catalog, on the maturity of the implemented controls and a statement on the effectiveness of the ICS in their entity. Internal Audit regularly reviews these self-declarations in a risk-oriented way. The ICS Steering Committee, the Board of Management, and the Audit Committee are informed at least once a year about the results of the self-assessments.

For information on the accounting-related internal control system, please refer to the section [“Accounting-related internal control system.”](#)


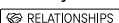
Risk and opportunity management system

Our risk and opportunity management system is based on the globally applicable risk management standard ISO 31000 “Risk management – Principles and guidelines.” It serves as a guide for internationally recognized risk management systems. A risk and opportunity management system is necessary from both a business point of view and on the basis of laws and regulations, in particular § 91 (2) and (3) of the German Stock Corporation Act (Aktiengesetz – AktG). Our risk and opportunity management system is organized on a decentralized basis. The Group Risk Governance unit defines the Group-wide methods, including the associated reporting system, and the segments are integrated via their own risk and opportunity management. The relevant owners in each of the segments are responsible for identifying, assessing, and continuously monitoring risks. This is also at the core of our risk culture, which includes the motto “Everyone is a risk manager.” In other words, every individual takes responsibility for their risks.

For further information on the risk and opportunity management system, please refer to the section [“Risk and opportunity management system.”](#)

Compliance management system

Our compliance culture is a key component for corporate governance based on integrity and respect. We have expressed our Group-wide commitment to complying with ethical principles and both legal and statutory requirements. We have incorporated this pledge in our Guiding Principles and our Code of Conduct.

We implemented a compliance management system with the aim of minimizing risks arising from systematic infringements of legal or ethical standards that could result in regulatory or criminal liability on the part of the Company, its executive body members, or employees, or result in a significant loss of reputation. In particular, when we established the compliance management system to prevent corruption, we used the Principles for the Proper Performance of Reasonable Assurance Engagements Relating to Compliance Management Systems laid down in IDW Assurance Standard 980 as a basis. The Board of Management considers its overall responsibility for compliance as a key leadership task. Our Chief Compliance Officer is responsible for the design and management 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.  

For further information on the compliance management system, please refer to [“Aspect 5: Fighting corruption”](#) in the section [“Combined non-financial statement.”](#)

Statement of effectiveness

Based on regular discussions about the internal control system and the risk and opportunity management system, including the Group risk report and the ICS report, the Board of Management is not aware of any circumstances as of the date of preparation of the combined management report which contradict the appropriateness and effectiveness of these systems in their entirety. An external audit of risk and opportunity management in accordance with IDW Auditing Standard 981 carried out at the end of 2022/start of 2023 for selected parts of the organization and risk categories did not uncover any findings that would cast doubt on its appropriateness or effectiveness.

Accounting-related internal control system

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. Legal provisions, 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 experts, for example, to measure pension obligations or in connection with purchase price allocations. 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, regulations, 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

Central and local ICS management continuously develop the ICS further in line with the operational processes, systematically responding to new technologies and ways of working. These include the use of software robots, real-time alarms, artificial intelligence, and agile working.

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 and Declaration of Conformity

The Corporate Governance Statement pursuant to § 289f, § 315d HGB is available on our [Investor Relations website](#). The Declaration of Conformity pursuant to § 161 AktG can be found below:

- I. The Board of Management and the Supervisory Board of Deutsche Telekom AG hereby declare that in the period since submission of the most recent declaration of conformity pursuant to § 161 AktG on December 30, 2022, Deutsche Telekom AG has complied with the recommendations of the Government Commission on the German Corporate Governance Code announced by the Federal Ministry of Justice on June 27, 2022, in the official section of the Federal Gazette (Bundesanzeiger), with the exception of recommendation C.5 (maximum number of supervisory board mandates).

Reason for the declared deviation from recommendation C.5 in the past:

According to recommendation C.5, members of the management board of listed companies should not have, in aggregate, more than two supervisory board mandates in non-group listed companies or comparable functions, and should not accept the chairmanship of a supervisory board in a non-group listed company. In the opinion of the Management Board and the Supervisory Board, the total number of supervisory board mandates held or the supervisory board chairmanship in non-group listed companies and comparable functions should be assessed more appropriately on a case-by-case basis than by means of a rigid limitation. As long as it is ensured that a member of the Supervisory Board of Deutsche Telekom AG has sufficient time to exercise this supervisory board mandate with due regularity and care, a deviation from recommendation C.5 may appear appropriate in individual cases, taking into account all relevant aspects of the respective circumstances.

- II. The Board of Management and the Supervisory Board of Deutsche Telekom AG further declare that as of today Deutsche Telekom AG will completely comply with the recommendations of the Government Commission on the German Corporate Governance Code announced by the Federal Ministry of Justice on June 27, 2022, in the official section of the Federal Gazette (Bundesanzeiger).

Bonn, December 30, 2023

For the Supervisory Board
Dr. Frank Appel

For the Board of Management
Timotheus Höttges

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, 2023.

Shareholders' equity

Each share entitles the holder to one vote. These voting rights are restricted, however, in relation to treasury shares (at December 31, 2023: around 8 million in total).

Treasury shares. The amount of issued capital assigned to treasury shares was approximately EUR 20 million at December 31, 2023. This equates to 0.2 % of share capital. 7,843,113 treasury shares were held at December 31, 2023.

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, 2023 and to Note 19 "Shareholders' equity" in the notes to the consolidated financial statements.

The shareholders' meeting resolved on April 1, 2021 to authorize the Board of Management to purchase shares in the Company by March 31, 2026, with the amount of share capital accounted for by these shares totaling up to EUR 1,218,933,400.57, 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 April 1, 2021 under item 7 on the agenda. The shares may also be used for purposes involving an exclusion of subscription rights. In addition, they may be sold on the stock market or by way of an offer to all shareholders, or canceled. The shares may 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 remuneration of the Board of Management, on the basis of a decision by the Supervisory Board to this effect. Furthermore, under the authorization granted on April 1, 2021, the Board of Management is authorized to offer and/or grant shares to employees of Deutsche Telekom and of lower-tier affiliated companies as well as to Managing Board members of lower-tier affiliated companies; this also includes the authorization to offer or grant shares free of charge or on other special conditions.

Under the resolution of the shareholders' meeting on April 1, 2021, the Board of Management is also authorized to acquire the shares through the use of equity derivatives.

No treasury shares were acquired in the reporting period and in the prior year. Currently, the treasury shares for participants of the Share Matching Plan and of the Shares2You share program for employees are issued from the pool of shares previously held in a trust deposit.

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 April 1, 2021, 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, 5,927 thousand previously deposited shares were reallocated for issue to eligible participants of the Share Matching Plan (prior year: 708 thousand shares).

For matching shares from the Share Matching Plan and for free shares from the employee share program Shares2You, treasury shares are transferred free of charge to the custody accounts of employees of Deutsche Telekom AG. 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. For treasury shares bought by way of the personal investment as part of the Shares2You program and transferred to the custody accounts of employees, a conversion rate of EUR 20.96 per share or EUR 20.24 per share was used. The conversion is determined using the lowest price at which a trade actually took place on an official German exchange on the date of conversion.

In all months of the reporting year, except for December, treasury shares (5,914 thousand in total) were reallocated and transferred to the custody accounts of eligible participants (prior year: 760 thousand treasury shares). As of December 31, 2023, disposals of treasury shares resulting from the transfers in the reporting period accounted for 0.12 %, or EUR 15 million, of share capital. Gains on disposal arising from transfers of treasury shares amounted to EUR 118 million. The transfers of treasury shares increased the capital reserve by EUR 103 million. In the reporting year, 1,808 thousand treasury shares with a fair value of EUR 37 million were billed to other Group companies.

Authorized capital. The shareholders' meeting on April 7, 2022 authorized the Board of Management to increase the share capital with the approval of the Supervisory Board by up to EUR 3,829,600,199.68 by issuing up to 1,495,937,578 no par value registered shares against cash and/or contribution in kind in the period ending April 6, 2027. The 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 contribution in kind 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 April 7, 2022 subject to the disapplication of subscription rights – must not exceed 10 % of the total share capital; the latter is defined as the amount existing as of April 7, 2022, 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. The Board of Management is also authorized, subject to the approval of the Supervisory Board, to determine the rights accruing to the shares in the future and the conditions for issuing shares (**2022 Authorized Capital**).

As of December 31, 2023, 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**). A capital increase from the 2018 Contingent Capital, however, is no longer possible, because the authorization granted to the Board of Management by the shareholders' meeting on May 17, 2018 to issue bonds with warrants or convertible bonds with option or conversion rights to shares of the Company expired on May 16, 2023 without these rights being exercised. The contingent capital increase could have been implemented subject to the aforementioned deadline being met 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 option 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, had made 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, had fulfilled 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 cash payment of the amount due)

and other forms of fulfillment had not been used. The new shares would have participated in profits starting at the beginning of the financial year in which they would have been 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 AG 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 (OTE), Athens, Greece; the change agreement concerned the accession of the Hellenic Republic Asset Development Fund (HRADF) as a party to the contract. 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, the respective other party (Orange and Atlas Services Belgium only jointly) may terminate the master agreement with immediate effect.

Changes in the composition of the Group

56 German and 238 foreign subsidiaries are fully consolidated in Deutsche Telekom's consolidated financial statements (December 31, 2022: 63 and 290). 15 associates (December 31, 2022: 14) and 21 joint ventures (December 31, 2022: 15) 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

Deutsche Telekom did not consummate any material business combinations in the reporting year.

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.