CORPORATE RESPONSIBILITY REPORT 2019

CONTENTS

This PDF document contains all information on accountability ("Management & facts")
from Deutsche Telekom's 2019 CR Report.

The themed pages "Green future", "Digital life", "New ways of working", and "Good stewardship" may be downloaded
individually using the "Print this page" function or as one document using the "Info basket" function.

FOREWORD

Dear Readers,

Since the 1990s, we have been taking on responsibility for the major issues of our age – climate change, social justice, and digital participation are key action areas for Deutsche Telekom. However, the challenges are growing exponentially and range from threats to our democracy from media phenomena such as fake news and filter bubbles all the way to resurgent populism in sections of our society. That's why I firmly believe we need more than just a focus on sustainability – we need a sustainable business model. In 2019, we therefore modified our Group strategy to explicitly make "acting responsibly" a core element. This is something we're working toward, step by step.

For example, we have set ourselves new, ambitious climate protection targets – 90 percent lower emissions by 2030 and electricity generated solely from renewables from 2021. Furthermore, these are targets that apply to our entire Group. However, 80 percent of our CO_2 footprint comes from the manufacture and use of our products. We are committed to reducing these emissions by 25 percent per customer by 2030. The Science Based Targets initiative (SBTi) confirmed us as the third DAX company whose climate protection targets are helping achieve compliance with the Paris Climate Agreement. We have also examined our value chain to identify other areas where we could help improve climate protection and resource conservation. Our "We care for our planet" Group program combines selected initiatives in which we're working as a Group toward gradually becoming "greener". Examples include our sustainable smartphone recycling initiative, reducing packaging, and switching our service fleet to alternative drives.

Our media literacy initiatives promote safe and proficient use of digital media. After all, digitalization also has its dark side. How do we identify extremist propaganda on the net, for instance? In 2019, these initiatives ran under the banner of "Digital democracy". Our aim is to connect everyone to present and future digital opportunities, whether in a private or social context. That's why our mission is "We won't stop until everyone is connected."

Digitalization is also having a huge impact on the world of work – and Deutsche Telekom is no exception. We are keen to have all our employees on board as we navigate the increasingly complex digitalized economy. To that end, we have made learning an integral part of our everyday work. In 2019, in conjunction with the Group Works Council, we set out guidelines for shaping the digital world of work with our "Manifesto of Agile Work".

Timotheus Höttges, Chairman of the Board of Management, Bonn, Germany

We are also committed to responsible digitalization. We are the first company that has introduced guiding principles for the ethical use of artificial intelligence (AI). In 2019, among other activities, we carried out training and workshops on implementing the principles, integrated them into contract-relevant provisions for our suppliers, developed an internal test seal for ethical AI products, and held a conference on digital ethics.

We want to be measured by our actions and not by our words! We also report extensively and transparently on our diverse sustainability activities in this year's Sustainability Report.
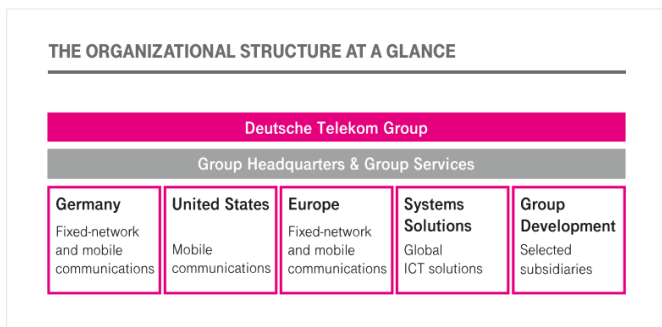
We remain committed to the principles of the United Nations Global Compact and the German Sustainability Code. Both of these frameworks, along with the UN Sustainable Development Goals, guide us in what we do.

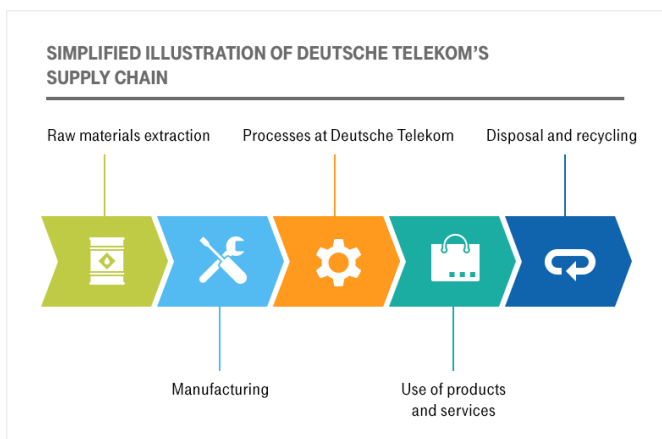I hope you find the report enjoyable reading!
Tim Höttges

CR STRATEGY & MANAGEMENT
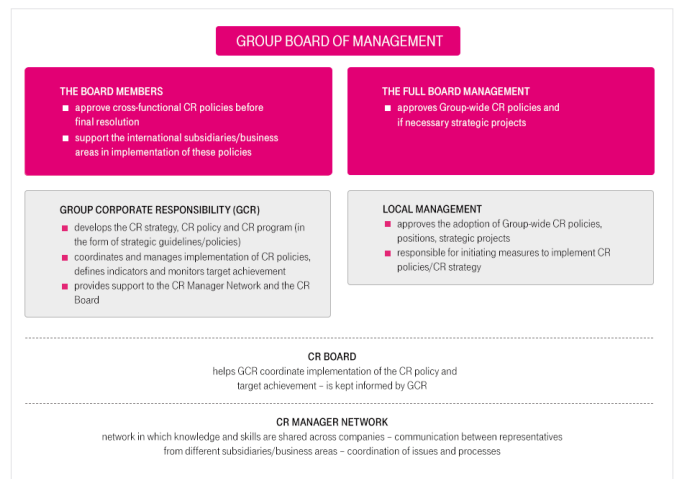
BUSINESS ACTIVITIES AND ORGANIZATION

You can find a description of our business activities on our website and detailed information about our business development in the 2019 annual report. Our Group is broken down into five operating segments:

THE ORGANIZATIONAL STRUCTURE AT A GLANCE

Deutsche Telekom Group				
Group Headquarters & Group Services				
Germany Fixed-network and mobile communications	**United States** Mobile communications	**Europe** Fixed-network and mobile communications	**Systems Solutions** Global ICT solutions	**Group Development** Selected subsidiaries

We believe that commercial, social, and ecological aspects can complement each other and we aim to make a positive contribution to sustainable development throughout our entire value chain.

SIMPLIFIED ILLUSTRATION OF DEUTSCHE TELEKOM'S SUPPLY CHAIN

Raw materials extraction — Processes at Deutsche Telekom — Disposal and recycling

Manufacturing — Use of products and services

CURRENT ORGANIZATIONAL STRUCTURE IN CR

GROUP BOARD OF MANAGEMENT

THE BOARD MEMBERS
- approve cross-functional CR policies before final resolution
- support the international subsidiaries/business areas in implementation of these policies

THE FULL BOARD MANAGEMENT
- approves Group-wide CR policies and if necessary strategic projects

GROUP CORPORATE RESPONSIBILITY (GCR)
- develops the CR strategy, CR policy and CR program (in the form of strategic guidelines/policies)
- coordinates and manages implementation of CR policies, defines indicators and monitors target achievement
- provides support to the CR Manager Network and the CR Board

LOCAL MANAGEMENT
- approves the adoption of Group-wide CR policies, positions, strategic projects
- responsible for initiating measures to implement CR policies/CR strategy

CR BOARD
helps GCR coordinate implementation of the CR policy and target achievement – is kept informed by GCR

CR MANAGER NETWORK
network in which knowledge and skills are shared across companies – communication between representatives from different subsidiaries/business areas – coordination of issues and processes

Overall responsibility for CR lies with our Board of Management; it discusses and decides on important CR matters. The Board Member for Human Resources and Legal Affairs, Labor Director Officer decides which CR matters are to be classed as important and represents them on the Board of Management. The Group Corporate Responsibility (GCR) unit reports to the Human Resources and Legal Affairs Board department. It develops Group-wide policies and guidelines with the goal of advancing the corporate culture with a focus on sustainable innovation and social responsibility. In order to always ensure direct feedback between CR and our core business, the CR Board advises GCR. The board is made up of the heads of the main Group units.

The CR managers from the different business units and national companies are responsible for implementing our CR strategy. They collaborate within the international CR Manager Network, where they coordinate their activities and share best practices.

Our CR Policy provides the formal, mandatory framework for the sustainability management activities at all Group units. The CR Policy has also been successfully introduced in a majority of European national companies since 2017.

CR CONTROLLING – USING IT TO MEASURE AND MANAGE SUSTAINABILITY

We use an IT-based data collection system to record environmental, social, and governance (ESG) data. It supports standardized, mandatory processes at the Group and national levels and enables Group-wide benchmarks.

We use this data primarily to calculate relevant indicators and our ESG KPIs, with which we measure and control our CR performance throughout the Group. Our CR controlling ensures that ESG data and KPIs are both recorded transparently in good time and can be reported in the "Facts & figures" section and interactive KPI tool of this CR report.
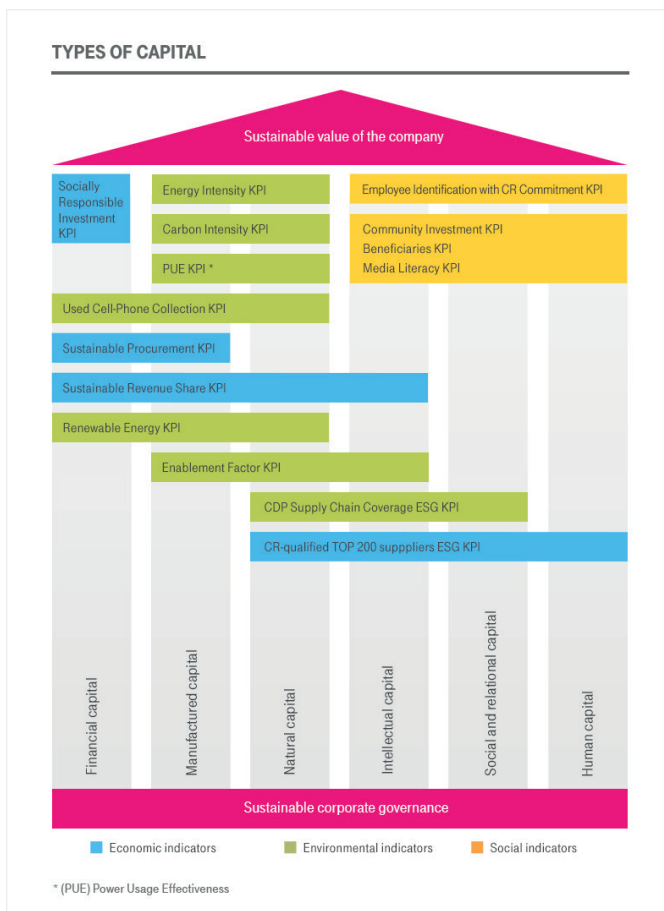
We are continuously improving our system for performance indicators on the basis of internal and external requirements. For example, we extended our reporting on resource protection in 2019 so we can report on the many successes in our "We care for our planet" program and in the "Green Pioneers" employee community.

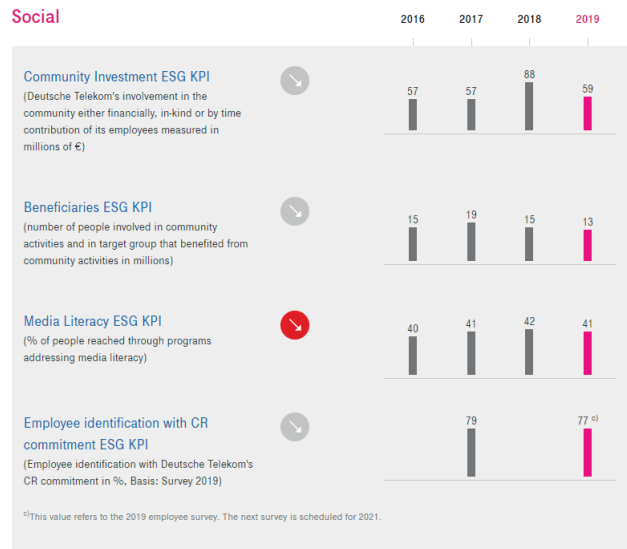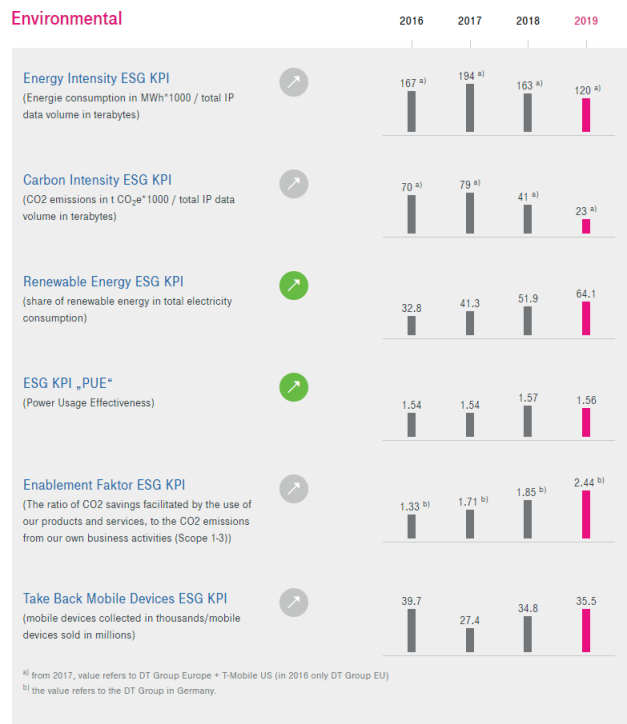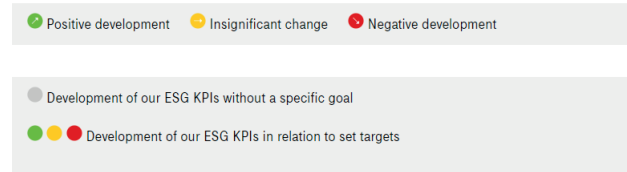## OUR MANAGEMENT TOOLS – THE ESG KEY PERFORMANCE INDICATORS

ESG KPIs (key performance indicators) are used as management tools for our CR involvement. Since they are highly relevant, we also report them in the combined non-financial statement of our annual report.

The national companies also record CR data and thus assist in the collection of Group-wide ESG KPIs. These national companies represent 99 percent of the Group's net revenue.

For the purpose of integrated financial and sustainability reporting, the KPIs map all six types of capital (see diagram).

TYPES OF CAPITAL

Sustainable value of the company

Socially Responsible Investment KPI
Energy Intensity KPI
Carbon Intensity KPI
PUE KPI *
Used Cell-Phone Collection KPI
Sustainable Procurement KPI
Sustainable Revenue Share KPI
Renewable Energy KPI
Enablement Factor KPI
CDP Supply Chain Coverage ESG KPI
CR-qualified TOP 200 suppliers ESG KPI
Employee Identification with CR Commitment KPI
Community Investment KPI
Beneficiaries KPI
Media Literacy KPI

Financial capital | Manufactured capital | Natural capital | Intellectual capital | Social and relational capital | Human capital

Sustainable corporate governance

■ Economic indicators   ■ Environmental indicators   ■ Social indicators

* (PUE) Power Usage Effectiveness

DEVELOPMENT OF OUR ESG KPIS

● Positive development   ● Insignificant change   ● Negative development

● Development of our ESG KPIs without a specific goal

●●● Development of our ESG KPIs in relation to set targets

Economic

		2016	2017	2018	2019
Socially Responsible Investment (SRI) ESG KPI (% T-Shares, held by SRI investors)	→	21.7	20.8	21.0	21.0
Sustainable Procurement ESG KPI (% of procurement volume reviewed according to sustainability criteria)	→	83	81	81	81
Sustainability Revenue Quota ESG KPI (% of revenue with products and services that offer sustainability benefits)	↗	39.0	40.0	42.0	43.0

Environmental

		2016	2017	2018	2019
Energy Intensity ESG KPI (Energie consumption in MWh*1000 / total IP data volume in terabytes)	↗	167 [a]	194 [a]	163 [a]	120 [a]
Carbon Intensity ESG KPI (CO_2 emissions in t CO_2e*1000 / total IP data volume in terabytes)	↗	70 [a]	79 [a]	41 [a]	23 [a]
Renewable Energy ESG KPI (share of renewable energy in total electricity consumption)	↗	32.8	41.3	51.9	64.1
ESG KPI „PUE" (Power Usage Effectiveness)	↗	1.54	1.54	1.57	1.56
Enablement Faktor ESG KPI (The ratio of CO_2 savings facilitated by the use of our products and services, to the CO_2 emissions from our own business activities (Scope 1-3))	↗	1.33 [b]	1.71 [b]	1.85 [b]	2.44 [b]
Take Back Mobile Devices ESG KPI (mobile devices collected in thousands/mobile devices sold in millions)	↗	39.7	27.4	34.8	35.5

[a] from 2017, value refers to DT Group Europe + T-Mobile US (in 2016 only DT Group EU)
[b] the value refers to the DT Group in Germany.

Social

		2016	2017	2018	2019
Community Investment ESG KPI (Deutsche Telekom's involvement in the community either financially, in-kind or by time contribution of its employees measured in millions of €)	↘	57	57	88	59
Beneficiaries ESG KPI (number of people involved in community activities and in target group that benefited from community activities in millions)	↘	15	19	15	13
Media Literacy ESG KPI (% of people reached through programs addressing media literacy)	↘	40	41	42	41
Employee identification with CR commitment ESG KPI (Employee identification with Deutsche Telekom's CR commitment in %, Basis: Survey 2019)	↘		79		77 [c]

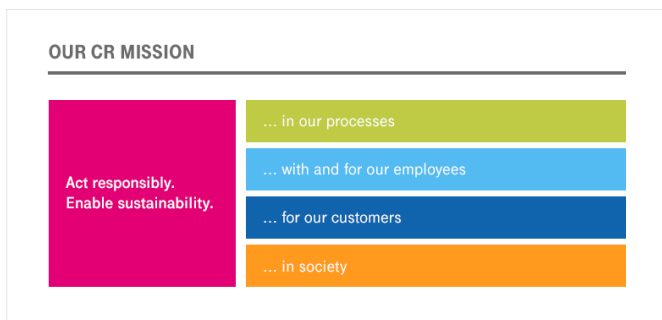[c] This value refers to the 2019 employee survey. The next survey is scheduled for 2021.
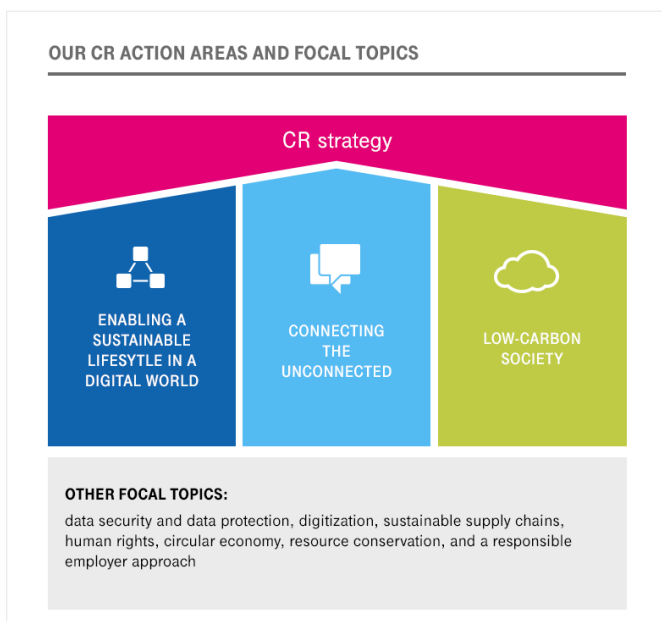
CR STRATEGY

Globalization, global population growth, and the ever wider use of digital technologies are putting a strain on available resources and require a sustainable, more environmentally friendly approach to business as well as socially responsible conduct. We are tackling these challenges head on. Sustainability and social responsibility have played a key role in our corporate activities for many years. In 2019, we modified our Group strategy to explicitly make the concept of "acting responsibly" a core element. To meet our responsibility toward society, we are consistently organizing our core business processes on a sustainable footing.

CORPORATE STRATEGY: LEADING EUROPEAN TELCO

GROW		
LEAD IN CUSTOMER EXPERIENCE	LEAD IN TECHNOLOGY	LEAD IN BUSINESS PRODUCTIVITY
ONE CONNECTIVITY & PERFECT SERVICE	INTEGRATED GIGABIT NETWORKS	SECURE ICT SOLUTIONS & BIG IOT
SAVE FOR GROWTH INVESTMENTS		
SIMPLIFY, DIGITALIZE, ACCELERATE & ACT RESPONSIBLY		

You can find additional information on our Group strategy in the 2019 annual report.

OUR CR MISSION

Act responsibly. Enable sustainability.	… in our processes
	… with and for our employees
	… for our customers
	… in society

Our CR strategy is derived from the Group strategy and revolves around our three CR action areas and six focus topics.

OUR CR ACTION AREAS AND FOCAL TOPICS

CR strategy

ENABLING A SUSTAINABLE LIFESYTLE IN A DIGITAL WORLD

CONNECTING THE UNCONNECTED

LOW-CARBON SOCIETY

OTHER FOCAL TOPICS:
data security and data protection, digitization, sustainable supply chains, human rights, circular economy, resource conservation, and a responsible employer approach

Our CR strategy also forms the framework for the sustainability activities of our national companies. An integrated governance structure helps us to closely interlink strategic management and operational implementation of our CR strategy throughout the Group. Overall responsibility for sustainability lies with the Deutsche Telekom Board of Management.

2019 CR PROGRAM – TARGETS, ACTIVITIES, AND DEADLINES

The CR program is where we define targets and report on progress regarding Group-wide implementation in the relevant processes of our core business. In 2019 we restructured our CR program in accordance to the four pillars of our Management & facts segment, Strategy, Economy, Environment and Social.

RISK AND OPPORTUNITY MANAGEMENT

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 (environment, social, and governance – ESG). We actively and systematically involve relevant stakeholders in order to identify which current and potential ESG risks and opportunities are important for Deutsche Telekom. We also participate in a number of working groups and committees. We continuously track ESG issues and systematically ascertain our stakeholders' positions on these matters.

Important tools we use for this purpose are:

- Fortnightly social media monitoring, which evaluates information appearing on social media that is relevant to us

- Our involvement in working groups and committees, numerous relevant national and international business associations, and social organizations (GeSI, Federation of German Industries, BITKOM, econsense, and the German National Association of Senior Citizen's Organizations, for example)

- Stakeholder dialog formats organized by us

- Our various publications, such as the press review and newsletters

- Our internal compliance evaluation, which also examines the most important sustainability risks

In the section risk and opportunity management our annual report also addresses the following issues, which we have identified as key aspects of our sustainability management:

- Climate protection
- Suppliers
- Health and the environment

We are currently investigating internally how reporting on climate-related financial risks and opportunities can be aligned with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). This should build on the existing approaches for strategy, controlling, and risk management. Further information on the TCFD is available here.

VALUES AND GUIDING PRINCIPLES

Corporate responsibility (CR) is based on shared values. To solidify our value-based corporate culture, we convey the basic values of our company to all employees through binding Guiding Principles. We use various measures such as the annual "Guiding Principles Day" to remind employees of these values again and again, entrenching them in our everyday work. And the measures have been successful. According to our pulse survey in November 2019, 74 percent of our employees believe that the Guiding Principles are applied to our everyday work.

Our Code of Conduct and the Code of Human Rights & Social Principles are other tools we use to ensure that our Group and our partners demonstrate corporate responsibility in their conduct. Our compliance management system, which guarantees that our business activities are in compliance with laws and regulations, is also based on these documents. They also entrench ethical standards and, in particular, human rights within the Group.

CERTIFIED HEALTH, SAFETY AND ENVIRONMENTAL MANAGEMENT SYSTEM: ALMOST ALL WORKPLACES COVERED

We want to make sustainability a component of all our business processes and of our employees' everyday lives. Our integrated health, safety and environmental (HSE) management system assists with this at the Group level.

The management system helps us to systematically plan, implement and improve our HSE processes. This promotes the health of our employees and has a positive effect on their performance. It is also beneficial when it comes to bidding on new projects, since an increasing number of potential customers now require their suppliers to provide HSE certificates.

Our Group-level HSE management system is covered by an umbrella certificate based on the international standards ISO 45001 (formerly OHSAS 18001) for occupational health and safety and ISO 14001 for environmental management. For some units, it also covers international standard ISO 9001 for quality management.

Some of the national companies are not covered by an umbrella certificate because they have their own certifications which are, in part, even more comprehensive. This is the case in Greece, for example. This national company has an integrated management system, which in addition to the above-mentioned standards, also covers the international standards ISO 50001 for energy management and ISO 27001 for data security.

Through our compliance with legal regulations, we already meet the essential requirements for ISO 45001 certification in Germany. 100 percent of our employees in Germany are employed at an ISO 14001- and ISO 45001-certified workplace. Internationally, 98 percent of employees are employed at an ISO 14001- and ISO 45001-certified workplace.

Our goal was to cover all companies that have more than 50 employees by the end of 2018. We were not able to meet this target. However, we further expanded coverage in 2019: with certification of T-Systems Polska and T-Systems Schweiz according to ISO 45001 and 14001 and certification of T-Systems Iberia according to ISO 45001.

CR PROGRAM 2019

STRATEGY

Objectives	Target achievement	Implementation
Integrate socially responsible conduct into the Group strategy	▪ Implemented in 2019	▪ CR strategy
Continue to develop reporting with a clear focus up to 2020	▪ First stage implemented in 2019	▪ About this report
Additional implementation of health, safety, and environmental management systems in two more companies	▪ Implemented in 2019	▪ Certified health, safety and environmental management system
Contribute to the Sustainable Development Goals (SDGs)	▪ Focus on 2, 3, 4, 5, 7, 8, 9, 11, 12, 13, 15	▪ Our contribution to the Sustainable Development Goals ▪ Measures and KPIs relevant to SDGs
Conduct an international employee survey on compliance	▪ Implemented in 2019	▪ The results of our employee study on the culture of compliance
Implement the AI guidelines adopted in 2018	▪ Training and information for employees, conference on digital ethics, integration into provisions for suppliers, internal test seal	▪ Responsible use of artificial intelligence (AI)

CR PROGRAM 2019

BUSINESS

Objectives	Target achievement	Implementation
Cover 70 percent of our procurement from carbon-intensive suppliers with the CDP Supply Chain Program by 2020	▪ 63 percent coverage in 2019	▪ CDP Supply Chain Program
Review 80 percent of procurement volume by 2020	▪ 81 percent coverage in 2019	▪ Sustainable Procurement ESG KPI
Have 75 percent of the top 200 suppliers CR-qualified by 2020	▪ 87 percent coverage in 2019	▪ CR-Qualified Top 200 Suppliers ESG KPI
99 percent LTE coverage in Germany by 2020	▪ 98 percent coverage in 2019	▪ Progress in network expansion
99 percent LTE coverage in Europe by 2021	▪ 98 percent coverage in 2019	▪ Progress in network expansion
99 percent 5G coverage in Germany by 2025	▪ Deutsche Telekom's 5G network available in eight German cities at the end of 2019	▪ 5G expansion
CR labeling of products and services to increase transparency for customers	▪ Introduction of the "we care" label	▪ "we care" label
Increase Group-wide customer retention (measured using TRI*M index)	▪ Slight decline – 68.5 in 2018; 67.3 in 2019	▪ Measuring customer retention and endorsement
Obtain relevant service awards	▪ Achieved, among other things, thanks to accolades associated with the TÜV quality seal, the title "Service-König" (King of Service) from the trade magazine Focus Money, and the top score in the CHIP online test	▪ Awards for our service
Develop and implement a sustainable investment strategy for Deutsche Telekom's capital investments	▪ Implemented	▪ Sustainable investment at Deutsche Telekom
Ensure inclusion in relevant sustainability indices	▪ Inclusion in four additional indices in 2019	▪ T-Shares in sustainability ratings and indices

CR PROGRAM 2019

ENVIRONMENT

Objectives	Target achievement	Implementation
Develop and adopt science-based climate targets and ensure official recognition from the Science-Based Targets initiative	▪ Achieved	▪ Climate strategy ▪ Climate protection from 2020 onward – new climate goal and revision of the climate protection strategy
Develop a program to reinforce environmental management	▪ "We care for our planet" Group program adopted	▪ We care for our planet
Decrease Group-wide Scope 1 and 2 emissions by 20 percent by 2020 compared to 2008 (without T-Mobile USA)	▪ Assessment of target achievement in 20	▪ Climate strategy ▪ Climate protection from 2020 onward – new climate goal and revision of the climate protection strategy ▪ Total CO_2e emissions (Scopes 1 to 3) ▪ Total CO_2e emissions (Scope 1 and 2 emissions)
Decrease Group-wide Scope 1 and 2 emissions by 90 percent by 2030 compared to 2017	▪ Approx. 38 percent reduction from 2017 to 2019	▪ Climate strategy ▪ Climate protection from 2020 onward – new climate goal and revision of the climate protection strategy ▪ Total CO_2e emissions (Scopes 1 to 3) ▪ Total CO_2e emissions (Scope 1 and 2 emissions)
Reduce emissions from the upstream and downstream value chain (Scope 3) by 25 percent per customer by 2030 compared to 2017	▪ Approx. 10 percent reduction from 2017 to 2019 ▪ Currently being evaluated to ascertain per-customer ratio.	▪ Currently being evaluated to ascertain per-customer ratio. ▪ Climate strategy ▪ Climate protection from 2020 onward – new climate goal and revision of the climate protection strategy ▪ Total CO_2e emissions (Scopes 1 to 3)
Develop carbon neutrality and join the GSMA initiative	▪ Achieved	▪ Climate protection from 2020 onward – new climate goal and revision of the climate protection strategy
Boost the efficiency of our data centers	▪ 2011 to 2019: Global PUE img value lowered from 1.85 to 1.64 Germany: 1.67 to 1.56 ▪ Data centers (Biere) PUE value: 1.32	▪ PUE ESG KPI – lower CO_2 consumption in data centers
Switch Group-wide power consumption to 100 percent renewable energy by 2021	Proportion of renewable energy at Deutsche Telekom in ▪ Germany in 2019: 84 percent ▪ Group-wide in 2019: 64 percent ▪ Hungary in 2019: 100 percent ▪ Greece in 2019: 100 percent ▪ Austria: 99 percent ▪ The Netherlands: 100 percent	▪ Climate strategy ▪ Climate protection from 2020 onward – new climate goal and revision of the climate protection strategy ▪ Renewable Energy ESG KPI ▪ Renewable energy in the Group ▪ Renewable energy in the national companies
Raise the profile and boost the impact of the Green Pioneers community	▪ Increase from 40 to 200 Green Pioneers in 2019; coverage of 40 sites in Germany; more community initiatives in our national companies	▪ Green Pioneers
Reduce the CO_2 attributable to customers' use of our products and solutions compared to our own emissions	▪ Improvement of the enablement factor in Germany to 2.44 (1.85 in 2018); ▪ Across Europe, to 1.74 (1.21 in 2018)	▪ Enablement Factor ESG KPI for DT Group in Germany ▪ Enablement Factor ESG KPI for Deutsche Telekom Group in Europe

CR PROGRAM 2019

SOCIAL

Objectives	Target achievement	Implementation
Increase the Media Literacy ESG KPI to 45 percent by 2020	▪ December 31, 2019: 41 percent	▪ ESG KPIs "Beneficiaries" and "Media Literacy"
Increase the proportion of women in top positions in middle and upper management to 30 percent	▪ December 31, 2019: 35 percent women Group-wide ▪ On Board of Management: 22.2 percent ▪ In middle and upper management: 26 percent ▪ On Supervisory Board (in Germany): 40 percent ▪ On Supervisory Boards (in Europe): 25 percent	▪ Proportion of women on the Board of Management ▪ Proportion of women in middle and upper management ▪ Proportion of women on supervisory boards of Deutsche Telekom national companies ▪ Commitment to increasing the proportion of women
Increase the Group-wide health rate to 95.9 percent by 2020	▪ December 31, 2019: 94 percent	▪ Health rate ▪ Effectiveness of our health and safety measures
Reduce the accident rate in Germany	▪ 2019: Reduction to 6.8 accidents (resulting in more than three days of absence) per thousand employees (8.7 in 2018)	▪ Effectiveness of our health and safety measures
Revise the Guiding Principles	▪ Implemented	▪ Our approach to employee relationships
Boost digital further training	▪ In 2019, over 60 percent of the training courses that could be booked via the Learning Management System (LMS) were digital. (53 percent in 2018)	▪ Our approach to training and development ▪ Training courses offered by Telekom Training in Germany
Expand #DABEI-Geschichten. com ("#TAKEPART-stories. com")	▪ Two new modules on life in the city of the future and on digital democracy	▪ Promoting media literacy and democratic competence
Improve employee satisfaction	▪ Commitment index in 2019: 4.0 (Commitment index in 2017: 4.1)	▪ Employee survey every two years ▪ Satisfaction and commitment indexes
Performance of Human Rights Impact Assessment (HRIA) and Employee Relations Review (ERR)	▪ Performance of HRIA at T-Systems India ▪ Performance of ERR at T-Mobile Polska, Deutsche Telekom field staff	▪ Human Rights Impact Assessments

MATERIALITY

OUR PROCESS FOR IDENTIFYING MATERIAL CR TOPICS

We systematically identify which topics are of particular importance in defining Deutsche Telekom's sustainability management and sustainability reporting focus from the perspective of our stakeholders as well as from an internal corporate perspective. Although our material topics had undergone detailed analysis and then been validated in an internal workshop as recently as 2018, the topic weightings were readjusted for the present report. This process factored in changes in stakeholder expectations and current internal developments.

We have utilized the methodology of the Global e-Sustainability Initiative (GeSI) to assess materiality since 2015. It covers 55 topics that are relevant for the ICT industry, and places them into nine categories: digital inclusion, employee relationships, climate change, circular economy, sourcing and manufacturing, customer relationships, freedom of expression and privacy, governance and management, and local community and environment impacts. These topics have been developed to pertain to a variety of companies and are therefore recognized in the industry.

Identifying and evaluating material topics

In order to determine our stakeholders' expectations of our sustainability management, we have used an online survey since 2014. In this survey, our stakeholders can rate topics according to their importance and assess our performance in the different areas. However, willingness to participate in the survey has declined considerably since 2018. Consequently, the results can no longer be classed as representative. Nonetheless, to ensure external stakeholder requirements can still be factored into our materiality analysis, we also conducted a document analysis in 2018. This took into account legal texts, studies, position papers, and media publications that provide information about the demands and expectations made on Deutsche Telekom with regard to sustainability management. The analysis also considered whether Deutsche Telekom has any influence on the respective topic and whether the expectations have an impact on Deutsche Telekom's business activity. The results of the stakeholder survey and the document analysis were then compared and finalized in an internal workshop attended by experts from various units. The table below sets out the criteria that determine whether or not a topic is highly relevant.

Stakeholder perspective

High expectations for the relevant topic when ...

NGOs	... the majority of NGOs express specific expectations or demand compliance with certain targets or standards.
Competition	... multiple competitors actively communicate a more ambitious strategic objective or development concepts.
Legislation	... there are concrete regulatory objectives, laws or guidelines that directly impact the company.
Financial market	... the topic is part of the criteria for the ratings in question and is considered a top issue in the industry.

Company perspective

Highly influenced by the relevant topic when ...

Value creation	... all stages of the value chain are affected by the topic.
Sustainable Development Goals	... the topic is directly related to several SDGs.
Industry	...the ICT has a big influence on it and Deutsche Telekom holds a leading industry position on the topic.

The 2019 document analysis shows our stakeholders now have considerably higher expectations regarding topics related to the environment and human rights. It is not just politicians and NGOs that have these expectations, but also the Fridays for Future movement, for example. We were acting in line with these requirements when, at the start of 2019, we adopted our climate target, which complies with the two-degree target. The study entitled "The State of Children's Rights and Business 2019: From Promise to Practice" showed that our commitment to human rights – particularly as regards children – is on the right track. We secured second place in the "Telecommunications and Technology" category, scoring 9.4 out of 10 points.

Our document analysis also shows that the topics of water, waste, and the circular economy have fundamentally increased in relevance. In 2020, we will analyze whether and to which extent this affects the importance these topics hold for us. The document analysis shows that there had been either no changes or very limited changes to all the other topics.
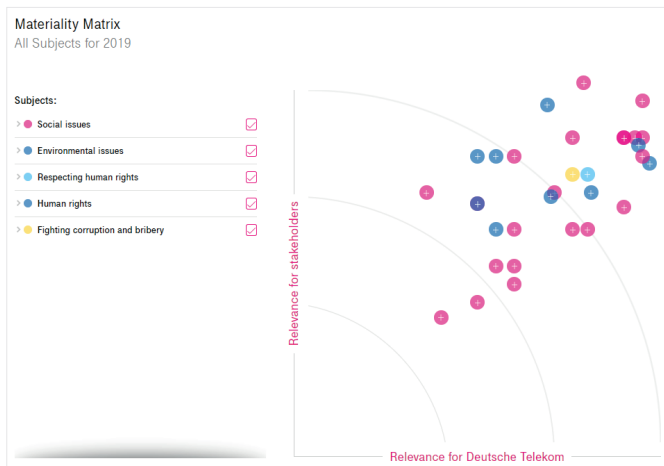
We identified the material topics for this year's CR reporting based on these findings. We presented the results of the analysis in a materiality matrix in accordance with the requirements of the Global Reporting Initiative (GRI).

RESULTS OF THE MATERIALITY ANALYSIS

Topics were rated as "very relevant," "relevant," "less relevant," and "not relevant" in the materiality analysis. We translate their weighting results onto a 100-point scale. Here are the results of the analysis.
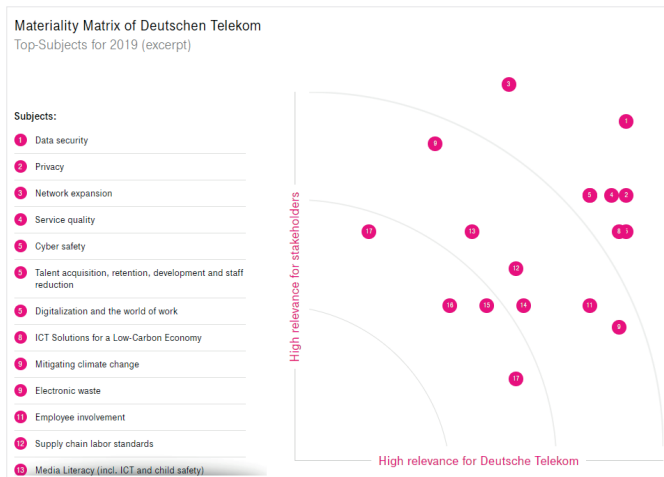
The overall result

The following illustration shows how all of the topics were rated by our stakeholders and from a corporate perspective on a scale of 0 to 100.

Materiality Matrix
All Subjects for 2019

Subjects:
- Social issues
- Environmental issues
- Respecting human rights
- Human rights
- Fighting corruption and bribery

Relevance for stakeholders
Relevance for Deutsche Telekom

Top topics for Deutschen Telekom's sustainable business development

We consider all topics that achieved more than 70 points on average in the materiality process to be top topics. They are presented on a scale of 50 to 100 below.

Materiality Matrix of Deutschen Telekom
Top-Subjects for 2019 (excerpt)

Subjects:
1. Data security
2. Privacy
3. Network expansion
4. Service quality
5. Cyber safety
6. Talent acquisition, retention, development and staff reduction
7. Digitalization and the world of work
8. ICT Solutions for a Low-Carbon Economy
9. Mitigating climate change
10. Electronic waste
11. Employee involvement
12. Supply chain labor standards
13. Media Literacy (incl. ICT and child safety)

High relevance for stakeholders
High relevance for Deutsche Telekom

MATERIAL TOPICS MATCHED WITH GRI ASPECTS

The following overview indicates which GRI aspects can be matched
with the material topics of the stakeholder survey.

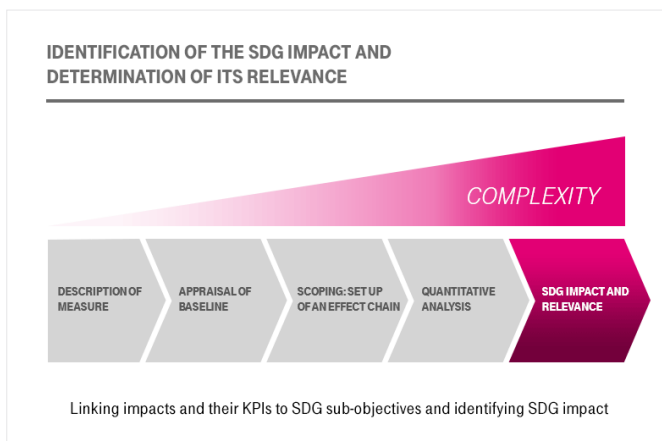| #	Material aspects	GRI aspects	Management approach
1	Data security	▪ Customer privacy	▪ Our approach to data protection
2	Privacy	▪ Customer privacy	▪ Our approach to data protection
3	Network expansion	▪ Indirect economic impacts	▪ Our approach for infrastructural expansion
4	Service quality	▪ Stakeholder engagement	▪ Our approach for top service quality
5	ICT solutions for a low-carbon economy	▪ Products and services	▪ Our approach for sustainable products and services
6	Climate change mitigation	▪ Emissions ▪ Energy	▪ Our approach to measuring our progress with regard to climate protection ▪ Our approach for energy-efficient networks
7	Cybersecurity	▪ Customer privacy	▪ Our approach to data protection ▪ Our approach for consumer protection
8	Talent acquisition, employee retention, development, and staff reduction	▪ Training and further education ▪ Employment	▪ Our approach to training and development
9	Digitalization and the world of work	▪ Training and further education	▪ Our approach to training and development
10	Electronic waste	▪ Waste and waste water	▪ Our approach to resource conservation and environmental protection
11	Media literacy (including ICT and child safety)	▪ Customer health and safety	▪ Our approach to social responsibility
12	Employee involvement	▪ Labor/management relations ▪ Freedom of association and collective bargaining	▪ Our approach to employee relations ▪ Our approach to protecting human rights
13	Supply chain labor standards	▪ Procurement practices ▪ Forced or compulsory labor ▪ Supplier human rights assessment	▪ Our approach for sustainable procurement ▪ Our approach to protecting human rights ▪ Our approach to integrity and compliance
14	Employee diversity and anti-discrimination	▪ Non-discrimination ▪ Diversity and equal opportunities	▪ Our approach to protecting human rights ▪ Our approach to diversity and equal opportunity
15	Ethical business practices and compliance	▪ Socioeconomic compliance ▪ Anti-corruption	▪ Our approach to integrity and compliance

IMPACT MEASUREMENT

IMPACT MEASUREMENT AND MANAGEMENT

We aim to continuously improve the positive social impact of our products, solutions, and activities, and minimize their negative impacts. We have made our contributions to achieving the United Nations Sustainable Development Goals (SDGs) transparent in our reporting since 2015. With the support of internal and external experts, we have also developed an overarching approach we can use to measure the impact of our activities – our blueprint as it were. This is based on a six-tiered formula that enables us to identify and evaluate causal relationships.

To ensure transparency and comparability of the results, we use external frameworks to describe the effects of our contributions. These include both the SDGs and the Universal Declaration of Human Rights.

The first step when measuring impact is to examine the consequences that a project, product, or activity (such as switching from paper billing to online billing, for instance) has for material key topics on an ecological, social, and economic footing. We then use the resultant findings to assess the associated SDG impact from a global perspective and to support the internal management and communication of corresponding activities.

In 2018, we introduced impact measurement for various activities and products. In doing so, we ensured that the methods we use are transparent, are based on robust data and assumptions, and are effective for several years. Moreover, we have described the relevant starting point, or baseline, as accurately as possible so that the concrete impact on the SDGs can be evaluated reliably. The results are both qualitative and quantitative in nature and are presented in the following sections.

IDENTIFICATION OF THE SDG IMPACT AND DETERMINATION OF ITS RELEVANCE

COMPLEXITY

| DESCRIPTION OF MEASURE | APPRAISAL OF BASELINE | SCOPING: SET UP OF AN EFFECT CHAIN | QUANTITATIVE ANALYSIS | SDG IMPACT AND RELEVANCE |

Linking impacts and their KPIs to SDG sub-objectives and identifying SDG impact

IMPACT MEASUREMENT: BROADBAND EXPANSION

We examined one of our core topics – broadband expansion.

Broadband expansion has a positive impact on many aspects of society and helps to deliver the SDGs.

- Improved network coverage (SDGs 9 and 17) can create new jobs, as a growing number of new businesses are established, for instance (SDG 8). Average income and gross domestic product also increase as a result.

- Network expansion also lays the foundation for many other positive effects, such as improved and more equal access to digital services in the educational and health care field for example (SDGs 3, 4, and 10).

However, network expansion also has negative consequences:

- On an intermittent and one-off basis, the civil engineering works that have to be undertaken to expand infrastructure consume resources, generate emissions, and infringe on natural habitats.

- The expansion of higher-performance network infrastructure can lead to increased energy demand.

To mitigate these effects, we are expanding our network in an energy-efficient manner and increasingly using renewable energies (SDG 7), which means that, in the long term, the positive impacts will outweigh the negative consequences.

IMPACT MEASUREMENT: ONLINE BILLING

Gradually switching from paper billing to online billing is a good example of the sustainability potential inherent in digitalization. We applied our new approach to impact measurement in order to analyze the effects more closely for Deutsche Telekom. This involved assessing the entire impact chain for both paper and online billing.

- Our comparison shows that the negative environmental consequences of online billing are more than 50 percent lower than those associated with paper billing. Striking elements include a lower consumption of paper and ink and reduced logistics services (SDGs 3, 6, 7, 8, 9, 11, 12, 13, and 14).

We have identified the potential negative consequences of this measure as a drop in sales for the timber and paper industries and logistics sector. However, these consequences are less substantial than the positive effects.

IMPACT MEASUREMENT: ECO-CONSCIOUS PACKAGING

We are working to reduce as much as possible the amount of materials we use in packaging and in the devices we buy. In 2018, we applied our impact measurement methodology to analyze the effects of packaging improvements for one of our core products. Even before then, we had already started to reduce the amount of packaging used for various products. In 2019 we took this approach further, reducing the amount of packaging materials for more products and switching to alternative packaging materials. For example, by using 100 percent biodegradable PaperFoam for one product, we are saving approximately 95 metric tons of paper and around 200 metric tons of CO_2 (per 250,000 packaging units). For 2020, as part of our "We Care for Our Planet" program, we are also planning to redesign the casing of the Speedport 4 router and our media receivers. In the future, they will be made from 100 percent recycled materials.

In total, the switchover benefits nine SDGs, with a particularly striking impact on certain sub-goals of SDGs 6, 12, 13, and 14, such as lowering water pollution, CO_2 emissions, and the use of plastics.

IMPACT MEASUREMENT: OUR CONTRIBUTION TO RESPECT FOR HUMAN RIGHTS

The following diagram illustrates the positive impact that can be achieved in both our value chain and society through our commitment to human rights.
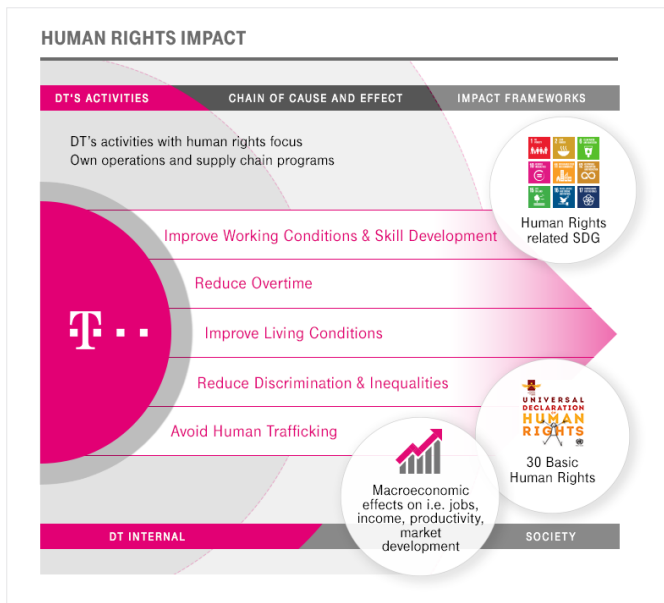
In 2019 we conducted a Human Rights Impact Assessment at unit-Systems in India. It looked at the topics such as working hours, mental and physical stress and work-life balance as well as discrimination and working conditions of employees ou our suppliers..

We developed and introduced a range of improvement measures based on this assessment. Besides changes to the way work is planned, these included various measures for raising awareness, such as workshops designed to explain overtime regulations.

With such specific measures we have a chance to have an positive impact on SDGs 3 and 8 and contribute towards the recommendations of the United Nations Office of the High Commissioner for Human Rights.

IMPACT MEASUREMENT: MEDIA LITERACY

Turning to the topic of media literacy, we analyzed our Teachtoday initiative.

The learning methods employed with Teachtoday appeal to multiple senses. According to our results, which we obtained together with the auditors from PwC, such methods are more than twice as effective as learning methods that only appeal to one sense (SDG 4).

SUSTAINABLE DEVELOPMENT GOALS

**THE GLOBAL DIMENSION TO OUR COMMITMENT –
SUSTAINABLE DEVELOPMENT GOALS (SDGS)**

Deutsche Telekom emphatically supports the UN Sustainable Development Goals (SDGs). We are already making a contribution with many of our products, solutions, and measures. We also examine how our business activities affect the SDGs as part of our impact assessment.

Internally, we use the SDGs effectively in our communication with various units. They help us clarify how we influence society and the environment and improve our level of awareness when it comes to managing the social impact of our products and solutions.

Our transparent external reporting in relation to the SDGs has previously earned special recognition from PwC, among others.

In both this CR report and our annual report, we draw attention to our contributions to the SDGs. The relevant sections are marked with the corresponding SDG symbols. Furthermore, we also set out how our commitment to the SDGs benefits the development of Deutsche Telekom.

**OUR CONTRIBUTION TO THE SUSTAINABLE
DEVELOPMENT GOALS**

Various studies have come to the conclusion that 103 of all 169 sub-goals associated with the SDGs can benefit from the use of ICT. Examples include the study entitled "ICT-centric economic growth, innovation, and job creation" published in 2017 by the International Telecommunication Union and the "SMARTer2030" study launched by the GeSI initiative in 2019.

Our network infrastructure offers the technological foundation for diverse and innovative approaches to solving social and ecological challenges – and hence also for achieving many SDGs. That is why we believe we can make the biggest impact on SDG 9: "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation."

The following overview details our contribution to the SDGs and refers to specific examples from the current CR report.

Our efforts to support the SDGs also have a positive impact on our company. To highlight the various internal contributions throughout our value chain that help us support the SDGs, we have divided them into five sectors. Each sector has its own logo. These logos appear alongside the SDG symbol in both our annual report and the "Facts & figures" section of the CR report and thus clarify the correlation between the SDG contribution and the relevant internal contribution.

Deutsche Telekom's value contributions

| Finance | Structure | Relationships | Employees | Environment |

STAKEHOLDER MANAGEMENT

OUR STAKEHOLDERS

Our interaction with stakeholder groups helps us find support for the things that matter to us and makes it easier to identify trends early on, thereby fostering our innovation processes.

The following overview sets out who our stakeholders are and what matters to them most:

Analysts, investors and their representatives
TOP-SUBJECTS:
- Cyber safety
- Privacy
- ICT Solutions for a Low-Carbon Economy
- Employee involvement
- Mitigating climate change

STAKEHOLDER GROUPS:
- Private investors
- Funds, asset managers and analysts
- (SRI) rating agencies
- Analyst organizations and associations
- Institutional investors

Customers, potential customers and their representatives
TOP-SUBJECTS:
- Data security
- Employee involvement
- Privacy
- Cyber safety
- ICT Solutions for a Low-Carbon Economy

Stakeholder groups:
- Youngsters and young adults
- Families
- Middle-aged people
- Senior citizens
- Small and medium-sized enterprises
- Large corporations
- Public authorities
- Consumer organizations and segment-specific interest groups
- Telekom Supervisory Board members

Business sector and its representatives
TOP-SUBJECTS:
- All top-subjects of the materiality analysis 2019

Stakeholder groups:
- DAX-listed companies
- Other large corporations
- Small and medium-sized enterprises
- Trade and industry associations
- Cooperation partners
- Competitors

Science, research and education
TOP-SUBJECTS:
- Employee involvement
- Socially relevant application of ICT products and services
- Cyber safety
- ICT Solutions for a Low-Carbon Economy
- Privacy

Stakeholder groups:
- CR and sustainability research institutions
- Political and business research institutions
- Universities
- Schools
- Day care centers
- Student organizations and university associations
- ICT, sociology and design research institutions

NGOs and special interest groups
TOP-SUBJECTS:
- Privacy
- Cyber safety
- Socially relevant application of ICT products and services
- Transparency and reporting
- ICT and child safety

Stakeholder groups:
- Humanitarian organizations and charities
- Business ethics groups
- Multi-thematic organizations
- Churches and their relief organizations as well as other religious and social groups
- Foundations
- Environmental protection organizations

Media
TOP-SUBJECTS:
- All top-subjects of the materiality analysis 2019

Stakeholder groups:
- CR and sustainability
- Players from politics and business
- Education
- Radio broadcasters, daily press, press agencies
- Online media and social networks
- Publishers
- Journalist associations/media groups
- ICT and communications

Politics
TOP-SUBJECTS:
- Privacy
- Cyber safety
- Socially relevant application of ICT products and services
- Transparency and reporting
- ICT and child safety

Stakeholder groups:
- Players at national level
- Embassies and consulates
- Supervisory and regulatory authorities
- Communities and their representatives
- International organizations
- Players at EU level

Employees, potential employees and their representatives
TOP-SUBJECTS:
- Data Security
- Privacy
- Cyber safety
- ICT Solutions for a Low-Carbon Economy
- Employee involvement

Stakeholder groups:
- Employees
- Managers
- Board of Management
- Applicants and prospective employees
- Trade unions and works councils
- Employees and students
- Endowed chairs
- Apprentices/trainees

Suppliers
TOP-SUBJECTS:
- Privacy
- Cyber safety
- Mitigating climate change
- Talent acquisition, retention, development and staff reduction
- Data Security

Stakeholder groups:
- Auditors and certification bodies
- Sub-suppliers
- Consultants
- First-tier suppliers

FORMATS FOR STAKEHOLDER ENGAGEMENT – MANAGEMENT APPROACH

We encourage stakeholder engagement in our corporate activities. With this in mind, we developed a corresponding strategy in 2011. It is based on the three AA1000 principles developed by the NGO AccountAbility: materiality, inclusivity, and responsiveness. Our conformity with these principles was investigated and verified by an auditing firm in 2013.

We used a case-based relevance analysis to identify the type and intensity of our stakeholder engagement. The more relevant a stakeholder group is to the topic or project concerned, the more intensive the engagement of that stakeholder group can be. Depending on the intensity, we make a distinction between three types of engagement: participation, dialog, and information.

PARTICIPATION

- Development programs for suppliers
- YAM: information, discussion and awareness-raising ▣
- Strengthening our corporate culture, encouraging a speak-up culture
- Collaboration for the protection of minors
- Cooperating in the name of security
- Co-designing Deutsche Telekom products and services in the think tank
- Stop Wasting – Start Caring!
- Digitalization expert committee

DIALOG

- Expertise in the CR Report: You can ask Deutsche Telekom experts questions on selected topics, such as sustainable products and services
- Magenta Security Congress ▣
- Cyber Security Summit
- SRI Roadshows
- Evaluating and implementing the EMF Policy

INFORMATION

- #TAKEPART-Stories
- Good to know: Internal CR newsletter for employees
- Data protection tips with our one-pager
- We Care magazine
- Information Centre on Mobile Communications (IZMF)
- Telekom.com

OVERVIEW OF MEMBERSHIPS AND COLLABORATIONS

Business and industry associations

- American Chamber of Commerce in Germany
- Bundesvereinigung der Deutschen Arbeitgeberverbände (BDA, Confederation of German Employers' Associations)
- BITKOM industry association
- Corporate Digital Responsibility Initiative
- European Telecommunications Network Operators' Association (ETNO)
- Forum Nachhaltige Entwicklung der Deutschen Wirtschaft e.V. (econsense, Forum for Sustainable Development of German Business)
- GSM Association (GSMA)
- International Chamber of Commerce (ICC)
- Bundesverband der Deutschen Industrie e. V. (BDI, the Voice of German Industry)

Climate protection and environmental organizations

- CDP
- B.A.U.M. e.V. environmental management organization
- Global e-Sustainability Initiative (GeSI)
- Stiftung 2° – Deutsche Unternehmer für Klimaschutz (2° Foundation – German CEOs for Climate Protection)
- Sustainability Leadership Forum (in collaboration with B.A.U.M.)
- European School of Management and Technology (ESMT) (Sustainable Business Roundtable)
- Global Compact
- Caring for Climate
- Joint Audit Cooperation (JAC)
- Deutsches CSR-Forum (German CSR Forum)
- nachhaltig.digital (sustainable.digital)

Civic and aid organizations

- Bündnis für Verbraucherbildung (Alliance for consumer education)
- Charta der digitalen Vernetzung (Charter for Digital Networking)
- Deutschland sicher im Netz (Making Germany safe on the Net, DsiN)
- London Benchmark Group
- Help e.V. aid organization
- Bundesnetzwerk Bürgerschaftliches Engagement (National Network for Civil Society)
- CCCD – WIE
- Aktion Deutschland Hilft e.V. (Germany's Relief Coalition)
- Deutsches Rotes Kreuz (German Red Cross)
- DKMS Deutsche Knochenmarkspenderdatei gemeinnützige Gesellschaft mbH (German Bone Marrow Donor Center)
- Lebenshilfe e.V. aid organization
- SOS-Kinderdorf e.V. (SOS Children's Villages)
- Nummer gegen Kummer (youth counseling line)
- TelefonSeelsorge (crisis counseling helpline)
- Deutsche Telekom Stiftung
- Deutschlandstiftung Integration (German Foundation for Integration)
- Bundesarbeitsgemeinschaft der Senioren-Organisationen (BAGSO – German Association of Senior Citizens' Organizations)
- Code of Responsible Conduct for Business
- GIZ Private Sector Advisory Board
- Together

COMPLIANCE

HOLISTIC COMPLIANCE MANAGEMENT SYSTEM

We have clearly expressed our commitment to complying with ethical principles and current legal standards. This commitment has been incorporated in our Guiding Principles and Code of Conduct. We have put in place a compliance management system to anchor lawful and ethical conduct in all areas of the Group. The specific purpose of this system is to ensure compliance risks are successfully tackled and make sure rules and regulations are followed throughout the entire Group.

Responsibility for the compliance management system lies with top management. There is also a management position for compliance in every company of Deutsche Telekom. The Group-wide design, development, and implementation of the compliance management system falls under the remit of the Chief Compliance Officer of Deutsche Telekom AG and the Group Compliance Management unit she runs. We also have dedicated compliance officers (COs) at each of our operating segments and national companies. It is their job to ensure the compliance management system and our compliance goals are implemented on site.

At Deutsche Telekom, compliance means following the rules and always doing the right thing. Within the meaning of our five Guiding Principles and Code of Conduct, integrity – which necessarily encompasses compliance – forms the basis of all our business decisions and activities. It defines the behavior of all our employees when dealing with customers, employees and colleagues, investors, managers, and Deutsche Telekom's general environment.

We have derived the following objectives for our compliance work:

- Preventing compliance violations and unethical business decisions

- Integrating compliance into business processes at an early stage and on a lasting basis

- Minimizing liability risks for the company

- Ensuring Deutsche Telekom is viewed as a dependable partner by its customers

- Adopting a consistent approach to preventing, identifying, and responding to non-compliance

- Fostering a compliance culture and ethical conduct

COMPLIANCE MANAGEMENT CERTIFICATIONS

In 2018, we once again had our compliance management system certified with a focus on anti-corruption measures. This is our way of ensuring that we can confront risks consistently and that we have established effective processes in the company. Since 2016 25 international companies have been were certified.

The certification focused on processes in Procurement, Sales, HR, and Mergers & Acquisitions, on the one hand, and on events, donations, and sponsorships on the other. The potential danger of corruption is greatest in these areas. Auditors investigated the efficacy of the compliance management system and verified it without any reservations. We document details regarding audit content and corporate departments that have undergone anti-corruption audits in our audit report.

COMPLIANCE MANAGEMENT ENHANCED WITH RISK ASSESSMENT

If we are going to be successful in preventing and countering legal infractions and regulatory breaches, then we need to adopt the correct approach to assessing compliance risks. That is why our compliance management system is centered around an annual compliance risk assessment. To help us carry this out, we have put in place a Group-wide compliance management process, allocated responsibilities, and defined assessment criteria. The individual steps in the compliance risk assessment, all of which are documented transparently, are as follows:

- The companies that will take part in the compliance risk assessment are selected using a model based around how developed and complete their compliance programs are. A total of 80 companies took part in 2019. This equates to a coverage of just under 97 percent in terms of headcount. Responsibility for conducting the compliance risk assessment lies with the respective national company. Our central compliance organization provides support and advice in these matters.

- The national companies' managing boards are responsible for the results of the compliance risk assessment. Activities and responsibilities for the following year's compliance program are developed on the basis of these results. The managing board then passes a formal resolution to approve the program. The compliance program measures are monitored closely.

- We use the Group risk map to assess risks that are particularly significant to our company. The risk map enables Deutsche Telekom's companies, with their various business models, to conduct systematic risk analyses. It currently covers 27 core risk categories, ranging from corruption and anti-trust law violations to contraventions of the Code of Human Rights & Social Principles. Each national company

can add additional categories specific to their business needs. This involves defining which specific threat each risk poses to the national company and stating which measures have already been implemented to mitigate this risk. If necessary, additional measures are developed to reduce the risks to a manageable level.

A CLEAR REFERENCE FRAMEWORK: OUR CODE OF CONDUCT

Integrity, respect, and compliance with the law – these are the principles on which Deutsche Telekom's business activities are based. Our Code of Conduct is the central reference framework for completely lawful and ethical conduct. It makes a significant contribution to our business success by providing a solid foundation for our business activities.

RAISING AWARENESS OF COMPLIANCE RISKS AMONG STAFF

We aim to ensure the conduct of our employees in their day-to-day work is always ethical and lawful, which is why we implement the following measures across the entire Group:

- Annual compliance risk assessment (CRA), which we use to identify and assess compliance risks and specify key areas for suitable preventive measures.

- Preventive measures that are combined in a compliance program.

- A Group-wide Code of Conduct that sets out clearly how our employees are expected to behave.

- Compliance-related Group policies on areas such as anti-corruption, gifts, invitations, and events, as well as on dealings with consultants and agents.

- A policies database that helps staff find and implement applicable regulations.

- Regular compliance and anti-corruption training (see GRI 205-2).

- The "Ask me!" portal for questions relating to compliance. The portal contains FAQs with example cases, as well as information on laws, internal policies, and behavioral standards. It also gives users the opportunity to contact the "Ask me!" advisory team, which will provide reliable answers if they are unsure about what to do in a particular situation. The number of inquiries and the topics covered can be viewed here.

SYSTEMATIC HANDLING OF INFRACTIONS

We always investigate tip-offs about a breach of statutory or internal regulations when there is a sufficiently tangible description of the matter at hand. Among other things, we run a whistleblower portal called "Tell me!" as a means of accepting tip-offs.

- All tip-offs are carefully investigated.

- Any violations we uncover are punished appropriately. In some cases employment relationships have even been terminated for good cause. Claims for damages may also be asserted.

- Any weaknesses identified in the internal control system during the investigation are systematically analyzed and remedied.

Deutsche Telekom is party to proceedings both in and out of court with government agencies, competitors, and other parties. We have reported on what Deutsche Telekom views as key processes in the 2019 annual report.

"TELL ME!" WHISTLEBLOWER PORTAL

We have created the "Tell me!" whistleblower portal to uncover non-compliance. Both our employees and external parties such as business partners and customers can use the portal to report misconduct – and can do so anonymously. We have introduced a Group-wide reporting process to control and monitor these activities.

In 2019, 122 compliance-related reports were made to Deutsche Telekom via the "Tell me!" portal (137 reports were made in the previous year). 27 of those are still being reviewed for plausibility and investigations are being made into 60 plausible reports (as of December 31, 2019). A total of 38 were confirmed as actual misconduct and were prosecuted accordingly. 13 cases are currently still being investigated.

- Most of the tip-offs received in 2019 focused on "financial interests" (possible cases of fraud, breach of trust, misappropriation, theft, manipulation of targets, and unfair sales methods).

- In confirmed cases, we impose systematic sanctions that are proportionate to the act and the guilt of the perpetrator and are in line with applicable legal provisions.

- Naturally, we always follow up on all compliance-related tip-offs, even those that reach us through other channels.

	2019	2018	2017
Reports (overall)	1 058	953	1 706
Compliance relevant tip-offs	122	137	146
thereof anonymous tip-offs	61	76	87
confirmed misconduct	38	46	43
in investigation	13	9	12
non-plausible/proven tip-offs	35	40	44

Hints: Most of the reports submitted in 2019 were related to fraud, breach of trust, embezzlement, theft, target manipulation and unfair sales practices. Tipp-offs reported to portals in a business unit are only counted for the central Tell me! portal if Group relevant.

CURRENT MEASURES TO STRENGTHEN COMPANY CULTURE

In 2016 we started the Compliance-based Corporate Culture initiative with the intention of encouraging integrity and a constructive speak-up culture within our company. Based on an employee survey in the following year, a comprehensive set of measures was put together and then rolled out in 2018 and 2019.

- The Speak-Up Culture initiative: Employees are encouraged to openly address grievances in critical situations, just as managers should be open to hearing these grievances. To help with this, "Speak Up!" training courses are offered on an international scale, in which employees learn communication techniques for use in difficult situations. By the end of 2019, approximately 3,000 employees had taken part in one of these courses in Germany alone.

- "Ethical Leadership" training courses help our managers reflect on their own ethical conduct. So far, around 400 managers have taken part in one of these courses.

- In 2019, we introduced an e-learning and self-reflection tool for managers and project managers that helps them foster a speak-up culture in their teams and enhance their own ethical leadership behavior.

- Employee surveys: in 2019 we carried out a follow-up survey on our compliance culture and a good 46,000 employees took part.

THE RESULTS OF OUR EMPLOYEE STUDY ON THE CULTURE OF COMPLIANCE

In 2019, as part of the Compliance-based Company Culture initiative, we conducted our second ever international employee survey on compliance. The aim was to reassess how our compliance culture had developed since the last survey was conducted in 2017. The European School of Management and Technology (ESMT Berlin) and Hertie School of Governance were our research partners for the first, extensive study. Some 46,000 Deutsche Telekom employees took part in the latest survey – more than participated in the first. The initiative is supported by an expert committee created specifically for this purpose. The committee is comprised of Deutsche Telekom employees as well as representatives from non-governmental organizations, the business and scientific communities, and society.

The results have improved compared to 2017.

- Some 98 percent of those surveyed said they are committed to the rules at Deutsche Telekom and are unwilling to conduct themselves in an unethical manner (97 percent in 2017). Accordingly, the vast majority stand by their own values and would not stray from them, even under pressure.

- A total of 88 percent indicated that their manager sets a good example for ethical conduct.

- Just under 90 percent said they are well informed by the company as regards appropriate conduct at work and that they feel well prepared to deal with ethically dubious situations.

- A clear majority of survey respondents stated that the company management team sets a good example for ethical conduct.

- Weaknesses were identified with regard to feedback culture. A number of employees said they did not feel comfortable expressing their opinion openly.

The weaknesses identified were the subject of intensive discussion on the Board of Management and a set of measures was developed to address them. The aim of these measures is to further reinforce the values-based compliance culture in the Group and carry forward the current, overwhelmingly positive trend. One of the measures was the introduction of the "Managing Dilemmas" virtual reality program. The aim behind this program is to make it easier for staff to identify critical situations and adopt the correct approach in these scenarios. A "speak-up culture" is also being promoted with measures such as the launch of a new e-learning program.

BREAKING DOWN BARRIERS – WORLDWIDE COOPERATION FOR COMPLIANCE

Different legal practices and cultural values in the countries where Deutsche Telekom is active represent a significant challenge for compliance. The increasingly dynamic development of global markets and intensified international competition also influence our compliance strategy.

In line with the Group's international orientation, we discuss strategic issues with an international compliance advisory team twice a year. The team is a trend-setter of sorts for designing and implementing balanced compliance structures at Deutsche Telekom. We also promote Group-wide compliance cooperation through meetings of the representatives of all compliance organizations from our international subsidiaries.

We are working with other parties in national and international organizations and professional circles, which involves discussing compliance issues, among other things. We also actively contribute to the ongoing development of compliance, for example by giving specialist presentations and releasing publications.

COMMITMENT TO ANTI-CORRUPTION INITIATIVES

Deutsche Telekom AG regularly contributes to national and international organizations that focus primarily on compliance issues. As a member of associations and organizations such as the Compliance & Integrity forum of ZfW (Center for Business Ethics) and BITKOM (Federal Association for Information Technology, Telecommunications, and New Media), we make use of the opportunity to exchange ideas and experiences related to compliance.

RESPONSIBLE USE OF ARTIFICIAL INTELLIGENCE (AI)

In 2018, with Group Compliance Management taking the lead, we introduced guiding principles for the ethical use of artificial intelligence (AI). These principles clarify how we at Deutsche Telekom aim to use AI responsibly and develop our AI-based products and services in the future. We do not claim that these guidelines constitute universally applicable rules on the responsible use of AI. Instead, we aim to continuously develop these guidelines in partnership with our employees and external stakeholders, anchoring them in our company.

In 2019, we carried out activities such as training and workshops on implementing the guidelines, held a conference on digital ethics, provided employees with comprehensive information through a range of formats, integrated the AI guidelines into contract-relevant provisions for our suppliers, and developed an internal test seal for ethical AI products. AI applications that satisfy our high standards carry the seal.

POLITICAL ADVOCACY

COMMITMENT TO CONSUMERS

Deutsche Telekom aims to become the leading European telco. That is why we again gave high priority to consumer-related topics in 2019.

Main topics included:

- Maintaining data privacy for consumers (e.g., in online advertising).

- Improving comprehensive, cross-technology protection of young people at national and EU levels (in particular by advancing a comprehensive, Group-wide minimum standard within the EU and ongoing dialog with organizations involved in the protection of minors both nationally and at EU level).

- Improving customer service standards.

- Improving consumer protection in telecommunications (e.g., during the ongoing IP migration and when switching providers for fixed-line and mobile connections).

- Striving to provide better transparency for our customers (e.g., the data protection one-pager and the product information sheet on the Transparency Ordinance).

Within the scope of IP migration in the fixed-line network, we have switched 98 percent of our customers to IP in the last five years and taken numerous measures to make the migration as easy and seamless as possible for customers. The IP migration is nearing completion. Only voice connections will still need to be migrated in 2020.

We are also continuing our commitment in issues of provider switching, with the goal being to make it easier for both fixed-network and mobile consumers to switch providers, largely without any service interruptions. In all these areas, Deutsche Telekom stands for a constructive and solution-oriented approach that is geared to both consumer interests and the interests of our company.

POLITICAL ADVOCACY TOOLS

Our partners from parliaments, governments, and non-profit organizations need to uphold their independence and integrity. This principle is codified in Deutsche Telekom's Code of Conduct. Donations to political institutions, parties, and political representatives are not allowed, for example. Instead, we place importance on factual communication, competence, credibility, and integrity. As a result, politicians and stakeholders feel that the information we provide is authentic and credible and refer to this information when forming their own opinions. Deutsche Telekom is registered in the official transparency register for lobbyists

in Brussels. Within the context of our collaboration efforts in associations and other bodies, we feel that we are under the obligation to comply with all ethical codes and legal provisions.

In 2019, our political advocacy work focused on the following key issues:

- Framework for broadband and fiber-optic build-out
- 5G frequency auction
- Mobile strategy for Germany
- Data economy and artificial intelligence
- Secure networks and cybersecurity
- Digital self-determination
- Sustainability

ASSOCIATION FEES – THE MAIN POLITICAL ADVOCACY OUTLAY

Active involvement in associations is the cornerstone of our political advocacy work. Accordingly, all the various membership fees (for umbrella/trade/industry associations etc.) account for the majority of our outlay in this area. To make our involvement transparent, an overview of the main fees paid in the past three years is provided below.

Category	Institution	2017	2018	2019
Annual total monetary contrebutions / donations (in EUR)	Trade Associations	< 5,000,000*)	< 5,000,000*)	< 5,000,000*)
	Political Parties	-	-	-
Largest single annual contributions (in EUR)	(Deutsche) Industrie und Handelskammer (IHK / DIHK)	-1,108,566	2,231,980	1,082,182
	Bundesverband der deutschen Industrie (BDI e.V.)	501,620	500,000	500,000
	Bundesvereinigung der Deutschen Arbeitgeberverbände (BDA)	400,410	400,000	400,407
	Bitkom e.V.	357,830	360,000	360,000

* Trade associations are the cornerstone of the public relations activities by Deutsche Telekom. Correspondingly, total membership fees (for trade associations, industry associcytions or other such groups) form the main component of the contributions in this area. The numbers for contributions to trade associations listed above (2017-2019) mean "Less than5 mio. EUR per year" (value may vary year-on-year; this is the maximum of an approximate value). Deutsche Telekom does not make contributions, grant advantages of give benefits of any kind, directly or indirectly, to political movements or trade unions or their representatives or candidates, except as required by applicable laws and regulations

OUR POSITION ON BROADBAND – INVESTMENT INCENTIVES ARE NEEDED

Having a high-performance, reliable, and secure broadband infrastructure is the basis of success for all business sectors and is a key factor in making a business location attractive. Deutsche Telekom has been making considerable contributions for years by investing heavily in the infrastructure for mobile internet and the fixed-line network, including with optical fiber. We show more commitment than any other company to providing full-area coverage, including in rural areas.

In order to drive network expansion, network operators in Germany need investment incentives, legal and regulatory planning security, and technological freedom of action. That enables them to respond flexibly to the circumstances of enterprises and households and meet political, economic, and social requirements. This is the only way to fully harness the potential for cost-effective private network expansion using all available technologies. When it comes to areas where cost-effective broadband expansion is not possible, it is down to the public sector to ensure the gaps are plugged by providing technology and supplier-neutral funding programs and exercising sound judgment. Legal frameworks and regulatory practice need to actively support private-sector investment in new fiber-optic networks and prevent unnecessary financial burdens and red tape for the network operators investing in networks.

In view of the fact that the internet and telecommunications markets are converging rapidly and in light of the growing market power of a few global internet players, the sector-specific regulation of telecommunications that has been pursued to date is creating more and more of an imbalance. The same laws and regulations that apply to telecommunications companies also need to apply to internet companies providing the same services. The objective here must be to create equal competitive conditions and enable fair distribution of the financial burden involved in broadband expansion.

OUR POSITION ON NETWORK NEUTRALITY – THE INTERNET SHOULD STAY OPEN

As part of the EU Telecoms Package, regulations on the open internet were adopted and came into effect on April 30, 2016. The regulations particularly address permitted traffic management and transparency requirements and limit commercial product and service differentiation on the internet.

Deutsche Telekom remains committed to preserving an open internet. Content and services will continue to be available online in accordance with the best effort principle. This means that data on the Internet are processed without preferential treatment and forwarded in the best possible way. We are continuing to gradually expand our infrastructure so that we can cope with rapidly increasing amounts of data traffic and facilitate innovation in our network. As a result, we are satisfying our customers' growing demands and meeting the expectations of online content and application providers, who want to be able to provide their services in high quality both now and in the future.

Building on the best effort internet, we are developing an innovative network architecture – 5G networks – which can better and more flexibly meet the various transmission quality requirements of specific services. We thereby fulfill business and regulatory requirements and enable innovation in the services we offer on our networks. Content is not monitored, nor do we have any influence over user or provider content. When competing with other network operators, we will continue to market services with guaranteed quality features exclusively on a non-discriminatory basis.

SUSTAINABILITY STANDARDS

UN GLOBAL COMPACT – COMMUNICATION ON PROGRESS
This CR report also serves as a CoP (communication on progress) from Deutsche Telekom as part of the United Nations Global Compact. The table refers to the text passages in which we provide information about our commitment to implementing the ten principles of the Global Compact in this CR report and in other Group publications, thereby also meeting the expanded Global Compact Advanced criteria.

GERMAN SUSTAINABILITY CODE
Each year, as part of its Corporate Responsibility report, Deutsche Telekom publishes a comprehensive declaration of conformity with the German Sustainability Code. The German Sustainability Code aims to make companies' commitment to sustainability transparent and comparable under a binding framework.Deutsche Telekom's declarations of conformity for 2019 will be set out here.The German Sustainability Code was approved by the federal government's Council for Sustainable Development. Deutsche Telekom was one of the first companies to accede to the Sustainability Code.

GRI-INDEX
The 2019 CR Report of Deutsche Telekom was created in line with the Global Reporting Initiative (GRI) guidelines and in compliance with the "Core" option.

In the GRI content index below we refer to content pertaining to general and specific standard disclosures and explain this content when necessary. The standard disclosures are based on the very relevant aspects identified in our materiality process. Selected content from different action areas and information on the materiality process was subjected to an assurance engagement and are identified with a in the index. The index also contains links and explanations to other GRI aspects that are included in the report.

AWARDS

DEUTSCHE TELEKOM RATED ONE OF THE MOST ETHICAL COMPANIES IN THE WORLD IN 2019

In 2019, the Arizona-based Ethisphere Institute ranked Deutsche Telekom as one of the world's most ethical companies for the second time. We are the only company in Germany to have been presented with the Ethisphere Award multiple times in succession. Ethisphere commends the excellent performance of companies with the highest ethical competence worldwide.

AWARD FOR CLIMATE PROTECTION ALONG THE SUPPLY CHAIN

Working on behalf of investors, the non-governmental organization CDP regularly assesses the climate protection activities of listed companies worldwide and compiles an index of leading companies, referred to as the A List. In 2019, Deutsche Telekom featured in this list for the fourth time in a row.

The CDP Supply Chain Coverage ESG KPI was reported externally for the first time in 2017. It indicates the degree to which our procurement volume from carbon-intensive suppliers is covered by the CDP Supply Chain Program.

As part of the CDP's supplier program, companies ask their key suppliers about their emissions and their climate strategy. We use this program in order to survey our suppliers. In 2019, we invited 379 suppliers to participate in the CDP Supply Chain Program. These suppliers cover 80 percent of our procurement volume. A total of 204 suppliers took part in the program. They cover 63 percent of the procurement volume (2018: 71.35 percent). Our goal is to cover 70 percent of our carbon-intensive suppliers by 2020. At the same time, we have disclosed our own commitment to climate protection to eight suppliers through this program.

Through our commitment to climate transparency in supply chains, we were once again awarded a place in the Supplier Engagement Leader Board in 2019.

We intend to continue helping our suppliers to reduce their emissions. The first workshops for this purpose were held in 2019 with selected suppliers. Throughout 2020, we aim to further intensify our dialog with suppliers about reducing emissions in our shared value chain.

AWARDS FOR SOCIAL COMMITMENT

Comenius EduMedia Seal for Teachtoday

In 2019, Teachtoday was awarded two "Comenius EduMedia Seals" by Gesellschaft für Pädagogik und Informationt e.V. (Association for Teaching and Information). The initiative impressed an international panel of judges with its Teachtoday online portal and the SCROLLER magazine. The quality of the educational media earned both elements of the initiative a seal each in the category of "Communication, media, and adult education."

FOX AWARDS for Scroller

dapamedien Verlags KG has been presenting the FOX AWARD to trend setters in marketing and communications since 2011. In 2019, the SCROLLER magazine for children won a silver FOX Award in the category "Industry, technology, production – internal communication" for its communication concept. It also won silver in the FOX Visual category for its design.

German Design Award for Scroller information movie

In 2019, the SCROLLER animation series "Did you know?" won the German Design Award in the "Excellent Communications Design / Audiovisual" category. The prize, which is presented by the German Design Council, is awarded each year to innovative products and projects that are leading the way in design.

German Reading Foundation quality seal for Scroller

In 2019, Stiftung Lesen, the German Reading Foundation conferred its quality seal on the children's magazine SCROLLER, part of the Teachtoday initiative. Their reasoning was: "Engaging, clear layout. Good overall concept. This publication was sorely needed!"

AWARDS FOR OUR SERVICE

TÜV quality seal for "tested customer satisfaction"

For the seventh time in a row, TÜV Rheinland awarded our hotline, our technical service, and the Deutsche Telekom shops the coveted "tested customer satisfaction" quality seal based on a representative survey. Some 2,550 customers in Germany were polled for the study in a representative random sampling. With an average grade of 2.0 or better in each case, we achieved the best result since measurements started being taken.

"King of Service"

In 2019, Deutsche Telekom once again took first place in the customer satisfaction survey conducted by Focus Money. The trade magazine collected more than 275,000 customer votes for its survey. The test question was "which company do you think offers the best service?" Deutsche Telekom came out top for the telecommunications sector, both on a national level and in 51 out of 56 cities.

CHIP hotline test 2019

The trade magazine CHIP put the hotlines of 12 different sectors through their paces over several weeks. The testers made 8,906 calls and carried out 1,670 detailed interviews. The Deutsche Telekom hotlines for fixed-line network, mobile, and MagentaTV came out as winners. We achieved the top grade of 1.0 in three evaluation categories (service, wait time, transparency).

Connect mobile network hotline test 2019

Connect magazine conducts an annual review of broadband/fixed network hotlines from various providers. Its 2019 test confirmed that Deutsche Telekom has the best fixed network infrastructure as well as the best hotline. Aspects such as accessibility, wait time, costs, friendliness of employees, and the quality of information were assessed.

Connect service apps 2019

The trade magazine Connect tested the service apps of telecommunications service providers in Germany, Austria, and Switzerland in 2019. With a total of 431 points, the "Mein Magenta" app was declared the winner for Germany. Connect looked at three categories – functionality and handling, service, and security.

Best service quality in TESTBild

In 2019, TESTBild magazine used a reader panel to examine the service quality of several industries. Deutsche Telekom was the clear test winner in the mobile category. More than 20,000 participants submitted their ratings for this service test.

Digital customer champion!

According to a study by management consultants BearingPoint, Deutsche Telekom is the "Digital Leader in Europe." As part of an industry-wide comparison, we took first or second place in four of the six categories that were rated, thereby securing first place in the overall evaluation, ahead of the other 75 companies that were analyzed.

AWARDS FOR THE MOBILE NETWORK IN GERMANY

Chip (edition 1/2020)

We won the CHIP mobile network test for the tenth time in a row in 2020 and were declared the best network.

Connect mobile network test (edition: 1/2020)

We were the overall winner of the 2020 Connect mobile network test, with a rating of "very good". Testing focused on the performance and reliability of the networks for voice and data.

SUSTAINABLE FINANCE

SOCIALLY RESPONSIBLE INVESTMENT

SRI investment products consist of securities from companies that have passed an audit based on environmental, social, and governance (ESG) criteria. The development of demand from socially responsible investors for T-Shares serves as an indicator we can use to assess our sustainability performance.

With our Socially Responsible Investment ESG KPI we measure how the financial markets perceive our CR activities.

The concept of the United Nations' Sustainable Development Goals (SDGs) is an increasingly popular topic among investors. This is especially true with regard to the future orientation of the SDGs. To assess the impact of our activities on the SDGs and put it into quantifiable terms, we conducted an impact measurement project in 2018.

T-SHARES IN SUSTAINABILITY RATINGS AND INDEXES

As part of our CR strategy, we focus on specific rating inquiries, choosing them on the basis of reputation, relevance, and independence. Examples include ratings from RobecoSAM, Sustainalytics, and oekom.

In 2018, as part of its biennial analyses, the rating agency oekom once again singled us out as the world's best telecommunications company for our ecological and social performance. Moreover, T-Shares were again listed on leading sustainability indices, including RobecoSAM's prominent DJSI World and DJSI Europe. Our shares were also listed yet again in the FTSE4Good index (for the eighth year running) and the UN Global Compact 100 index. For further T-Share listings, please consult the table below.

In the reporting year, our shares also made their way into four other sustainability indices: the Euronext Vigeo Europe 120, the Euronext Vigeo Eurozone 120, the S&P Europe 350 ESG by RobecoSAM, and the EURO STOXX 50 ESG by Sustainalytics.

Rating agency	Indexes/ratings/ ranking	Successfully listed in index				
		2015	2016	2017	2018	2019 ●
RobecoSAM	DJSI World	✓	✓	✓	✓	✓
	DJSI Europe	✓	✓	✓	✓	✓
	S&P Europe 350 ESG	–	–	–	–	✓
CDP	STOXX Global Climate Change Leaders	✓	✓	✓	✓	✓
ISS-oekom	„Prime" (Sector Leader)	✓	✓	✓	✓	✓
Sustainalytics	STOXX Global ESG Leaders	✓	✓	✓	✓	✓
	EURO STOXX 50 ESG	–	–	–	–	✓
	iSTOXX 50 SD KPI	✓	✓	✓	✓	✓
	UN Global Compact 100	✓	✓	✓	✓	✓
FTSE Financial Times Stock Exchange	FTSE4Good	✓	✓	✓	✓	✓
Vigeo eiris	EURONEXT Vigeo Index: Europe 120	✗	✗	✗	✗	✓
	EURONEXT Vigeo Index: Eurozone 120	✗	✗	✗	✗	✓

✓ Successfully listed   ✗ Not listed   – New index since 2019
● Data checked by PwC.

Furthermore, at the beginning of 2019 we were once again named one of the most ethical companies worldwide by Ethisphere, an institute that promotes ethical business methods.

SOCIALLY RESPONSIBLE INVESTMENT (SRI) ESG KPI

The Socially Responsible Investment (SRI) ESG KPI indicates the proportion of shares in Deutsche Telekom AG held by investors who take, among other criteria, environmental, social, and governance criteria into account for their investment strategy. („SRI Investment"; SRI for „Socially Responsible Investment")

And our commitment for more sustainability pays off: As of September 30, 2019, 18 percent of all T-Shares were held by investors who partially take environmental, social, and governance criteria into account for their investment strategy; 3 percent were held by investors who manage their funds primarily in accordance with SRI aspects.

Our ambition: increase KPI

in %

	2016	2017	2018	2019 ●
	21.7	20.8	21.0	21.0

■ Primary SRI   ■ Partial SRI
● Data checked by PwC.
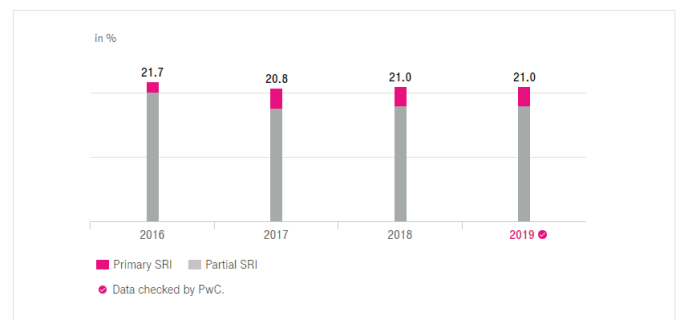
As the basis of calculation is updated annually, year-on-year comparisons may be of limited value. (Source: Ipreo until 2016; from 2017 Nasdaq based on data of Thomson Reuters)

Reporting against standards
The KPI is relevant for criteria 1 (Strategic Analysis, Strategy and Goals) and 7 (Rules and Processes) of the German Sustainability Code.

SUSTAINABLE INVESTMENT AT DEUTSCHE TELEKOM

We apply our sustainability principles to the assets held in the Deutsche Telekom Pension Fund too. We have pursued a sustainable investment strategy for the selection of these capital assets since 2013. Besides financial aspects, we also factor in ecological and social principles and guidelines for good corporate governance. This encompasses:

- Targeted efforts to achieve the Sustainable Development Goals (SDGs) by exercising our rights to have a say in decisions as a shareholder

- General ban on all investments in companies that manufacture or do business with "controversial weapons" (e.g., anti-personnel mines, cluster munitions, nuclear weapons, biological or chemical weapons)

- Ban on investments in companies that have repeatedly violated the principles of the UN Global Compact

Our best-in-class approach:

- Selected investment managers with ESG expertise make targeted investments in companies that are the best in their sector in terms of sustainability performance

- We aspire to reconcile attractive profit expectations with sustainable values

We live up to our fiduciary responsibility toward our employees regarding capital investment by investing in stable values. Above and beyond this, we strive to avoid reputational risks and minimize major risks of loss.

The sustainable capital investment strategy for the Deutsche Telekom Pension Fund received praise from experts in 2019, when we came second in the "ESG Implementation" category at the Institutional Assets Awards organized by the specialist publishing house of German newspaper Frankfurter Allgemeine Zeitung. The award recognizes successful investment strategies that have been implemented in a particularly coherent manner.

Since 2019, Deutsche Telekom's capital investments (DT Trust) have also been geared toward ecological and social standards. The DT Trust is based on the criteria for Norway's Government Pension Fund ("Norges"). Among other things, companies that violate human rights, manufacture certain weapons, or whose core business is considered harmful to the environment are excluded.

We are currently drawing up further sustainable finance models in a joint project involving the Corporate Responsibility and Treasury units.

INVESTOR COMMUNICATION

More and more investors and rating agencies are interested in receiving information about our CR activities, and there is a noticeable trend toward integrating SRI approaches into classic investment strategies. We use different formats – both in our reporting and in direct dialog – to inform SRI analysts and investors of our CR activities.

In addition to our corporate responsibility report, we also publish a non-financial statement and key ESG KPIs in our annual report. Financial market players interested in sustainability can also review ESG information in the Socially Responsible Investment (SRI) section on our investor relations portal.

We seek to engage with investors on a personal level, host Socially Responsible Investment (SRI) roadshows, and regularly accept invitations to present our CR strategy as a best practice at roadshows and conferences. We also provide interested investors with information in conference calls, answer numerous direct requests for information, and take part in SRI conferences.

TAX POLICY GUIDELINES

The Group Tax department is responsible for ensuring that the Deutsche Telekom Group pays taxes and duties at the national and international level in accordance with the applicable laws.

It is the task of Group Tax to take measures that the Deutsche Telekom Group complies with all its tax obligations in Germany and abroad, in particular that it pays taxes in accordance with the local laws and regulations applicable to the individual Group entities. This includes the Group's income taxes, which must also be regularly reported in our IFRS financial statements, as well as, for example, VAT and wage taxes payable within the context of customer transactions and for Group employees.

Group Tax also ensures that the Deutsche Telekom Group has an efficient tax structure within the framework of German and foreign tax laws as applicable in each country, i.e., that the Group does not carry any unnecessary tax burden. The goal is to achieve sustainable tax efficiency for the Group, which requires a transparent, trust-based cooperation with local tax authorities.

In addition, Group Tax undertakes to contribute to the greatest extent possible to the success of Deutsche Telekom's operations, e.g., by providing detailed tax advice regarding new business models or innovative technological developments. In such matters, Group Tax is particularly focused on clarifying upfront any unresolved tax law-related issues as well as providing practical solutions to meeting all applicable tax requirements.

The tax strategy – Tax Compliance, Sustainable Tax Efficiency, Tax as Valued Business Partner – was also adopted by the Deutsche Telekom Board of Management.

For detailed information on the work of Group Tax, its principles, and its responsible approach to tax, please see the related document.

Deutsche Telekom participates in initiatives for the development and establishment of a comprehensive approach regarding the determination and publication by enterprises and groups of meaningful information relating to tax matters. The aim is to give a full and differentiated view of the various contributions to the financing of the public domain that are made in connection with or otherwise result from enterprises and entrepreneurial activities. In this respect, Deutsche Telekom determines the so-called „Total Tax Contribution" for the main European group companies in the telecommunications sector. This approach is explained in more detail in the attached document on Total Tax Contribution, which also contains the respective information relating to Deutsche Telekom. Deutsche Telekom intends to determine and publish such information also with respect to subsequent years.

TOTAL TAX CONTRIBUTION

With its participation in a survey carried out by PwC regarding the Total Tax Contribution, Deutsche Telekom supports an initiative of the European Business Tax Forum (EBTF) for the development and establishment of a comprehensive approach regarding the determination and publication of information relating to enterprises with respect to tax. In this context Deutsche Telekom has taken the main European group companies in the telecommunications sector into account. At the present time the information for the reporting year 2018 is available. Deutsche Telekom intends to determine and publish such information also relating to subsequent years.

Put simply, the Total Tax Contribution addresses the contributions as a whole to the financing of public domain that are made in connection with, or are a result of enterprises and entrepreneurial activities. In this respect not only are the taxes levied on the profit of the enterprise or group of companies taken into account, further taxes are also addressed, which can be quite substantial, in particular also in the telecommunications sector. Moreover, the so-called "Taxes Borne" as well as so-called "Taxes Collected" are included in the approach in order to comprehensively visualize the financial weight of the enterprise and its activity for the public domain. For example, it also illustrates theaspects of employment and value-added through the presentation of wage taxes, social contributions and value-added taxes. As a consequence, a differentiated and therefore meaningful picture results regarding the positive financial impact on the public community in connection with the enterprise and its activity. In addition this approach can also show national differences in the tax frameworks.

Further information regarding the EBTF as well as the PwC survey can be found at https://ebtforum.org/wp-content/uploads/2019/12/Total-Tax-Contribution-A-study-of-the-largest-companies-in-the-EU-and-EFTA-Full-report.pdf and https://www.pwc.com/gx/en/services/tax/publications/total-tax-contribution-framework.html. Under both links, explanations and details regarding the definition of the Total Tax Contribution are also given, for example with respect to the concepts of Taxes Collected and Taxes Borne and further breakdowns of the Total Tax Contribution, as well as a presentation of the findings of the survey carried out by PwC.

For 2018 in relation to Deutsche Telekom and for the included group companies (telecommunication sector, Europe, materiality) the Total Tax Contribution was 8.6 bn EUR, consisting of 2.1 bn EUR of Taxes Borne and 6.5 bn EUR of Taxes Collected. With respect to Germany the Total Tax Contribution was approx. 5.7 bn EUR, the Total Tax Contribution relating to all further material European telecommunication group companies included in the study (except for Germany) combined amounted to approx. 2.9 bn EUR. The following charts show the Total Tax Contribution of the group companies addressed.
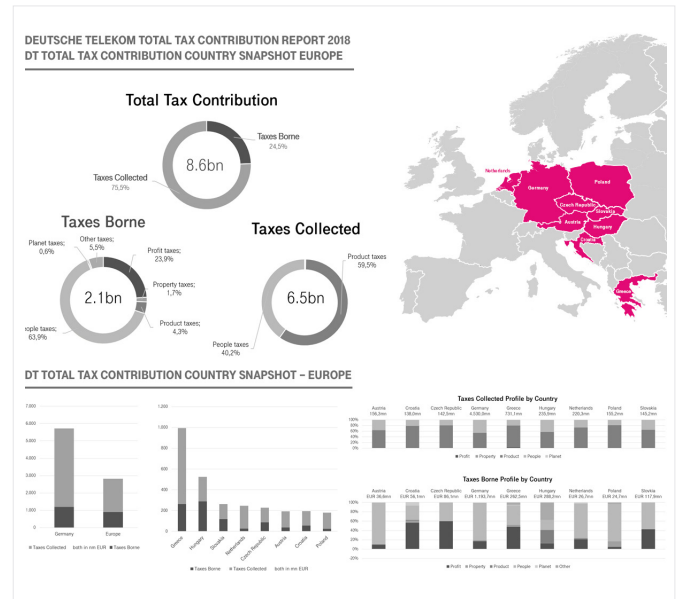
RESEARCH AND DEVELOPMENT

As a telecommunications business, we naturally support ongoing research. The escalating number of inquiries about our research efforts proves we are right to do so.

Deutsche Telekom promotes research in a number of ways. Since 2015, for instance, we have supported dementia research through the Sea Hero Quest project, in which a smartphone game records spatial navigation data to support scientists in the battle against dementia. We also collaborate with a large number of universities. In 2019, for example, we established a professorship for software engineering (with a focus on blockchain) at the CODE University of Applied Sciences in Berlin.

Furthermore, we invest in various fields of research such as the Internet of Things. We invested a total of 45.5 million euros in research and development throughout the Group in 2019.

In addition, we support innovative business ideas at "hubraum", our start-up incubator.

SUPPLIERS

OUR APPROACH FOR SUSTAINABLE PROCUREMENT

Encompassing the entire procurement process, our Group-wide sustainable procurement strategy is put into action using internal and external performance indicators and management tools.

- The responsibility for ensuring sustainability in procurement lies with the Board departments for Finance as well as Human Resources and Legal Affairs.

- Our sustainability criteria are factored into the overall procurement process and given a weighting of 10 percent when choosing suppliers who have responded to tenders.

- In the event of a significant violation of our requirements, we initiate an escalation process.

- We train our employees throughout the Group using an e-learning tool. In addition, our Global Procurement Policy provides an overview of which CR criteria must be considered at which point in the procurement process.

- We ensure business partners and suppliers are up to the mark by offering workshops on specific topics and through our Supplier Development Program.

The Supplier Code of Conduct forms part of our General Terms and Conditions for Purchasing, but does not, of course, replace the laws and regulations of countries in which our suppliers operate. Rather, it is designed to facilitate compliance with these laws and regulations and ensure that they are implemented faithfully and effectively. Since 2014, we have offered online compliance training for our suppliers.

We select our business partners in line with compliance criteria, and conduct risk-oriented compliance business assessments for this purpose. Besides customers and suppliers, this also concerns consultants (Consultant Policy), sales agents, development partners, and joint venture partners.

SUSTAINABLE PROCUREMENT ESG KPI

The Sustainable Procurement ESG KPI remained on a stable level against the prior-year figure. The share of the procurement volume that has been risk-assessed momentarily amounts to 81 percent. Over the next two years, we expect our Sustainable Procurement ESG KPI to remain stable at a high level. Our aim is to keep a coverage of at least 80 % until 2020.

In 2020, we will adopt a somewhat different approach to generating the KPIs for sustainable procurement so that we continue to meet current requirements.

SUSTAINABLE PROCUREMENT STRATEGY

Norms and standards

CSR and anti-corruption clause:
- Code of Conduct
- Code of Human Rights & Social Principles
  - ILO and OECD principles
  - Universal Declaration of Human Rights
  - UN Global Compact
  - UN Guiding Principles on Business and Human Rights ("Ruggie-Principles")

Fraud Policy

Statement of Extractives

List of forbidden substances

Implementation in the company

Sustainable Procurement Working Group (SPWG)

Global Procurement Policy

Buyer handbook

ESG KPIs
- Sustainable Procurement
- CR-Qualified Top 200 Suppliers
- CDP Supply Chain Coverage

in %

Target: at least 80%

2015	2016	2017	2018	2019 [a]
78	83	81	81	81

■ Procurement volume covered by supplier self-assessments and/or audits as a percentage of total sourcing volume

● Data audited by PwC. Based on procurement volumes at Group Procurement.

a) Excl. T-Mobile US

SUPPLIER COMPLIANCE

We have also drawn up a Code of Conduct for our suppliers to place them under an obligation to uphold the principles and values anchored in our Code of Conduct and in the "Code of Human Rights & Social Principles." We expect our suppliers to impose the same requirements on their subcontractors, too. Deutsche Telekom suppliers are also under the obligation to do everything necessary to prevent active and passive forms of corruption.

We measure the degree to which our procurement volume is covered by sustainable activities with the Sustainable Procurement ESG KPI. It measures the share of procurement volume we obtain from suppliers where one or several Group companies of the corporate group have been assessed for compliance with our social and environmental standards by way of self-assessments and/or audits. This also applies for audits carried out on subcontractors. In the coming years we expect our Sustainable Procurement ESG KPI to stay at a constant level.

Reporting against standards

The Sustainable Procurement ESG KPI together with information about our strategic approach fully covers the GRI 412-1 (Human Rights Assessment) and GRI 414-1 (Supplier Social Assessment) GRI indicators. By providing this information, we cover the V28-04 EFFAS indicators (Supply Chain). It is also relevant for criteria 1 (Opportunities and Risks), 3 (Sustainability Goals), 4 (Value Add ed Chain), 6 (Rules and Processes), 7 (Performance Indicators) and 17 (Human Rights) of the German Sustainability Code. It is also used for reporting in accordance with the Global Compact Principles 1 (Supporting and respecting human rights), 2 (No complicity in human rights abuses) and 5 (Effective Abolition of Child Labor).

CR-QUALIFIED TOP 200 SUPPLIERS ESG KPI

The ESG KPI „CR-Qualified Top 200 Suppliers" is an internal management indicator which complements the ESG KPI "Sustainable Procurement". While the ESG KPI "Sustainable Procurement" measures the share of procurement volume reviewed according to sustainability criteria, the KPI "CR-Qualified Top 200 Suppliers" reflects the share of suppliers from the Top 200 Suppliers pool. These are reviewed based on sustainability criteria according to Self-Assessments, Audits, Supplier Sustainability Workshops and Supplier Development Programs. The share of CR-qualified suppliers taken from the Top 200 pool amounts to 87 percent in 2019. Thus, our target to reach 75 percent by 2020 is already exceeded.

In 2020, we will adopt a somewhat different approach to generating the KPIs for sustainable procurement so that we continue to meet current requirements.

in %
Target for 2020: 75%

- 2016: 68
- 2017: 73
- 2018: 86
- 2019: 87

■ CR-Qualified TOP 200 Suppliers; *CR Qualified: Self-Assessments (Pre-Qualification,
* E-TASC), Audits, Supplier Sustainability Workshops, Supplier Development Program.
The ESG KPI „CR-Qualified Top 200 Suppliers" considers the share of suppliers that are CR-Qualified TOP 200 suppliers.
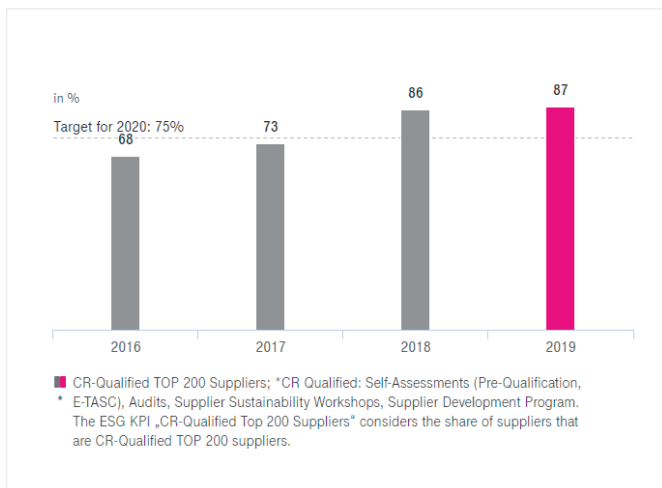
SCORES IN SUSTAINABILITY RANKINGS

Every year, leading rating agencies measure the sustainability performance of large enterprises. Deutsche Telekom scored 83 out of 100 points in the supply chain management category of the 2019 RobecoSAM Corporate Sustainability Assessment. This makes us one of the leading companies in the ICT sector.

SUPPLY CHAIN MANAGEMENT

Before doing business with us, every supplier must initially register in our supplier pool. Those who do are fully informed of Deutsche Telekom's fundamental principles and values regarding corporate responsibility and sustainability.

As a rule, we use a three-step approach to minimize risks and encourage our suppliers to improve their practices.

Leading up to the supplier evaluation, we rate our categories as critical or non-critical based on risk and opportunity (classification).

- Risk categories 2019: 6,208 suppliers (20.6 percent of the procurement volume)

- Non-risk categories 2019: 32,365 suppliers (79.4 percent of the procurement volume)

We classify products based on risk and opportunity analyses, taking into consideration a wide range of sustainability aspects and risks, including risks of forced/child labor or environmental pollution, as well as opportunities such as the potential to reduce energy consumption.

RISK MINIMIZATION AND SUPPLY CHAIN MANAGEMENT

Risk assessment program

Ongoing improvements

Step 1: Selection of suppliers
(all suppliers)
Acceptance of Supplier Code of Conduct, risk monitoring and analyses by an external audit firm.

Step 2: Risk management and control
(selected critical suppliers)
Sustainability assessments and reviews by EcoVadis, RepRisk, mobile surveys and social audits

Step 3: Supplier development
(selected suppliers)
Supplier Development Program with other ICT-businesses, supplier workshops and trainin

ESCALATION PROCESS

In the event of a significant violation of our requirements, we initiate an escalation process.

The escalation process comes into effect whenever a supplier refuses to meet our sustainability requirements in full and to our satisfaction. The procurement organization is primarily responsible for the process, with the GCR unit always on hand to offer advice and support. If the focused discussions held with the relevant supplier on various levels during the escalation process do not lead to the desired outcome, the last resort is to involve the Board of Management. The Board will then make the final decision about how to proceed with the supplier. In the worst case, this could lead to the business relationship with the supplier being terminated.

If someone in our supply chain identifies irregularities regarding compliance with laws, internal guidelines, and standards of conduct, they can report these anonymously using our Tell me! portal, which is publicly accessible to all our stakeholders.

ESCALATION PROCESS FOR VIOLATIONS AGAINST THE SUPPLIER CODE

	Number of reviews	Number of findings	Number of completed findings
Social audits ⓘ (via external audit firms)	84	567	165
Social audits (via internal auditors)	20	309	98
Mobile surveys*	20	-	-
EcoVadis ⓘ (2014–2019)	463	-	-
CDP ⓘ supply chain **	204	-	-
Total	791	-	-

*Mobile surveys with selected suppliers as a supplementary, innovative review method
**CDP's supply chain program is used for direct suppliers with high emission intensity.

RISK MONITORING

In 2018, we established a comprehensive risk monitoring scheme for supplier procurement, subjecting the existing supplier basis to an extended risk analysis. The first step is to classify suppliers (segmentation) based on criteria such as:

- Procurement volume
- Critical components
- Dependence on suppliers

Depending on the segmentation result, appropriate risk monitoring is subsequently carried out:

- Basic monitoring:Financial, CSR, and compliance scoring is performed (by an external audit firm) for all suppliers within the scope of an ongoing review process.

- Active risk monitoring:Suppliers exhibiting the greatest risk are subject to additional active monitoring with regard to other, global risks (e.g., natural disasters, political risks).

2019 SUPPLIER SUSTAINABILITY REVIEWS (EXCL. T-MOBILE USA)

In 2019, external auditing firms conducted 84 on-site social audits on our behalf – 26 at our direct and 58 at our indirect suppliers. We let the supplier know the approximate time of the audit in advance ("semi-announced audit"). This is necessary to make sure that relevant contacts in key functions are present for the audit. In 2019, we also commissioned qualified supplier experts to conduct another 20 internal audits. On top of that, we completed 20 mobile surveys, which give our suppliers' employees the opportunity to provide anonymous information about the social and ecological situation at their company. The surveys are primarily used to gain an initial impression of the local working conditions in order to then initiate further measures as needed, such as dedicated on-site reviews (social audits).

AUDITING PROCEDURES

Our auditing activities center primarily on strategically important and/or particularly risky supplier groups. As part of these efforts, we focus on roughly 250 of our 30,000 or so suppliers, which are routinely audited every two to three years. These 250 suppliers already cover around 80 percent of our procurement volume, giving us transparency about the risks in large parts of our supply chain.

The majority of these audits are conducted within the scope of the Joint Audit Cooperation (JAC). The audits cover the following areas:

- Labor standards
- Social standards
- Living standards
- Environmental requirements

The JAC Guidelines require, among other things, that our suppliers:

- Pay a fair wage that enables employees to enjoy a decent standard of living.

- Respect the right to freedom of association and collective bargaining, and provide a healthy, safe working environment.

- Do not exceed a 48-hour working week and a weekly maximum of twelve hours' overtime, and grant at least one free day after six consecutive days of working.

Compliance with all these requirements is regularly reviewed by means of on-site audits, during which the features and quality of the working, sleeping, and cafeteria areas are also inspected.

Deutsche Telekom does not require its suppliers to obtain external environmental or social certification. But if suppliers cannot show any environmental and social accountability certificates, we do expect comparable management systems to be used. Our auditing experience shows, however, that the majority of our relevant manufacturing suppliers have an external certificate or comparable management systems.

Verification of important social and ecological aspects as well as funda-mental human rights during our audits is in line with internationally rec-ognized guidelines and standards such as the ILO core labour stand-ards, the UN Guiding Principles on Business and Human Rights, and the OECD Guidelines for Multinational Enterprises.

2019 AUDIT RESULTS
In the audit program, which was established and is controlled at the Group level, a total of 84 audits were carried out in 2019.

As in previous years, we concentrated our auditing activities on suppli-ers in Asia, Latin America, Southern Europe, and Eastern Europe.

Audited suppliers included manufacturers in the areas of IT hardware, software and services as well as networks and devices.During the audits, we identified one case of bribery and consequently ended the business relationship with the supplier with immediate effect. Beyond this, no other cases of corruption, bribery, or critical violations of compli-ance policies or the right to intellectual property were found.
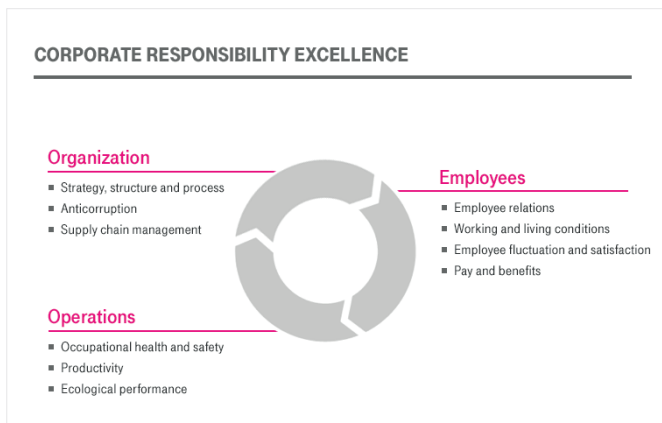

Legend: Area (Number of violations)
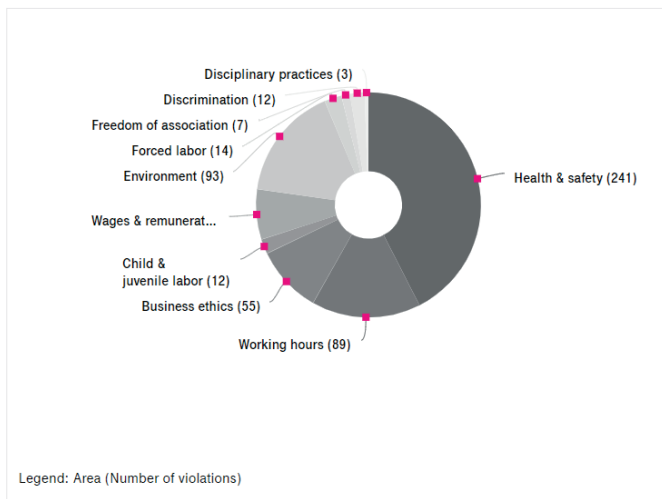
- Of the 84 suppliers we audited in 2019 (13 of which were in accord-ance with the validated audit processes of the Responsible Busi-ness Alliance), around 31 percent (26 audits) were direct suppliers and 69 percent (58 audits) were tier 2, 3, and 4 suppliers – that is, indirect suppliers.

- The audits carried out in 2019 revealed a total of 567 violations of Deutsche Telekom's supplier requirements. In the process, a total of 165 violations were corrected in 2019, including several open improvement measures from previous years. These violations included two unacceptable incidents and eight critical findings. Examples of unacceptable and critical violations, as well as intro-duced improvement measures, are published here. Critical findings were discovered at 45 suppliers regarding occupational health and safety, at 45 suppliers regarding working hours, at 34 regarding environmental protection, at 24 regarding labor practices, and at 23 regarding wages and performance-related remuneration. Some 15 critical findings were discovered regarding business ethics. As in previous years, most violations were linked to occupational health and safety (43 percent, compared to 47 percent in 2018), followed by environmental issues at 16.4 percent (12.5 percent in 2018). At 15.7 percent, working hours constituted the third biggest issue (2018: 16 percent).

Area	Findings at suppliers	Initiated improvements	Status (end of 2019)
Child Labor & Juvenile Workers	Based on onsite observations and worker interviews, two juvenile workers were found in a soldering station which repre-sents a hazardous task and a violation of national legislation.	Implementation of a new man-agement and monitoring sys-tem for juvenile workers including training of line man-gers to avoid placement of young workers in hazardous working stations.	Closed
Health & Safety	Factory did not provide valid fire inspection certificate for two production buildings and a dormitory building.	Fire inspection certificates available now for all buildings; fire drills are conducted on a regular basis.	Closed
	Some evacuation indicating signs in production buildings were not working correctly. In addition, fire exits and escape routes in the dormitory building were not marked properly.	All evacuation signs in produc-tion facilities are functioning correctly now. Fire exits and escape routes in the dormitory buildings have been marked properly. In addition, specific inspections of fire protection equipment at all production facilities and dormitories are conducted regularly.	Closed
	Thin-walled containers stored and used in an assembly work-shop and marked with the names of the chemicals con-tained but not with their main components, safety warnings etc..	All chemical containers were marked with appropriate safety labels. In addition, Material Safety Data Sheets (MSDS) for all chemicals were made available	Closed
Wages & Benefits	The factory paid workers below the legal minimum wage. Fur-ther, the factory did not pay adequate overtime compensa-tion as required by law.	Workers' salary has been raised and exceeding now the local legal salary level. Over-time is payed according to legal requirements now.	Closed
Working hours	Workers' working hours exceeded legal requirements and also SA8000 standards.	Introduction of an electronic time recording system to mon-itor regular working hours including overtime. Working hours are now under control and meet requirements of national legislation as well as SA8000 standards.	Closed
Environment	The factory has no written emergency procedures in place to address accidental leaks, spills or uncontrolled releases of polluting sub-stances.	Emergency procedures have been established and commu-nicated to address accidental leaks, spills or uncontrolled releases of polluting sub-stances. In addition, chemical spill drills are conducted on a regular basis.	Closed

SUPPLIER DEVELOPMENT PROGRAM

We collaborate as partners with our suppliers to make sure they are able to meet our high sustainability criteria.

In 2018, we placed our supplier program under the umbrella of the ICT industry's Global Enabling Sustainability Initiative (GeSI) as an industry approach. The program has since been carried forward there as the Sustainable Development Program (SDP). The diagram shows the areas in which we audit the suppliers participating in our program. Using the results, we work with them to develop a plan for remedying any issues. All activities and results are documented so that we can gage the effectiveness of the measures employed.

CORPORATE RESPONSIBILITY EXCELLENCE

Organization
- Strategy, structure and process
- Anticorruption
- Supply chain management

Employees
- Employee relations
- Working and living conditions
- Employee fluctuation and satisfaction
- Pay and benefits

Operations
- Occupational health and safety
- Productivity
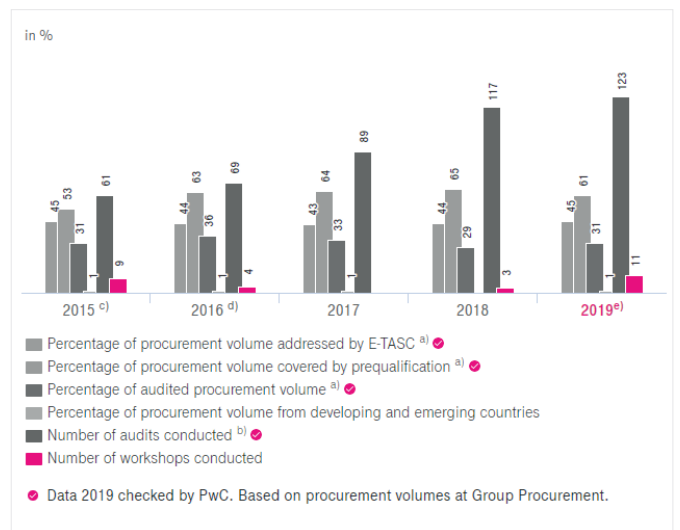- Ecological performance

CDP SUPPLY CHAIN PROGRAM

Since as early as 2016, we have been disclosing our activities to bring on board suppliers under the auspices of the supplier engagement rating of the CDP (formerly the Carbon Disclosure Project). This rating assesses how well companies have been able to integrate the topic of climate protection into their supply chain. In 2019, we once again improved on the previous year and achieved an "A", as we did in 2016. This has secured our place on the Supplier Engagement Leader Board. An important step in achieving this was calculating the supplier-specific emission intensities based on supplier responses to the CDP Supply Chain Program. This involves calculating the ratio between a supplier's overall emissions (Scope 1 and 2 and Scope 3 from the upstream supply chain) in grams and the supplier's overall sales.

The CDP Supply Chain Coverage ESG KPI was reported externally for the first time in 2017. It indicates the degree to which our procurement volume from carbon-intensive suppliers is covered by the CDP Supply Chain Program. In 2019, 63 percent of the procurement volume was covered by CDP's supply chain program. As the responses from individual major suppliers have a disproportionate impact on this KPI, we make sure to discuss this with the relevant suppliers. Our goal is to cover 70 percent of our carbon-intensive suppliers by 2020.

in %

Target for 2020: 70%

2015	2016	2017	2018	2019
60	65	66	71	63

■ Procurement volume covered by the CDP Supply Chain Program through carbon intensive suppliers

SUPPLIER RELATIONSHIPS

The percentage of audited procurement volume increased from 29% in the previous year to 31% in 2019. At the same time, the percentage of procurement volume covered by EcoVadis increased slightly to 45 percent. A supplier prequalification process via the Supplier Management Portal (SMP) took place for 61% of the procurement volume in 2019. Prequalification is mandatory for all suppliers for which we anticipate an order volume of more than 100,000 euros.

in %

	2015 c)	2016 d)	2017	2018	2019 e)
Percentage of procurement volume addressed by E-TASC a)	45	44	43	44	45
Percentage of procurement volume covered by prequalification a)	53	63	64	65	61
Percentage of audited procurement volume a)	31	36	33	29	31
Percentage of procurement volume from developing and emerging countries					
Number of audits conducted b)	61	69	89	117	123
Number of workshops conducted	9	4	7	3	11

■ Percentage of procurement volume addressed by E-TASC a) ✔
■ Percentage of procurement volume covered by prequalification a) ✔
■ Percentage of audited procurement volume a) ✔
■ Percentage of procurement volume from developing and emerging countries
■ Number of audits conducted b) ✔
■ Number of workshops conducted

✔ Data 2019 checked by PwC. Based on procurement volumes at Group Procurement.

Reporting against standards

The Sustainable Procurement ESG KPI together with information about our strategic approach fully covers the GRI 414-1 (Supplier Social Assessment) GRI indicators. We also comply with criterion 17 (Human Rights) of the German Sustainability Code. The KPI is also relevant for the EFFAS indicator (V28-04) and for criteria 1 (Opportunities and Risks), 3 (Sustainability Goals), 4 (Value Added Chain) and 6 (Rules and Processes) of the German Sustainability Code. It is also used for reporting in accordance with the Global Compact Principles 1 (Supporting and respecting human rights), 2 (No complicity in human rights abuses) and 5 (Effective Abolition of Child Labor).

RESPONSIBLE PROCUREMENT OF RAW MATERIALS

We require our suppliers to protect the environment and use resources responsibly. This is anchored in our "Code of Human Rights & Social Principles" and in our Supplier Code of Conduct.

As a form of verification, we request our suppliers to disclose information about their activities and we perform supplier audits (social audits). In these audits, we check whether our suppliers use an environmental management system, including a waste management system, and review how they manage their energy and water consumption. In addition, we explicitly check whether there is a management system in place to address the issue of conflict resources.

SUSTAINABLE AND INNOVATIVE PRODUCTS

OUR APPROACH FOR SUSTAINABLE PRODUCTS AND SERVICES

As a telecommunications company, our core business consists of expanding and operating our network. We are using this network to lay the foundations for digital participation and to enable our customers to reduce CO_2 emissions with innovative, network-based solutions. To make our core product sustainable, we have set ourselves an ambitious climate target to transform the entire Deutsche Telekom network into a "green network" by 2021. By purchasing electricity from renewable energies our customers will be able to surf the web on a climate-neutral basis.

Sustainability plays an important role in our other products, too, requiring systematic measures to be implemented across the entire value chain. This is why we begin with procurement: We can thereby ensure that sustainability criteria are met throughout supply chain.

We have our products certified by recognized ecolabels such as the Blue Angel and the TÜV Certified Green Product label. The strict requirements of these labels help us see how we can further improve our products. They also help us inform our customers of the benefits of choosing sustainable products. In 2019, we also launched our "we care" label for Deutsche Telekom products, services, and initiatives.

Even our product packaging is becoming more sustainable. Wherever possible, we use special packaging machines to reduce packaging size. To protect products in the packaging, we will be utilizing more insulating elements made from non-plastic materials.

At the end of a product's life cycle, we contribute to its reuse or recycling. For example, we regularly carry out used cell phone collection campaigns. Depending on their condition, the mobile devices collected in Germany are properly disposed of and recycled or refurbished and resold. We launched our sustainable cell phone recycling scheme in 2019. We want to actively encourage customers to sell certain cell phones back to us, which we will then refurbish and resell among our client base with a warranty.

In Germany and several national companies, we offer various subsidized rates to enable customers on a low income and people living with a disability to make calls at reasonable prices.

We measure our progress by means of various KPIs:

- We use the Sustainable Revenue Share ESG KPI to determine the proportion of sales generated with products and services that are classified as sustainable based on a risk-benefit analysis.

- We measure the impact of our collection campaigns with our Used Mobile Device Collection ESG KPI.

- We use the Enablement Factor ESG KPI to calculate the positive CO_2 effects generated by customers who are using our products.

CONTINUED ANALYSIS OF OUR PRODUCTS' SUSTAINABILITY BENEFITS

In 2014, we began analyzing our product portfolio together with external experts based on sustainability criteria. Recently, in 2018, we revised the filter logic of our approach so we can better map current developments. As part of our analysis, we are now placing greater emphasis on aspects such as information security and the circular economy.

Overall, we have carried out in-depth analyses for 27 product groups with regard to their sustainability benefits and the corresponding business potential (as of year-end 2019).

We measure the result with the Sustainable Revenue Share ESG KPI. The share of such products was already 43 percent in 2019 (excluding T-Mobile USA).

Our ambition: increase KPI

With a view to improving transparency in the reporting year, we analyzed the sustainability benefits of our revenue categories and assigned these to the Sustainable Development Goals. This assignment was based on an expert assessment and is intended to provide an idea of the type of potential sustainability benefits our products deliver. Where revenues were limited, only the main SDG impact was taken into account.

Share of revenue with products and services that offer sustainability in %
(DTAG excl. US, 2019)

- Sustainable Products (17,042 Mio. €) — 43%
- Standard products (23,069 Mio. €) — 57%

2016: 39 2017: 40 2018: 42 2019: 43

Extract: Revenue with sustainability benefits per products *
(in mio. €)

Broadband fixed/wholesale	10,193
Classic Hosting services	3,650
Mobile Broadband (only data)	3,050

* 22 products and solutions have been evaluated in total
● Data checked by PwC.

Estimated influence divion of our products' sustainability benefits on the Sustainable Development Goals

SUSTAINABLE DEVELOPMENT GOALS

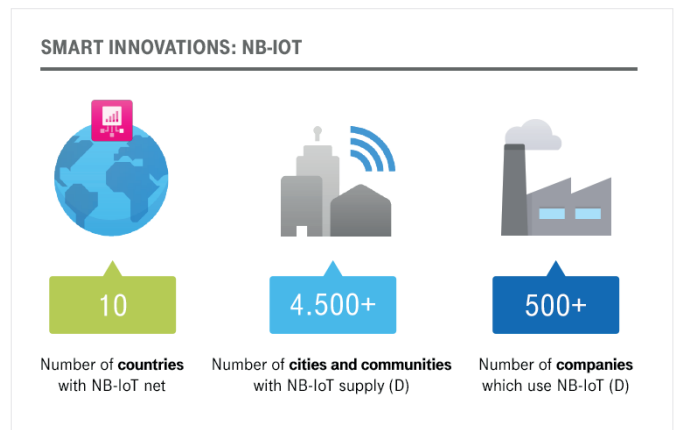To date, there is no industry-wide established system that provides sustainability information about ICT products and services. We have started to create just such a system using our product analyses – that is, to find out which sustainability contributions our products can make in the first place. We are eager to step up our efforts in informing our customers about such sustainability benefits and thus also sharpen our competitive edge.

In 2019, we therefore launched the "we care" label for Deutsche Telekom products, services, and initiatives. Deutsche Telekom employees can put forward suggestions for the label, which are then reviewed by an expert committee. A product, service, or initiative can receive the label for its contribution either to environmental protection or digital participation. A brief description beneath the "we care" symbol refers to the specific sustainability benefits. We use the symbol to offer our customers greater transparency and to help them make a purchasing decision.
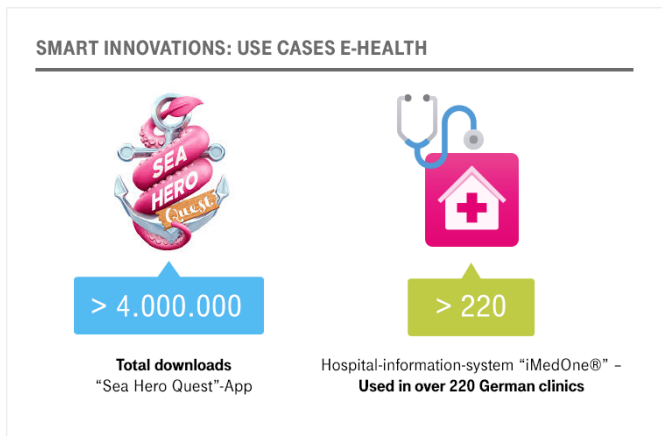
SMART INNOVATION

In this section, we will introduce some "Smart Innovation" solutions. The associated business models are based on the most advanced technology and provide an immediate value-add for our customers. At the same time, these solutions are also making an ecological and/or social contribution to society. We are, for example, utilizing future-oriented and widely available technologies to make cities viable for the future and to develop solutions for social challenges. For this, we are relying on innovative NarrowBand IoT (NB-IoT) technology, with which we are paving the way for the Internet of Things. NB-IoT devices have a large operating range and long battery service lives. Consequently, this technology provides the basis for many innovative uses that are both cost- and energy efficient. Particularly useful areas of application for NB-IoT are, for instance, smart parking, smart cities, smart meters, as well as transport and logistics solutions.

End of 2019, NB-IoT was available in more than 4 500 cities and municipalities in Germany. Deutsche Telekom has rolled out NB-IoT in 10 countries. In most of them the countrywide rollout is completed: Germany, Greece, Croatia, Netherlands, Austria, Slovakia and the USA. In Poland, the Czech Republic and Hungary the rollout will be completed shortly.

SMART INNOVATIONS: NB-IOT

10	4.500+	500+
Number of **countries** with NB-IoT net	Number of **cities and communities** with NB-IoT supply (D)	Number of **companies** which use NB-IoT (D)

In the area of e-health, we are highlighting, for the reporting year, two innovative applications that provide added social value, in particular, for our customers and for society: the game Sea Hero Quest gives scientists important insights into the spatial navigation ability of individuals of all ages, within minutes – and thus 150 times faster than with conventional research methods. Gamers thus make a direct contribution to dementia research while having fun. The other e-health solution, iMedOne®, is a hospital information system. It creates optimal conditions for connected work and supports hospital processes in multiple ways. This means that physicians and nursing staff, for instance, are able to access required data and functions at all times and everywhere. This makes a significant contribution to cost-efficiency and quality improvement. An efficient and fully integrated hospital information system that can be used on mobile devices thus improves the quality of care.

SMART INNOVATIONS: USE CASES E-HEALTH

> 4.000.000

Total downloads
"Sea Hero Quest"-App

> 220

Hospital-information-system "iMedOne®" –
Used in over 220 German clinics

The goals of preventing traffic jams and reducing CO_2 emissions pose major challenges to cities and communities. Digital applications can help cut pollution and save drivers time by improving the flow of traffic. One example of this is the Park and Joy app, which we launched in 2017. The app pinpoints and navigates drivers to free parking spaces. It also enables users to pay for their parking directly and extend the parking time as required on the move.

In 2019, the app already covered more than 170 000 parking spaces in 100 different towns and cities. An extension ticket free access with the Park and Joy app for around 200 multi-storey car parks is planned for early 2020.

With the developed method, both individual savings potentials for a single user of the application and predicted emission savings for cities and municipalities can be calculated.

SMART INNOVATIONS: PARK AND JOY

100+

Number of **cities**
with Park and Joy use

170.000+

Number of **parking spaces**
with sensors

240g

Savings potential per
Parking space search
in CO_2

ACCESSIBLE PRODUCTS AND SERVICES
Deutsche Telekom wants to make it easier for people with disabilities to have access to the knowledge and information society.

Services for the hearing impaired
Back in 2003, we set up a hotline (Deaf Hotline) for deaf and hearing-impaired customers. Every day, up to 50 people contact the hotline. Customers and consultants can see each other using a video-based live chat application and can communicate with each other in sign language.

For deaf customers and members of the German association for the deaf, Deutscher Gehörlosen-Bund e.V., we operate a special online distribution site. There we offer a discounted mobile communications and fixed-line portfolio that is tailored to the exact needs of deaf people. Customers can order their desired plans directly on the website, can contact the employees of the Deaf Hotline or be forwarded to the information exchange platform Deaf-Café in the Telekom Hilft community.

Since the summer of 2018, hearing-impaired people in Germany have had access to a 24-hour emergency call service with sign language interpreters through the Tess/Telesign interpreter relay service for emergency situations. Tess/Telesign is jointly financed by the mandatory social security contribution paid by Deutsche Telekom to Germany's Federal Network Agency.

Supporting users with simplified language
According to studies, 12 percent of people in Germany are not able to grasp complicated texts. In our endeavor to make it easier for them to access our products, we are working with Lebenshilfe – an organization that helps people with disabilities live with greater independence – to gradually switch our product information to simpler language. The focus topics of our CR report and our #TAKEPART stories are offered in simple language, too.

The national companies also make a dedicated effort to make their services accessible to customers. Further information is available in the respective country profiles.

NETWORK EXPANSION

OUR APPROACH FOR INFRASTRUCTURAL EXPANSION

As the biggest investor in Germany's network, our network expansion efforts are geared toward three key aspects – growth, efficiency, and quality. We will continue to expand our networks, increase the efficiency of our systems, and further strengthen our role as a leader in network quality.
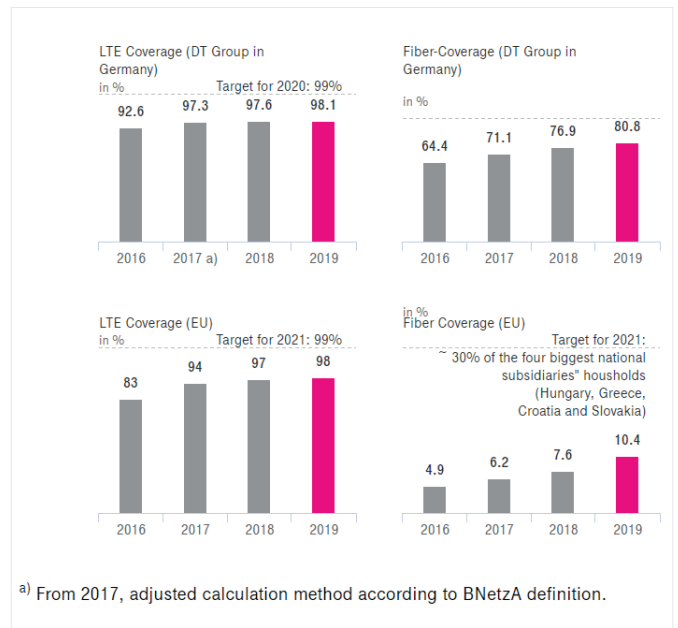
Germany's mobile network is being expanded under the terms and conditions resulting from the 2019 spectrum auction held by the German Federal Network Agency. Our initial target is to ensure nearly all households in the country (99 percent) have LTE coverage by the end of 2020. We will also continuously improve the coverage of traffic routes with bandwidths of 100 Mbit/s or 50 Mbit/s. At the same time, we are kickstarting a new generation of mobile communications across the whole of Germany. By the end of 2025, we will provide 5G coverage to 99 percent of the population.

In the fixed network, we have almost completed our FTTC (fiber to the curb) build-out and are now bringing fiber-optic connections into customers' homes through our FTTH (fiber to the home) expansion. Our initial focus is on expanding into business parks and rural areas (with state funding) and establishing collaborations.

Over the coming years, we will successively extend our FTTH expansion to reach up to an additional 2 million households each year.

PROGRESS IN NETWORK EXPANSION

Part of our network strategy is to also systematically build out our mobile networks with 4G/LTE technology to increase transmission rates in all national companies. Thanks to investments in our 4G/LTE network, our customers enjoy better network coverage with fast mobile broadband. In 2019, for example, we were already providing approximately 98.1 percent of the population in Germany with LTE coverage and 98 percent in Europe. This puts us right on schedule to reach our goal of 99 percent network coverage by 2020. Furthermore, around 31 million households in Germany can already order a rate with up to 100 Mbit/s on our fixed network. This figure keeps growing daily, as can be followed in our online expansion tracker.

LTE Coverage (DT Group in Germany) in %			
92.6	97.3	97.6	98.1
2016	2017 a)	2018	2019

Target for 2020: 99%

Fiber-Coverage (DT Group in Germany) in %			
64.4	71.1	76.9	80.8
2016	2017	2018	2019

LTE Coverage (EU) in %			
83	94	97	98
2016	2017	2018	2019

Target for 2021: 99%

Fiber Coverage (EU) in %			
4.9	6.2	7.6	10.4
2016	2017	2018	2019

Target for 2021: ~ 30% of the four biggest national subsidiaries' housholds (Hungary, Greece, Croatia and Slovakia)

a) From 2017, adjusted calculation method according to BNetzA definition.

UPDATING AND STABILIZING THE NETWORK ARCHITECTURE

We are making our networks faster and more efficient. To do this, we are deactivating all analog public switched telephone network (PSTN) platforms that we no longer need and switching our entire telephone network to IP-based lines. By the end of 2019, around 99 percent of lines had already been switched to IP technology.

Irrespective of the expansion and renewal of our infrastructure, we aim to operate our networks in the most stable and failure-free manner possible. Major events such as festivals and summits place the network under particular strain. We make sure, however, that voice calls and data are still transmitted in the quality our customers have come to expect by temporarily setting up extra mobile masts or laying fiber-optic cables. In the event of natural disasters such as floods, our Disaster Recovery Management team ensures those affected can quickly start communicating again.

5G EXPANSION

In October 2018, Deutsche Telekom presented an eight-point program for developing a 5G network infrastructure. The aim in Germany is to cover 99 percent of the population and 90 percent of the country with 5G by 2025.

Status:

- By the end of 2019, Deutsche Telekom's 5G network was already operational in eight German cities – Berlin, Bonn, Darmstadt, Frankfurt, Hamburg, Cologne, Leipzig, and Munich. By the start of 2020, Deutsche Telekom had already built 450 5G antennae, with this figure set to reach four digits as the year progresses. We aim to operate over 1,500 5G antennae, including in all 16 German state capitals, by the end of 2020.

- When it comes to the transition from LTE to 5G, the further expansion of LTE/LTE Advanced contributes to the future 5G infrastructure, because LTE is the basis for 5G and will remain an integral part of it. There will be no standalone version of 5G at the start. Instead, in line with the standardization and development plans, parts of the implementation of 5G will initially be mapped in LTE. Implementing 5G is an evolution: thanks to a fiber-optic connection, the SRAN (Single Radio Access Network) modernization which is currently underway, and new services such as LTE 900 or 4x4 MIMO, the 30,000 or so mobile sites in Germany will soon be ready, if they are not already, for the new standard and will be able to map initial 5G applications.

CONTINUING EXPANSION OF THE FIBER-OPTIC NETWORK

Deutsche Telekom operates the largest fiber-optic network in Europe, covering a length of well over 500,000 kilometers in Germany alone. We are further expanding our fiber-optic network to keep pace with demand for higher bandwidths in the network. We use our expansion tracker for Germany to report on our progress.

To reach this goal, we are using FTTC (fiber to the curb) technology with super vectoring and are expanding FTTH (fiber to the home) as well.

	DSL 🔲 16000	**FTTC with super vectoring**	**FTTH**
Download	up to 16 Mbit/s	up to 250 Mbit/s	up to 1,000 Mbit/s
Upload	up to 2.4 Mbit/s	up to 40 Mbit/s	up to 500 Mbit/s

NUMBER OF FIXED NETWORK CUSTOMERS

Number of fixed network customers
(in mio.)

17.8	9.1
DT Group in Germany	Europe [a]

a) excl. DT Group in Germany
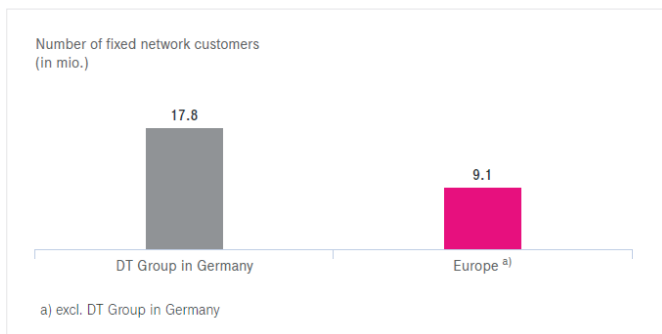
CUSTOMER SATISFACTION

OUR APPROACH FOR TOP SERVICE QUALITY

We strive to offer impeccable service that turns our customers into loyal fans. That's why we have set out to offer a service that rolls digitalization and compassion into one. Our staff members are free to decide for themselves, based on the relevant circumstances, how to best help our customers and ensure they enjoy a positive experience. Our solution consists of devoting more time to customers, answering their queries on the spot and with a smile, and being there when they need us. In this way, we transform contact with customers into genuine client relations.

Overall, this approach has enabled us to cut customer complaints by more than half since 2017. We have successfully reduced the proportion of missed technician appointments to 1.5 percent and the average wait time on the hotline to under two minutes. Just as importantly, however, we have been able to resolve many customer requests on first contact and have thus improved our first resolution rate. These achievements have also been independently verified by numerous successes in tests that show we are on the right track.

MEASURING CUSTOMER RETENTION AND ENDORSEMENT

We use the TRI*M index to gauge customer retention and regularly participate in benchmarking. The recorded data is based on a customer survey conducted in all markets and segments, except the United States (T-Mobile USA). The TRI*M value for the Deutsche Telekom Group is calculated by aggregating country and segment values. The index itself is determined based on four individual issues (competitive edge, performance, continued use, and recommendation).

The Group-wide TRI*M index was 67.3 points in the 2019 reporting year, which constitutes a modest decrease compared to the benchmark value of 68.5 and means the Group did not achieve the slight increase it had hoped for. This decrease can be attributed primarily to the transformation of the Systems Solutions operating segment of T-Systems, during which it proved impossible to maintain the above-average level of customer satisfaction previously achieved. In addition to the largely stable values in the other areas, this caused the Group value to decline. Our goal for the coming years is to again improve customer satisfaction in all areas.

The TRI*M index for Germany remained at the previous year's level at 61 points. That means we didn't attain our goal of a slight increase. Our target for 2020 is to achieve an improvement for the Group as a whole and to increase the TRI*M index by 0.5 points for the Germany segment.

Customer satisfaction and loyalty scores are factored into both the long-term variable remuneration scheme for our board members and, to an extent, the performance assessments of our managers, meaning some of their variable salary components are linked to these ratings.

This key performance indicator is also used as a parameter in the long-term incentive plan for our managers (excluding Board of Management members).

CONSUMER PROTECTION

OUR APPROACH FOR CONSUMER PROTECTION

Consumer protection is a multi-faceted topic at Deutsche Telekom. A core element is keeping our customers' data safe and secure. Data protection and data security are therefore top priorities for us.

The youngest members of society, in particular, need to be shielded from dangers online. That's why protecting children and young people also plays a big part in what we do. Youth protection aspects are also taken into consideration in our product and service design. In Germany we involve our youth protection officers in all issues regarding planning and designing offers for young people. The youth protection officers can then recommend restrictions or changes. We have appointed a Child Safety Officer (CSO) at each of our national companies within the EU who is responsible for issues pertaining to the protection of minors. The CSO acts as a central contact for stakeholders from the community in the individual markets and plays a key internal role in coordinating issues related to youth protection. These measures increase the consistency and transparency of Deutsche Telekom's involvement in protecting minors.

Above and beyond this, we strive to ensure our network does not affect people's health. We actively respond to the latest scientific research on mobile communications and health, and provide our customers with transparent updates in this regard.

OUR APPROACH TO DIGITAL YOUTH PROTECTION

Our strategy to protect children and young people from harm when using digital media is based on three pillars.

- We provide attractive, age-appropriate offers for children and give parents and guardians tools (filters) that they can use to restrict the access minors have to harmful content.

- We participate in combating child abuse and its depiction to the extent that this is permitted within the national legal framework.

- We promote skills to help people use the internet safely.

We also collaborate closely with prosecuting authorities and NGOs as well as other partners from business, politics, and society to ban online content that is harmful to children and young people. We have documented our commitment to protecting minors from unsuitable media content in Germany in relevant codes and introduced minimum standards. In 2007, we committed ourselves to fighting child pornography on the internet throughout the European Union. At a global level, we have been a member of the global association of mobile providers, GSMA, since 2008, which pursues the same objectives.

In order to better coordinate our activities within the Group, we also approved a list of general guidelines in 2013 for our activities to help protect minors from unsuitable media content and made these guidelines mandatory at international level, thereby setting new standards in our markets. In consideration of their particular cultural situation and business model, each international subsidiary in the European Union can further specify these measures, adopt additional measures, and also determine their own strategic focal points.

Cooperating with organizations for the protection of minors

Because protecting minors from unsuitable media content poses a challenge that affects many industries, we cooperate with different organizations for the protection of minors and participate in coalitions that coordinate the involvement of companies and organizations from the internet and media sector.

- For example, we are a member of the "Alliance to better protect minors online", which has set out to make the internet a safer place for kids.

- We have also taken a leading role in the "ICT Coalition for Children Online." In this coalition, we pursue a comprehensive cross-industry approach based on six principles that expressly includes helping young people learn media skills.

In 2013, as part of both coalitions, we announced plans to implement an EU-wide set of measures based on the principles of the ICT Coalition. We provide regular and transparent updates regarding implementation of the set of measures adopted in 2013; our most recent report was in 2019. The ICT Coalition published an annual report in 2014 on the implementation of corresponding measures at all of the companies represented in the ICT coalition. The report, which was written by an independent expert from the Dublin Institute of Technology, comes to the conclusion that Deutsche Telekom's approach to implementing the ICT Coalition's principles is exemplary.

OUR APPROACH FOR SECURE MOBILE COMMUNICATION

We want to make our mobile communications infrastructure and our products, as well as the processes on which they are based, as resource-efficient, secure, and safe for health as possible. In Germany these activities are based in particular on voluntary commitments by mobile communications providers and an agreement with local authorities' associations. Compliance with these voluntary commitments is reviewed every two years by external experts. In 2018 we once again submitted a current annual mobile communications expert report, coordinated by Deutsches Institut für Urbanistik (German Institute for Urban Studies), to the German Federal Government. According to the report, mobile communications expansion is progressing for the most part free

of conflict. 95 percent of the municipalities surveyed said that they had had little or no controversial decision-making cases. The report was published by the German Federal Environment Ministry.

Our Group-wide EMF Policy, which we adopted in 2004, plays a pivotal role. The policy specifies standardized minimum requirements in the area of mobile communications and health, requirements that by far exceed those set forth by national laws. Our policy provides our national companies with a mandatory framework that makes sure that the topic of mobile communications and health is addressed in a consistent, responsible way throughout the Group. All of our national companies have officially accepted the EMF Policy and implemented most of the required measures.

Our EMF Policy stipulates the following principles and measures:

EMF Policy

TRANSPARENCY | INFORMATION | PARTICIPATION | PROMOTING SCIENCE & PARTNERSHIPS
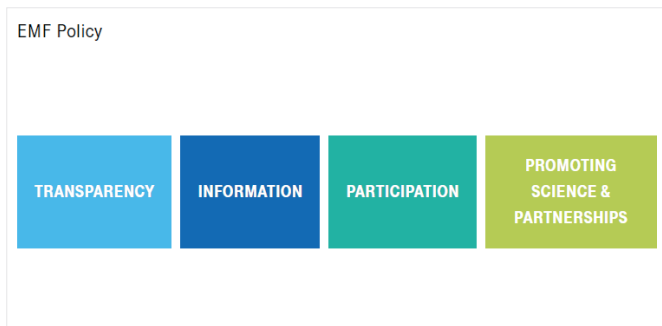
Transparency

We place importance on openly discussing issues involved in mobile communications. We make all relevant information regarding our mobile communications equipment in Germany accessible to the public, e.g., on the EMF database operated by the German Federal Network Agency.

Information

We provide consumer information that is easy to understand and pursue a fact-based, sound information policy. On our Group website we provide the latest information to those interested. We also provide our customers with information on the SAR levels of their devices. In addition, customers can get information on SAR levels at many of our shops, via our free environmental hotline, or via email.

Participation

We rely on close collaboration and constructive dialog with all those involved, including communities, when it comes to network expansion. Our goal is to find amicable solutions and negotiate acceptable compromises, which can only be achieved by responding fairly to critical arguments and being ready to learn from mistakes.

Promoting science & partnerships

Our guidelines call for promoting targeted research, scientific excellence, transparency, objectivity, and intelligibility.

We conduct ongoing reviews of compliance with our EMF Policy. The findings are used to improve individual aspects and develop solutions in different working groups such as our EMF Core Team and the EMF Technical Working Group.

MOBILE COMMUNICATIONS AND HEALTH (EMF)

Electromagnetic fields (EMFs) are a prevalent element in our connected world, even if we are not able to perceive them directly. Their effects on our health remain a topic of discussion. It is very important to make sure that the EMFs employed do not present a problem for people or the environment when we use them in mobile communications.

The effects of electromagnetic fields have been thoroughly researched over past decades in numerous scientific studies. The World Health Organization (WHO) analyzes the findings of scientific research and most recently made a statement regarding the results in October 2014. In its statement, the World Health Organization concludes that the current threshold values for electromagnetic fields ensure that mobile communications technology can be used safely but that further research is required.

Deutsche Telekom has made a commitment to actively address scientific research on mobile communications and health. We provide detailed information on the Group website on the latest technology and scientific risk assessments published by expert committees. In 2019, for instance, we extended our „Fakten zu Mobilfunk und Gesundheit" ("Facts about mobile communications and health") brochure to include a 5G factsheet and a new flyer containing answers to the 14 most important questions regarding mobile communications and health.

Together with Telefónica Deutschland, we also support the information platform www.informationszentrum-mobilfunk.de. This platform provides expert and evidence-based information on mobile communications topics subject to controversial public debate: about health, research, technology, benefits, and applications. In 2019, Informationszentrum published, among other things, a new brochure on 5G and interviews with scientific experts on these topics.

DATA PROTECTION AND DATA SECURITY

OUR APPROACH TO DATA PROTECTION

The highest standards of data privacy and data security are core characteristics of our brand identity. Back in 2008, we therefore set up a dedicated Board department for Data Privacy, Legal Affairs, and Compliance and established the Group Privacy unit. The responsible Board member is supported by the independent Data Privacy Advisory Board, which comprises renowned experts from politics, science, business, and independent organizations. The Board was founded in February 2009.

In its meeting on May 22, 2019, the Supervisory Board of Deutsche Telekom resolved to restructure the Group Board of Management. As of March 31, 2020, the current Board of Management member responsible for Data Privacy, Legal Affairs, and Compliance is leaving the Company for reasons of age. At the start of 2020, the Board department for Data Privacy, Legal Affairs, and Compliance and the Board department for Human Resources are being merged under the responsibility of the Chief Human Resources Officer. Our Data Privacy Advisory Board is taking on a bigger role, with more members from the Group Board of Management and the Supervisory Board joining.

The Telekom Security business unit commenced operations in 2017. The new unit combines the security activities from various Group areas, thereby reinforcing our portfolio of cybersecurity solutions.

Underlying regulations

Data protection and data security at Deutsche Telekom are subject to the following regulations:

- The Binding Corporate Rules on Privacy govern the handling of personal data. The related Binding Interpretations document contains specific recommendations and best practice examples for implementing the EU General Data Protection Regulation, which was enacted in 2018.

- The Group Policy on General Security includes significant security-related principles followed within the Group.

Both guidelines set forth binding standards that are in line with international standard ISO 27001. These policies allow us to guarantee an adequately high and consistent level of security and data privacy throughout the Group.

Ensuring effective data privacy

- **Consistent transparency vis-à-vis the public**
  We provide comprehensive information about our data protection activities such as the implementation of GDPR – at first in regular

data protection reports and since 2016 online at www.telekom.com/data-protection. We have also published an annual transparency report since 2014. Moreover, in the Consumer protection section of this CR report we explain how we make our products and services safe for users.

- **Regular employee training courses**
  Telecommunications companies are obliged to provide new employees with information on data privacy regulations. We go above and beyond these legal requirements. Every two years, we train all Group employees and place them under an obligation to uphold data privacy and telecommunications secrecy. We have also introduced specific training in the customer and human resources departments, where the risk of data misuse is higher. This training includes online courses for independent learning, presentations on data privacy and face-to-face courses on specific topics such as data protection at call centers. This helps us make sure that all employees have an in-depth understanding of the relevant data privacy policies.

- **Annual review and adaptation of measures**
  Every two years, we conduct an annual Group data privacy audit to measure and improve the general data privacy standards throughout the Group. 15 percent of the Group employees, who are randomly selected, are asked to participate in an online survey. The Group data privacy audit is supplemented by self-assessments by the data privacy officers at the national companies to determine to what extent these companies are implementing the requirements defined in our Binding Corporate Rules on Privacy. The Group Privacy unit assesses these surveys, checks whether action needs to be taken in the respective units, and calls for improvement measures where necessary. To this end, the Global Data Privacy Officer holds personal meetings with the responsible directors, managers, and data privacy officers at the different departments. The unit also helps implement the measures by providing information and advice, and checks they are effective. Unusual audit results are taken into consideration when planning the follow-up audit.

- **Certifications**
  We have our processes, management systems, products, and services certified by external, independent organizations such as TÜV, DEKRA, and auditing firms. This reporting year, TÜV Nord once again confirmed that the IT systems used by Telekom Deutschland are safe and secure. In addition, in 2014, we were the first DAX company to have our data privacy organization reviewed and certified according to the IDW PS 980 standard.

Our approach to big data

Growing volumes of data call for particular precautionary measures to protect citizens' privacy, which is why, back in 2013, we approved eight mandatory principles for handling big data. In 2015, we also approved specific measures to protect data and infrastructure in our "Ten-point program for increased cybersecurity." On top of that, we developed special protective products, including our Mobile Encryption app designed to ensure end-to-end encryption of mobile communication.

Reviewing our products

Data privacy and security play an important role that starts during the development of our products and services. Our Privacy and Security Assessment (PSA) procedure allows us to review the security of our systems in each step of the development process. This procedure applies to newly developed systems as well as existing systems that undergo changes in technology or in the way data is processed. We use a standardized procedure to document the data privacy and data security status of our products throughout their entire life cycle.

TRANSPARENCY REPORT

Telecommunications companies are legally obliged to assist security agencies. This includes, for example, surveillance measures to record telecommunications connections and information about account holders.

Every year since 2014, Deutsche Telekom has published a transparency report for Germany, which covers the types and amount of information we disclose to security agencies.

In 2016, the transparency report was expanded to include all the national companies. The matching international report was last published in February 2019.

International legal framework conditions differ considerably. In some countries it is illegal to disclose security measures, while in others surveillance is directly conducted by the authorities without the involvement of telecommunications companies.

You can find out more about the different situations in the relevant countries on our website.

We consider it the responsibility of the authorities to ensure transparency regarding security measures and called for improved online security in the context of a ten-point program in January 2015. Until state authorities meet our demands, we will strive to provide the necessary transparency ourselves to the extent legally possible.

CYBERSECURITY

We offer security products and services across Europe.

Our Telekom Security unit focuses on internal security issues and develops security solutions for consumers as well as business customers. This approach enables us to provide our customers with the right security solutions along the entire value chain – from product development and applications through to secure, high-performance networks and high-security data centers.

Technological developments can also harbor risks, which is why we develop targeted measures for combating potential new security risks – such as those associated with drones, for example. We developed the Magenta Drone Shield together with our partner Dedrone.

To enhance collaboration in the area of digital defense, we regularly host the Cyber Security Summit together with the Munich Security Conference.

In addition, we collaborate with research institutes, industry partners, initiatives, standardization committees, public institutions, and other internet service providers on a global scale. Together, we want to fight cybercrime and improve online security. We collaborate, for example, with the German Federal Office for Information Security (BSI) throughout Germany and with the European Union Agency for Network and Information Security (ENISA) at a European level.

We also provide up-to-date information about all of our data protection activities on our Group website under "Data protection and data security".

OUR CYBERSECURITY INFRASTRUCTURE

Cyber Emergency Response Team

We are always working to develop new ways to defend against attacks. We launched a Cyber Emergency Response Team (CERT) in the mid-1990s, which is responsible internationally for managing security incidents for our information and network technologies. Since then, we have continued to expand our activities in relation to cyber defense, information on attacks, and information sharing.

Cyber defense center

In 2017, we opened a new cyber defense center with integrated security operation center (SOC) in Bonn. There we analyze behavioral patterns on the internet and draw up defense strategies. This new defense center is one of the largest and most advanced ones of its kind in Europe, analyzing 2.5 billion pieces of security-relevant data from 3,300 data sources every day. What's more, the cyber defense center processes about 200 requests, filters about 5,000 viruses and malware programs, and scans on average 100 million incoming emails for spam every day. This is how we protect our infrastructure, and hence also our customers' data. Some 200 security experts work round the clock at the new SOC in Bonn and its affiliated national and international locations.

The measures that we undertake to fight cyberattacks on our own infrastructure are also available to other companies. More than 30 German DAX companies and SMEs employ our services for their own protection.

PROTECTION OF PERSONAL DATA

Protecting our customers' data is one of our top priorities. We also provide up-to-date information about all of our data protection activities on our Group website under data protection and data security. The following examples serve as a brief excerpt of our recent activities:

International cooperation for cyber security

In 2018, we once again promoted data security on an international level. Among other things, we are a founding partner of the Charter of Trust, which was signed at the Munich Security Conference in February.

One of its objectives is to establish general minimum standards for cyber security that are aligned with state-of-the-art technology. Together with our partners, we have identified ten action areas which call for more activity. 2019 was characterized by the stabilization of the joit work and the infrastructure expansion.

Furthermore, in November 2018 we underscored our commitment to security in the digital world by signing the Paris Call for Trust and Security in Cyberspace. We thereby pledge to intensify and actively shape collaboration in support of integrity and security in the digital world. In this context we did not only adress this topic in the political discourse but also pushed the topic through the Internet Governance Forum 2019.

Commendation for handling of customer data
For the third time, in 2018 we were commended by the independent testing authority TÜV Informationstechnik (TÜViT) for our handling of customer data. TÜViT certified that our processing of customer data, as it relates to billing, for example, is done in a secure and careful manner.

Security on the go
Since November 2017, we have partnered with the company Check Point Software Technologies to offer the Protect Mobile security solution for smartphones to our consumer customers. Protect Mobile provides reliable protection from cyber attacks through a combination of network protection and app on the smartphone – for downloading apps, doing online banking or surfing in the browser. Deutsche Telekom customers can add this option free of charge to their existing mobile phone contract. For the most complete protection, the app is available for Android and iOS from app stores.

Simple data privacy statements for everyone
Data Privacy Notices are often incomprehensible to the layperson. Our one-pager provides our customers with an easy-to-read overview of data privacy at our company. It contains simple, condensed information on the basics behind our data processing activities. It does not replace our formal data privacy statement, to which we link in the document and which complies with legal requirements. Instead, it provides users with transparent information on how and to what extent we process and use personal data. With this one-pager, we have followed an initiative launched by the National IT Summit, supported by the Federal Ministry of Justice and Consumer Protection.

Highest possible transparency for our customers
Data security has the highest priority at Deutsche Telekom. We do not only want to comply with legal requirements but to actively shape data security. For this purpose we collaborate with data security experts, permanently develop technical standards and are pushing for the highest possible transparency. We are doing this to allow our customers to be always assured that we treat their data confidentially.

For example we ensured in the development of our service "Sprach ID" that not our customers voice is being saved, but mathematical patterns, which are being calculated from characeristics in the voice. Therefore, a person can not be traced back through the voice pattern.

Another example is the "Magenta Speaker", the first intelligent European Smart Speaker. We ensured highest possible transparency throughout the first time set-up of the speaker. It is being explained in simple language which data is being saved by us for which purpose. After the set-up, our costumers can access their data through the Smart-Speaker app and can delete it.

Encryption for all
Together with the Fraunhofer Institute for Secure Information Technology (Fraunhofer SIT), we launched the "Volksverschlüsselung" encryption solution in 2016. It is a simple, free way to encrypt emails. We operate the solution at a high-security data center. The keys are generated on the user's device. The user is the only person with access to them; they are not sent to the infrastructure operator. To use the encryption, users only need to install the software and identify themselves as part of a simple one-time process. This product supports the federal government's digital agenda. What's more, we fulfill the requirements of the Charter for the Promotion of Trustworthy Communications ("Charta zur Stärkung der vertrauenswürdigen Kommunikation"), which was proposed and signed by representatives from the business and scientific communities as well as by political representatives.

IT SECURITY & DATA PROTECTION
A random sample of 50,000 Telekom employees are surveyed on the topics of data protection and IT security every two years. The findings of the survey are used, for example, to determine the Security Awareness Index (SAI) and the Data Protection Award indicator. The indicators help us to review the effectiveness of our measures in the areas of IT security and data protection. The data protection award indicator was last measured in 2018 and stood at 76 % (without T-Mobile US). In the last survey, security awareness reached 78.3 (without T-Mobile US) of maximum 100 points (which is higher than for all other companies in the benchmark).

76.5   76.7   78.4   78.3

100

50

2015   2016   2017   2018 ●

— Data Protection Award indicator [a]   — Security Awareness Index [a]

a) excl. T-Mobile US

● Data verified by PwC.

The Data Protection Award indicator measures the level of data protection within the units on a scale of 0 to 12. It is calculated based on what the employees said they thought, did and knew about data protection.

The Security Awareness Index measures our employees' perception of IT security at Deutsche Telekom. The assessment is based on Deutsche Telekom employee answers on management awareness of the topic, the security culture, the influence of security requirements on their own work, and their personal responsibility for and attitudes towards IT security. The index includes a scale from 0 to 100 – the higher the value, the higher IT security is rated at Deutsche Telekom.
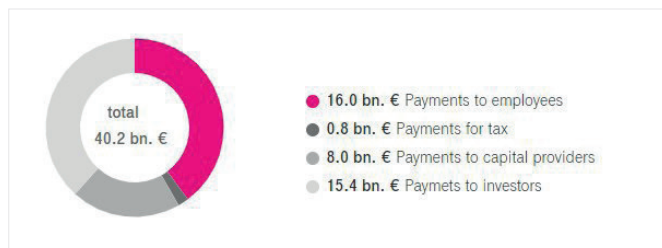
Reporting against standards

The information on the indicator "IT Security & Data Protection" is relevant for GRI indicator GRI 418-1 (Substantiated complaints concerning breaches of customer privacy and losses of customer data). It is also used in our reporting on Global Compact Principle 1 (Protection of international human rights).

FINANCIAL PERFORMANCE INDICATORS

NET VALUE ADDED

The increase in net value added from 33.5 billion euros to 40.2 billion euros is mainly due to the higher disbursement for investments in 5G licenses in Germany and spectrum acquisitions in the United States. Investments for the network build-out in the United States and the fiber-optic expansion in Germany remained at the same high level year-on-year. Payments to capital investors increased, in particular due to repayments for lease liabilities. The increase is due to the change in accounting for leases as part of the initial application of the new accounting standard IFRS 16 - Leases. These payments were previously part of the operating cash flow. Payments to employees increased due, among other things, to salary development in the United States, and the inclusion of T-Mobile Netherlands and UPC Austria. This was offset by lower headcounts in Germany.

total
40.2 bn. €

- ● 16.0 bn. € Payments to employees
- ● 0.8 bn. € Payments for tax
- ● 8.0 bn. € Payments to capital providers
- ● 15.4 bn. € Paymets to investors

In contrast to the statement of income, the net value added only takes account of real payment flows. That means that deferred tax expenses and the accrual of provisions do not impact the net value added of the reporting period. Although these costs are deducted from net profit in the statement of income, they are not linked to any current payments to stakeholder groups, as is the case with net value added. Outpayments in this respect are scheduled for the future and will only be accounted for in net value added in future years.

Reporting against standards

With this KPI, we fully cover the GRI 201-1 (Direct economic value generated and distributed) GRI indicator.

NET REVENUE, EBITDA AND NET PROFIT

A detailed clarification of our financial KPIs is available at www.telekom.com/investorrelations.

in bn. €		2016	2017	2018	2019
Net revenue		73.1	74.9	75.7	80.5
EBITDA AL (adjusted for special factors) [a, b, c]		n.a.	n.a.	21.6	23.1
EBITDA AL margin (adjusted for special factors) [c]	in %	n.a.	n.a.	30.5	30.7
Net profit (loss)		2.7	3.5	2.2	3.9

[a] Deutsche Telekom defines EBITDA as profit/loss from operations before depreciation, amortization and impairment losses.
[b] EBITDA AL adjusted for special factors, net debt, and free cash flow are non-GAAP figures not governed by the International Financial Reporting Standards (IFRS). These measures should be considered in addition to, but not as a substitute for, the information prepared in accordance with IFRS. Alternative performance measures are not subject to IFRS or any other generally accepted accounting principles. Other companies may define these terms in different ways. For further information relevant to alternative performance measures, please refer to the Annual Report section Management of the Group, page 38 et seq., or to Deutsche Telekom's Investor Relations website.
[c] Our operational performance is now measured on the basis of "EBITDA after leases" (EBITDA AL) and not on the basis of EBITDA. EBITDA AL is calculated by adjusting EBITDA for depreciation of the right-of-use assets and for interest expenses on recognized lease liabilities.

REVENUE DEVELOPMENT

In 2019 Deutsche Telekom generated Group revenue of 80.5 billion euros. With growth of just under 4.8 billion euros, it rose by around six percent compared with the previous year's level. The international share of Group revenue decreased by 0.7 percentage points to 86.3 percent.

in bn. €	2017	2018	2019	Change on 2018 (in bn/pp)
Net revenue Germany [a]	32.8	32.2	30.5	-1.7
Net revenue international [a]	67.2	67.8	69.5	1.7
Net revenue Group (total)	74.9	75.7	80.5	4.8
International revenue as a percentage of Group revenue	89.7%	89.6%	86.3%	-0.7 pp

[a] Since revenue allocation to determine ratios is from an HR perspective, it reflects the location of employees (FTE); see annual report section 'Workforce statistics'
In the annual report revenue is allocated to the country where it is generated.

FINANCIAL PERSONNEL INDICATORS

REVENUE PER EMPLOYEE

In the year 2019, revenues per employee increased to EUR 378,000 groupwide – this represents an increase of about 8 percent. In Germany, the revenues per employee has increased by 5 percent. Outside Germany, revenues per employee also increased slightly by about 6 percent.

You can find further information in the HR Factbook.
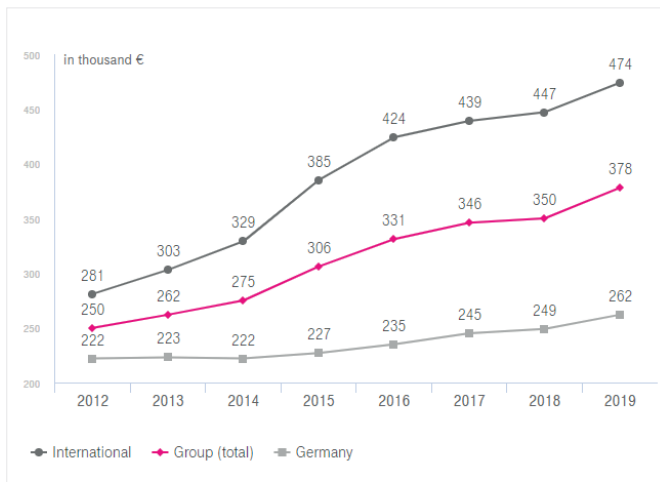
PERSONNEL COSTS AND PERSONNEL COST RATIO

in bn. €	2012	2013	2014	2015	2016	2017	2018	2019
Personnel costs in the Group	14.7	15.1	14.7	15.8	16.5	15.5	16.4	16.7
of which: Germany	9.2	9.4	9.1	9.4	9.8	8.5	9.2	8.7
Special factors	1.2	1.4	0.9	1.2	1.5	0.6	1.2	1.0
Personnel costs in the Group adjusted for special factors	13.5	13.7	13.8	14.6	14.8	14.9	15.2	15.7
Net revenue a)	58.2	60.1	62.7	69.2	73.1	74.9	75.7	80.5
of which: Germany	26.7	26.3	25.7	25.7	25.3	25.2	25.0	25.2
Adjusted personnel cost ratio Group (total. in %)	23.2	22.7	22.0	21.2	20.3	19.9	20.1	19.5
Adjusted personnel cost ratio Germany (in %)	31.1	32.3	32.9	33.0	32.9	32.1	33.0	31.6

a) As revenue allocation is separated into Germany/international from an HR perspective, this reflects employee location, unlike the financial report, which allocates revenue to the country where it was generated.

By personnel costs we mean basic personnel costs (salaries) and incidental personnel expenses. The indicator is adjusted for special factors in conjunction with personnel restructuring measures (individual downsizing instruments). The personnel cost ratio represents personnel costs as a proportion of revenue. The development of this rate serves as a benchmark for company business. In the Group as a whole, the personnel expenses ratio in 2019 fell slightly compared with 2018.

One driver for the 0.6 percentage point improvement in the adjusted personnel expenses ratio in the Group is the significant increase in Group revenues.

The disadvantage of the personnel cost ratio is that it ignores external personnel costs. Therefore the total workforce costs ratio is more meaningful for the management of personnel costs at Deutsche Telekom.

HR EBITDA (RATIO)

The so-called „HR EBITDA" of Deutsche Telekom Group (without T-Mobile US) puts into ratio the calculated earnings per employee with the investments in training per employee.

	2017	2018	2019
EBITDA (m€ adjusted) a)	12 914	13 245	14 891
EBITDA per employee (€/FTE) a)	85 915	85 013	83 964
Training budget (m€) a)	112	110	108
Training expense per employee (€/FTE) a)	649	645	659
HR EBITDA a)	132	132	127

HR EBITDA = EBITDA per employee (€/FTE) / Training expense per employee (€/FTE)

a) DT Group without T-Mobile US

Reporting against standards

This data is relevant for the GRI 404-1 (Average hours of training per year per employee) and GRI 404-2 (Programs for upgrading employee skills and transition assistance programs) GRI indicators as well as the S02-02 (Training expenses per employee) EFFAS indicator. This data also covers criterion 16 (Steps taken to promote the general employability of all employees) of the German Sustainability Code.

HUMAN CAPITAL ROI

The so-called "Human Capital Return on Invest (ROI)" illustrates the company's return on investment in human capital by building a ratio between revenue, OPEX and the costs of our internal workforce (IWC).

	2016	2017	2018	2019
Total Revenue (m€)	73 095	74 947	75 656	80 531
Total OPEX (m€ adjusted)	52 718	53 854	53 782	52 694
Internal Workforce Costs (IWC) (m€ adjusted)	14 824	14 945	15 216	15 686
Human Capital ROI	2.37	2.41	2.44	2.77

Human Capital ROI = (Total Revenue - Total OPEX) / HR OPEX (Total internal workforce)

Reporting against standards

This data is relevant for the GRI 404-1 (Average hours of training per year per employee) and GRI 404-2 (Programs for upgrading employee skills and transition assistance programs) GRI indicators as well as the S02-02 (Training expenses per employee) EFFAS indicator. This data also covers criterion 16 (Steps taken to promote the general employ-ability of all employees) of the German Sustainability Code.

TOTAL WORKFORCE COSTS

In bn. €	2014	2015	2016	2017	2018	2019
TWC [a]	15.4	16.5	16.8	16.9	17.1	17.5
of which: Germany	9.2	9.2	9.1	8.9	9.0	8.7
IWC [b] (PC [c] adjusted)	8.5	8.5	8.3	8.1	8.1	8.0
EWC [d] Leased and temporary workers	0.05	0.05	0.03	0.04	0.05	0.04
EWC [d] Freelancers and consultants	0.7	0.7	0.7	0.8	0.8	0.8
of which: international	6.1	7.2	7.8	7.9	8.0	8.8
IWC [b] (PC [c] adjusted)	5.3	6.1	6.5	6.8	7.1	7.7
EWC [d] Leased and temporary workers	0.3	0.4	0.5	0.2	0.2	0.2
EWC [d] Freelancers and consultants	0.6	0.7	0.8	0.8	0.8	0.9

[a] Total workforce cost: external workforce cost + personnel cost adjusted for special factors
[b] Internal workforce cost
[c] Personnel cost
[d] External workforce cost: cost of leased and temporary workers + cost of freelancers and consultants

TOTAL WORKFORCE RATIO

Total workforce management allows HR to be managed in a holistic manner, enabling qualitative and quantitative personnel planning over the long term. The total workforce ratio describes the relationship between all personnel expenditure and revenue. This means: if the ratio has fallen in comparison with the previous year, either revenue has remained constant while total workforce costs have gone down, or revenue has increased with stable Total Workforce Cost.

Deutsche Telekom's total workforce quota improved slightly in 2019. The adjusted ratio for the Group as a whole dropped by 0.9 percentage points in 2019 compared with the previous year. While total revenue was up 6.4 percent (488 million euros) in 2019, total workforce costs only increased by around 2.6 percent year-on-year.

in bn. €	PA [a] adjusted 2019	EWC [b] 2019	TWC [c] 2019	Revenue [d] 2019	TWQ [e] adjusted 2016	TWQ [e] adjusted 2017	TWQ [e] adjusted 2018	TWQ [e] adjusted 2019
Germany	8.0	0.8	8.7	25.2	35.9%	35.4%	36.1%	34.8%
International	7.7	1.0	8.8	55.4	16.2%	15.9%	15.9%	15.8%
Group (total)	15.7	1.8	17.5	80.5	23.0%	22.5%	22.6%	21.7%

[a] Personnel cost
[b] External workforce cost: cost of leased and temporary staff + cost of freelancers and consultants
[c] Total workforce cost: external workforce cost + personnel cost adjusted for special factors
[d] As revenue allocation is separated into Germany/international from an HR perspective, this reflects employee location, unlike the financial report, which allocates revenue to the country where it was generated.
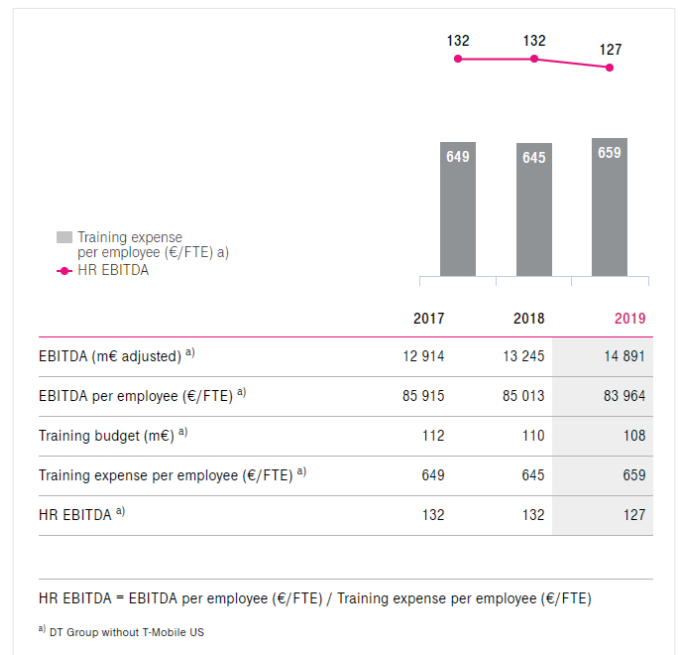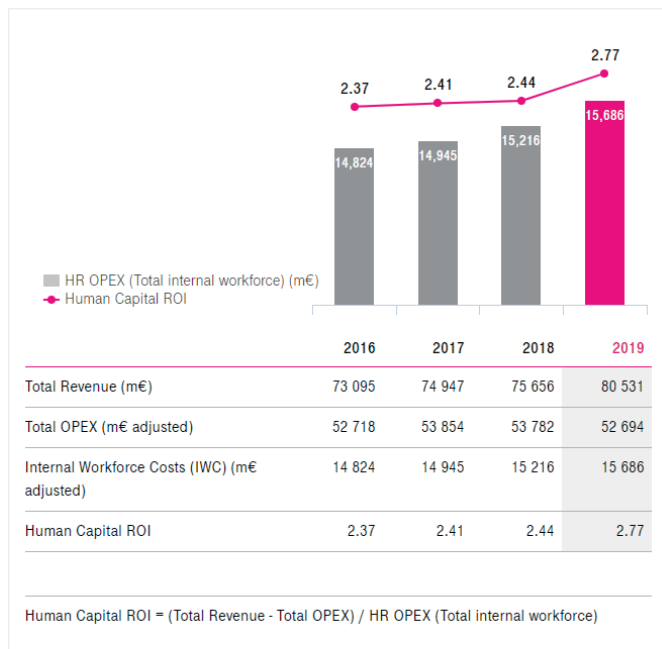[e] Total workforce quote = TWC/revenue

CLIMATE STRATEGY

CLIMATE STRATEGY

One of our goals is to reduce the negative environmental impact of our business activities. One important milestone is our climate target. By the year 2020, we are planning to reduce the absolute amount of CO_2 emissions we produce by 20 percent compared to the base year 2008 (excluding T-Mobile US). We expect to achieve this goal. In 2018, we have also developed a new climate target for the period after 2020.

Our integrated climate strategy is part of our Corporate Responsibility strategy, which we have aligned with our Group strategy. This is how we ensure that climate protection measures are closely linked with our core business. We have defined objectives and/or key performance indicators for each of the four aspects of our climate strategy ("Emissions from the value chain", "Renewable energy", "Energy efficiency", and "Positive social effects (Enablement)").

The four pillars of our integrated climate strategy

Emissions from the value chain	Renewable energy	Energy efficiency	Positive social effects (Enablement)

Emissions from thevalue chain

We record all direct and indirect emissions using the globally recognized "Greenhouse Gas (GHG) Protocol". By 2030, we aim to reduce our Scope 1 and Scope 2 emissions by 90 percent compared to the base year 2017. Since most of our emissions are caused by the use of electricity, our primary focus is to increase the share of renewable energies in the electricity mix. By 2021, we will fully convert our entire Deutsche Telekom network, across the entire gamut from mobile telecommunications to the high-speed DSL network, to use electricity entirely from renewable sources. We will also reduce emissions produced through the use of gas and oil, for instance. In addition, we will improve efficiency in areas with particularly high energy consumption, especially in our networks and data centers. This has already allowed us to moderately reduce our emissions over the past few years (excluding T-Mobile US) – despite rapidly growing data volumes and the necessary network build-out.

Indirect emissions from the upstream and downstream value chain (Scope 3 emissions) make up the largest share of our total emissions. We have also set ourselves a target for achieving a reduction in such emissions: by 2030, we aim to reduce all emissions resulting from the manufacture and use of Deutsche Telekom products by 25 percent per customer (using 2017 as our base year).

In September 2019, as part of an international industry initiative, we also committed to reducing our CO_2 emissions to "net zero" by 2050 at the latest.

By the year 2020, we are planning to reduce the absolute amount of CO_2 emissions we produce by 20 percent compared to the base year 2008 (excluding T-Mobile US). We expect to achieve this goal. In 2018, we have also developed a new climate target for the period after 2020.

Renewable energy

We are researching and evaluating various options to increase our proportion of green energy. Possibilities include purchasing energy certificates from renewable sources, but also, where possible, using cogeneration ("CHP") plants to generate our own renewable energy. Several of our national companies sourced 100 percent of their electricity from renewable sources in 2019: Greece, Croatia, the Netherlands, Austria, and Hungary. When purchasing electricity, we take a variety of sustainability factors into consideration on a Group-wide level. These include, for instance, the average emission factor of the electricity mix (i.e., the amount of emissions for every kilowatt hour of electricity used) and the proportion of renewable energy. These parameters help us make our energy mix more transparent and increase the share of energy obtained from renewable sources at our company. We will shift our entire electricity consumption to 100 percent renewable energy by 2021.

Energy efficiency

Since the operation of our network infrastructure calls for a considerable amount of energy, we are investing in modernization and energy-efficient technology. For instance, we are migrating our network infrastructure to IP technology, which is not only more powerful, but also consumes less electricity than existing technologies. In addition, we are working to process data traffic from no more than a few, particularly efficient data centers. Higher energy efficiency also always brings a reduction in CO_2 emissions. In order to measure our progress, we use key performance indicators (KPIs) Energy Intensity and Carbon Intensity.

Positive social effects (Enablement)

Many of our products and services provide sustainability advantages. They can help reduce energy consumption and CO_2 emissions, improve healthcare, and make logistics more efficient. In addition to our own carbon footprint, we also calculate the positive CO_2 effects facilitated for

our customers through using our products and solutions. We assess both variables in relation to the "Enablement Factor" ESG KPI. This helps us evaluate our overall performance in relation to climate protection.

Concepts and strategies for climate protection are also developed at our national companies. These can be viewed in the country profiles.

CLIMATE PROTECTION FROM 2020 ONWARD – NEW CLIMATE GOAL AND REVISED CLIMATE PROTECTION STRATEGY

In 2018, we devised a new Group-wide climate goal for the period beyond 2020, our current target year. This was adopted by our Board of Management at the beginning of 2019.

The goal was developed on the basis of the "Science Based Targets Initiative" (SBTi), which officially confirmed in May 2019 that we are the third DAX-listed company to contribute toward implementing the Paris Climate Agreement through our climate protection targets. We have thus followed our national companies in the United States and Hungary, whose targets were already endorsed by SBTi in 2018 and at the start of 2019, respectively.

- We have decided to switch to using 100 percent renewable energy for our entire power consumption by 2021 (Scope 2). As things currently stand, we already derive 64 percent from renewable sources. In light of growing data traffic and the network build-out, we expect energy consumption to continue to rise over the coming years. To fulfill the requirements laid down by the Science Based Targets initiative, however, we are taking measures to boost efficiency and are using electricity generated by renewable power sources.

- We aim to reduce our total emissions by 90 percent (Scope 1 + 2), including emissions from the use of gas and oil, by 2030.

- 80 percent of our CO_2 footprint arises from the production and use of our products. By 2030, we aim to reduce these emissions by 25 percent per customer in the main categories (emissions from the purchase of goods, services and capital goods, and emissions from the use of our products by our customers) (Scope 3). To achieve this, we have conducted initial workshops together with our key suppliers to develop measures and agreements for lowering CO_2 emissions.

The main difference between the new climate goal and the previous one is that the former takes into account emissions produced by T-Mobile US and arising from the upstream and downstream elements of the value-added chain (Scope 3 emissions).

In September 2019 we also joined an international industry initiative. Under this initiative we undertake to reduce our CO_2 emissions (Scope 1 and 2) to "net zero" by 2050 at the latest and thus to make our business operations completely climate neutral.

OUR APPROACH TO MEASURING OUR PROGRESS WITH REGARD TO CLIMATE PROTECTION

We calculate our emissions for our climate target along the entire value chain according to the market-based method of the internationally recognized Greenhouse Gas (GHG) Protocol. We have broken down all our CO_2 emissions in detail here. We ensure transparency for our stakeholders regarding the progress in implementing our climate strategy by using a number of key performance indicators (KPIs) to measure our contribution to climate protection. The Carbon Intensity and Energy Intensity KPIs are used to analyze the relationship between our carbon emissions or energy use and the transported data volume. Using data volume as a reference parameter makes it possible to create a direct link to the performance of our networks. The Enablement Factor, PUE, and Renewable Energy KPIs also improve the management and transparency of climate protection issues.

Indirect emissions along our value chain, or Scope 3 emissions, make up the majority of our total emissions. Recording these emissions helps us take targeted measures at both company and product level.

Our climate goal, adopted in 2013, to reduce the Group's CO_2 emissions by 20 percent (compared to 2008, excluding T-Mobile US) by 2020 is still in place. In all, 40 business units in 29 countries have undertaken to work toward this climate goal.

GCR reports to the Board of Management in detail on the status of target achievement each year. We have further reduced our emissions over the last few years, bringing us to the level forecast for 2019. We expect to achieve our goal.

ALIGNMENT WITH THE RECOMMENDATIONS OF THE TCFD

The United Nations Climate Change Conference hosted in Paris in 2015 saw the launch of the "Task Force on Climate-related Financial Disclosures" (TCFD), which sets out to develop voluntary, consistent climate-related financial risk disclosures. In 2017, the TCFD published specific recommendations for putting these disclosures into practice, which companies can use as a guideline to inform investors, lenders, insurers, and other interest groups about the risks climate change presents for their business model.

Deutsche Telekom welcomes the aims behind the TCFD. Among the risks that climate change harbors, meteorological extremes are one we are already experiencing. This is having a direct effect on our stakeholders, e.g., our customers, suppliers, and employees. The risk is assessed in relation to the continuation of operations as part of risk management and is managed at an operational level in the business units. In addition, we evaluate internally how reporting on climate-related financial risks and opportunities can be aligned with the recommendations of the "Task Force on Climate-related Financial Disclosures" (TCFD). This should build on the existing approaches for strategy, controlling, and risk management.

| GOVERNANCE | STRATEGY | RISK MANAGEMENT | METRICS AND TARGETS |

GOVERNANCE

Disclosures	Guidance	Input

a) Describe the Board's oversight of climate-related risks and opportunities.	▪ Processes and frequency by which the Board is informed about climate-related issues.
	
	▪ Does the Board consider climate-related issues when
	  ▪ reviewing and guiding strategy, major plans of action, risk management policies, annual budgets, and business plans?
	  ▪ setting the organization's performance objectives?
	  ▪ monitoring implementation and performance?
	  ▪ overseeing major capital expenditure, acquisitions, and divestitures?
	
	▪ How the Board monitors and oversees progress against goals and targets for addressing climate-related issues.
		▪ Deutsche Telekom's Board of Management is informed every year about the status of the company's climate target achievement and climate protection issues in the Climate Target Monitoring Board Report.
		
		▪ Deutsche Telekom's risk management unit reports on a quarterly basis. If any unforeseen risks arise outside the regular reporting of key risks and opportunities, they are recorded as appropriate.
		  ▪ The identified relevant risks are reported to the Board of Management of DT. The DT Board of Management informs the Supervisory Board accordingly.
		  ▪ Leading climate protection KPIs (Energy Intensity, Carbon Intensity) are part of the quarterly reporting to the responsible Board member (CHRO).
		
		▪ The Audit Committee of the Supervisory Board appraises the risks at its meetings, and the main relevant risks for the Deutsche Telekom Group are also integrated into our Annual Report.
		
		▪ The CR Board is informed about climate protection issues based on requirements.
		
		▪ Risk reporting will be expanded to encompass even more comprehensive inclusion of long-term climate-related risks.
		
		▪ Financial implications have been integrated into business planning; further management instruments are evaluated for integrating climate protection into investment decision-making (e.g. internal price on carbon).
		
		▪ Deutsche Telekom's Board of Management decided on a new climate protection strategy for 2030 including a Science-Based Target.
		
		▪ The overarching corporate strategy was extended at the end of 2019 by "acting responsibly". This puts a major focus on CO_2 and resource reduction as part of Telekom's strategic direction.
		
		▪ As part of our „We Care for our Planet" initiative, we have examined our value chain for opportunities to achieve greater resource efficiency and CO_2 reduction. Ten areas for action have been identified and these were approved by the Board of Management.

b) Describe management's role in assessing and managing climate-related risks and opportunities.	▪ Has the organization assigned climate-related responsibilities to management-level positions or committees?
	
	▪ And, if so:
	  ▪ Do such management positions or committees report to the Board?
	  ▪ Do those responsibilities include assessing and/or managing climate-related issues?
	
	▪ Description of the associated organizational structure(s).
	
	▪ Processes by which management is informed about climate-related issues.
	
	▪ How management (through specific positions and/or management committees) monitors climate-related issues.
		▪ Deutsche Telekom's current organizational CR structure can be found in the CR Report
		
		▪ At DT, the responsibility for CR includes oversight of climate-related issues.

STRATEGY

Disclosures	Guidance	Input
a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	▪ Description of what they consider to be the relevant short, medium, and long-term time horizons. ▪ Taking into consideration the useful life of the organization's assets or infrastructure and the fact that climate-related issues often manifest themselves over the medium and longer term. ▪ Description of the specific climate-related issues for each time horizon that could have a material financial impact on the organization. ▪ Description of the process used to determine which risks and opportunities could have a material financial impact on the organization.	▪ ICT solutions have the potential to facilitate the transformation to a decarbonized society. DT is therefore participating in the studies of the GeSI (Global e-Sustainability Initiative) so as to systematically evaluate potential. For more details, please refer to the latest issue of the study. ▪ For details on our risk management, please refer to our Annual Report and CR Report. Please note: We are currently evaluating internally how reporting on climate-related financial risks and opportunities can be aligned with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). This is to be based on the existing approaches to strategy, controlling and risk management.

b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	▪ What is the impact on the business and strategy in the following areas:
	  ▪ products and services
	  ▪ supply chain and/or value chain
	  ▪ adaptation and mitigation activities
	  ▪ investment in research and development
	  ▪ operations (including types of operation and location of facilities).
	▪ Description of
	  ▪ how climate-related issues serve as an input to their financial planning process
	  ▪ the time period(s) used
	  ▪ how these risks and opportunities are prioritized.
	▪ The impact on financial planning in the following areas:
	  ▪ operating costs and revenues
	  ▪ capital expenditure and capital allocation
	  ▪ acquisitions or divestments
	  ▪ access to capital.
	▪ Description of climate-related scenarios, if they were used to inform the organization's strategy and financial planning.
		▪ Considerations of physical risks to network infrastructure, e.g. due to extreme weather, are part of our Business Continuity Management, Technical Planning and Telekom Security, as well as the regular planning process for networking.
		▪ Dialog is held with major suppliers on climate protection issues (e.g. Scope 3 emissions) and energy efficiency. Telekom was also repeatedly included in the CDP A List.
		▪ Several programs have been launched to improve energy efficiency at our sites and operations.
		▪ As part of our „We Care for our Planet" initiative, we have examined our value chain for opportunities relating to greater resource efficiency and CO2 reduction. Ten key areas for action have been identified for future measures leading to a more sustainable company in general.
		▪ As part of that program, the „We care" product label is awarded to products that have been approved by a committee of internal experts. This label is intended to help customers to identify customer-facing examples in our sustainability program.
		▪ The impact on our R&D budget follows the "win with partners approach", using suppliers and especially start-ups to develop new innovative sustainable products and services in order to help our customers reduce their carbon emissions.
		
		Please note: We are currently evaluating internally how reporting on climate-related financial risks and opportunities can be aligned with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). This is to be based on the existing approaches to strategy, controlling and risk management.

c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	▪ Description of
	  ▪ how resilient their strategies are to climate-related risks and opportunities (taking into consideration a transition to a lower-carbon economy consistent with a 2°C or lower scenario) and
	  ▪ scenarios consistent with increased physical climate-related risks.
	▪ Organizations should consider discussing:
	  ▪ where they believe their strategies may be affected by climate-related risks and opportunities
	  ▪ how their strategies might change to address such potential risks and opportunities and
	  ▪ the climate-related scenarios and associated time horizon(s) considered.
		▪ DT set a Science-Based Target that is consistent with a 1.5°C scenario (for Scope 1+2) and signed the UN Global Compact net zero pledge.
		▪ Further scenarios relating to physical and transition risks associated with a 2°C or lower scenario will be developed.
		
		Please note: We are currently evaluating internally how reporting on climate-related financial risks and opportunities can be aligned with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). This is to be based on the existing approaches to strategy, controlling and risk management.

RISIKO MANAGEMENT

Disclosures	Guidance	Input

a) Describe the organization's processes for identifying and assessing climate-related risks.	▪ Risk management processes for identifying and assessing climate-related risks.
	▪ Determining the relative significance of climate-related risks in relation to other risks.
	▪ The consideration of existing and emerging regulatory requirements related to climate change (e.g. limits on emissions) as well as other relevant factors.
	▪ Processes for assessing the potential size and scope of identified climate-related risks.
	▪ Definitions of risk terminology or references to existing risk classification frameworks used.
		▪ The process for the identification of climate change related risks and opportunities includes:
		  ▪ screening media and NGO publications
		  ▪ actively supporting the work of various industry associations dealing with climate change, e.g. GeSI, econsense, 2-Degree Foundation, ICC, GSMA, ETNO
		  ▪ participation & initiation of climate change related stakeholder dialogs
		  ▪ analysis of the responses to the CDP supply chain programanalysis of changes in information requests from ratings such as RobecoSAM, CDP, Sustainalytics, and others
		  ▪ quarterly assessment of relevant data.
		▪ The process for the assessment of climate change related risks and opportunities includes:
		  ▪ identification & quantification of the relevant developments
		  ▪ calculation of the impact on operations
		  ▪ analysis of impact on value chain.
		▪ Furthermore, Telekom's processes for identifying and assessing climate-related risks are integrated into multi-disciplinary company-wide risk identification, assessment, and management processes.
		▪ Current regulation is relevant and always considered, owing to the need to comply with statutory regulations. DT (in Germany) therefore uses the WEKRA database, which is assessed by CR specialists, to track changes in the regulatory environment. DT also uses its internal capacities (e.g. policy and regulatory affairs) for assessing and evaluating the impact of existing regulations, like ETNO, BDI, bitkom, econsense, etc.
		▪ Emerging regulation is considered whenever it is relevant and can be anticipated. DT is also aware of upcoming regulations by actively working within various industry associations, e.g. GeSI, econsense or bitkom and intensive stakeholder dialogues with NGOs, e.g. WWF.

b) Describe the organization's processes for managing climate-related risks.	▪ Processes for managing climate-related risks, such as
	  ▪ how decisions are made to mitigate, transfer, accept, or control those risks
	  ▪ which processes are available for prioritizing climate-related risks
	  ▪ how materiality determinations are made within the organization.
		▪ DT manages (climate-related) risks and opportunities, identified by intensive risk screening and assessed on the basis of market research and expert knowledge, according to the process described above and published in our Annual Report.

c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	▪ How the processes for identifying, assessing, and managing climate-related risks are integrated into overall risk management.	Please note: We are currently evaluating internally how reporting on climate-related financial risks and opportunities can be aligned with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). This is to be based on the existing approaches to strategy, controlling and risk management.

METRICS AND TARGETS

Disclosures	Guidance	Input
a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	- Key metrics used to measure and manage climate-related risks and opportunities. - Metrics on climate-related risks associated with water, energy, land use, and waste management (where relevant). - Description of whether and how related performance metrics are incorporated into remuneration policies. - Where relevant: - the internal carbon price - climate-related opportunity metrics (e.g. revenue from products and services designed for a lower-carbon economy). - Metrics for historical periods to allow for trend analysis - Description of the methodologies used to calculate or estimate climate-related metrics (where not apparent).	- Key metrics used to measure and manage climate-related risks and opportunities are: - Scope 1-3 emissions - Share of renewable energy - Energy consumption - Energy Intensity KPI - Carbon Intensity KPI - Enablement Factor. - Furthermore, we calculate our sustainable revenue quota and continually analyze the sustainability benefits of our products. - Historical emission data for all DT subsidies can be found in the CR-report's interactive benchmarking tool. - The achievement of individual goals and/or targets related to an area of responsibility for selected relevant functions is part of target related remuneration, as well as targets based on the ESG KPI „Socially Responsible Investment" and the target „Listing of the T-Share in the sustainable indices/ratings" which reflect climate change issues and the directly related CR KPIs „Energy Intensity" and „Carbon Intensity". - The introduction of an internal price on carbon is currently being evaluated.
b) Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	- Scope 1 and Scope 2 emissions - Scope 3 emissions and the related risks. - Calculation of GHG emissions in line with the GHG Protocol methodology to allow for aggregation and comparability across organizations and jurisdictions. - As appropriate, related, generally accepted industry-specific GHG efficiency ratios. - GHG emissions and associated metrics for historical periods to allow for trend analysis. - Description of the methodologies used to calculate or estimate the metrics (where not apparent).	- Telekom annually discloses Scope 1-3 emissions in its CR Report and Annual Report. - Scope 1 and 2 emissions are calculated in line with the GHG protocol. The Scope 3 emissions calculation is based on the GHG protocol. - Carbon Intensity ratios are also published annually in the CR Report and Annual Report. - Historical emission data for all DT subsidies can be found in the CR Report's interactive benchmarking tool.
c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	- Description of the key climate-related targets (e.g. those based on GHG emissions, water usage, energy usage, etc.) in line with anticipated regulatory requirements, market constraints, or other goals. - Other goals may include: - efficiency or financial goals - financial loss tolerances - GHG emissions avoided throughout the entire product life cycle - net revenue goals for products and services designed for a lower-carbon economy. - A description of the targets should include the following: - a definition of the target as absolute or intensity based - timeframes over which the target applies - the base year from which progress is measured - key performance indicators used to assess progress against targets. - A description of the methodologies used to calculate targets and measures (where not apparent).	- DT's climate emission targets can be found in the CR Report. - Our targets based on energy efficiency are disclosed here. - We also calculate the positive CO_2 effects facilitated for our customers through the use of our products. - Furthermore, we calculate our sustainable revenue quota and continually analyze the sustainability benefits of our products. - We also publish targets for sustainable procurement here.

ADDRESSING CLIMATE RISKS

In the context of our integrated climate strategy, we determine potential opportunities and risks that exist for us as well as for our stakeholders. We report to the Board of Management quarterly on current climate risks within the context of our "Group Risk Report". You will find more information on risk management in the "Risk and opportunity management" section of our annual report.

Physical risks

Extreme weather conditions as a consequence of climate change will have a negative impact on our business processes and will inevitably lead to incidents or even network outages. Among the effects of such breakdowns is their massive impact on the management of rescue operations, for example, sometimes even rendering such emergency efforts entirely impossible. In order to be able to react appropriately in these cases, our internal "Group Policy on Continuity and Situation Management" defines responsibilities, processes, and measures. It also outlines how to handle emergency and crisis situations like floods. In addition, possible consequences of climate change are also taken into account when planning our future business activities. For instance, our network infrastructure is set up to be protected from storm conditions, changes in temperature, and high winds.

Financial risks

Climate change also carries financial risks, whether from levies on CO_2 emissions or an increase in energy costs. Our contribution to the mitigation of these risks is that we measure our own energy efficiency and develop measures for improvement. Extreme weather events are another possible cause of infrastructure failure, and this could necessitate additional investment in a more robust infrastructure.

Prevention

We also help our customers reduce their carbon footprint by providing them with innovative solutions (mitigation). Possible examples include innovative projects in the area of sustainable urban development and mobility, and real-time solutions for agriculture. These do not only help reduce emissions, but also optimize the use of fertilizer, seed, and machinery. Increasing yields can help us achieve the second sustainable development goal (SDG) of "zero hunger". On top of that, we also help our customers deal with the adverse effects of climate change (adaptation). In the event of an imminent catastrophe, our infrastructure can be used, for example, to send alerts via early warning apps.

OUR ENVIRONMENTAL PROGRAM

WE CARE FOR OUR PLANET

With the adoption of the new climate targets, the Deutsche Telekom Board of Management issued a mandate in early 2019 to further expand our existing commitment to environmental protection and resource conservation. We then identified ten areas along our value chain in which we can improve resource efficiency. Initial measures have already been developed and summarized in the "We care for our planet" program. In October 2020, the Board of Management commissioned the implementation of the program. It is managed by the GCR department.

WE CARE FOR OUR PLANET

Green Shop
Enabling a "green customer experience" at Telekom Shops

Circular network and infrastructure at Deutsche Telekom
Switching to recyclable components.
Energy consumption and efficiency

Green buildings
Reducing CO_2 emissions, waste volume, and water consumption at properties. Our activities and achievements to date on this topic can be found here: Energy efficiency in buildings

Green DT mobility
Converting the company vehicle fleet to alternative drives, and measures for more eco-friendly commuting or avoiding travel. Our activities and achievements to date on this topic can be found here: Our strategy for climate-friendly mobility in Germany

Paperless and paper-saving work
Switching to paperless processes. Our activities and achievements to date on this topic can be found here:
Online billing for mobile and fixed-line customers in Germany, Other recycling indicators (print-on-demand), Resource efficiency at the workplace

Sustainable product packaging
Development and use of sustainable product packaging. Our activities and achievements to date on this topic can be found here:

Sustainable business model for devices
Refurbishing used smartphones. Our activities and achievements to date on this topic can be found here:
Continued analysis of our products' sustainability benefits

Our national companies are committed to reducing our ecological footprint too. For example, many of our national companies are committed to reducing plastic waste, by no longer handing out plastic bags or replacing them with reusable tote bags and tote bags made from paper or recycled material. Plastic waste can also be reduced in product design and packaging, e.g. OTE and Cosmote Greece reduced SIM cards to half their size in 2017. Part of the # Zeroplastic initiative by OTE and Cosmote is also a specially developed digital game that offers employees the opportunity to win reusable bottles as an incentive to replace single-use plastic bottles. So far, more than 5,000 employees have participated. Another good example is set by IT Services Hungary: Used IT devices are sold to employees on an in-house developed electronic platform. Equipment that is not required is donated to schools.

CO$_2$E EMISSIONS

CARBON INTENSITY ESG KPI DEUTSCHE TELEKOM GROUP
Since 2016, we have reported on the Carbon Intensity ESG KPI.
In contrast to the existing CO$_2$ Emissions ESG KPI, the new ESG KPI shows the CO$_2$e emissions in proportion to the transmitted data volumes. Using data volume as a reference parameter makes it possible to create a direct link to the performance of our networks.

Our ambition: decrease KPI

CO$_2$e emissions in mio. kg CO$_2$e
1,741
76.2
IP data volume in mio. terabytes
= **23** CARBON INTENSITY kg CO$_2$e/terabytes

✓ Data assured by PwC. For detailed assurance comments see „DT Group in Germany".

The ESG KPI figure also takes into account total CO$_2$ emissions for all energy sources – fuel, gas, district heating and electricity, The data volume is composed of the transmitted IP data volumes (including Voice over IP, Internet, IP-TV).

in kg CO$_2$e
79 — 2017
41 — 2018 [a]
23 — 2019

a) The market-based method is the leading method starting this reporting year. This method is used to calculate emissions with a specific emissions factor (provider factor) per DT company. This factor depends on a company actual energy procurement (electricity mix); procuring renewable energy (direct purchase, certificates) reduces emissions.

Reporting against standards
The Carbon Intensity ESG KPI is relevant for the GRI indicator GRI 305-4 (Greenhouse Gas Emissions Intensity). This information is relevant for EFFAS KPI E02-01 (Greenhouse gas emissions Scope 1-3). It is further-

more relevant for criterion 13 (Climate-relevant emissions and objectives) of the German Sustainability Codex. It is also used for reporting on the Global Compact principles 7 (Precautionary approach) and 8 (Promoting environmental responsibility).

CARBON INTENSITY ESG KPI DT GROUP IN GERMANY
Since 2016, we have reported on the Carbon Intensity ESG KPI .
In contrast to the existing CO$_2$ Emissions ESG KPI, the new ESG KPI shows the CO$_2$e emissions in proportion to the transmitted data volumes. Using data volume as a reference parameter makes it possible to create a direct link to the performance of our networks.

CO$_2$e emissions in mio. kg CO$_2$e
472
45.7
IP data volume in mio. terabytes
= **10** CARBON INTENSITY kg CO$_2$e/terabytes

Data assured by PwC. Data is partly based on estimates, assumptions and extrapolations. The calculation method was adjusted in 2017. Values cannot be directly compared to the previous year.

The ESG KPI figure also takes into account total CO$_2$ emissions for all energy sources – fuel, gas, district heating and electricity, The data volume is composed of the transmitted IP data volumes (including Voice over IP, Internet, IP-TV).

in kg CO$_2$e
56 — 2017
26 — 2018 [a]
10 — 2019

a) The market-based method is the leading method starting this reporting year. This method is used to calculate emissions with a specific emissions factor (provider factor) per DT company. This factor depends on a company actual energy procurement (electricity mix); procuring renewable energy (direct purchase, certificates) reduces emissions.

Reporting against standards

The Carbon Intensity ESG KPI is relevant for the GRI indicator GRI 305-4 (Greenhouse Gas Emissions Intensity). This information is relevant for EFFAS KPI E02-01 (Greenhouse gas emissions Scope 1-3). It is furthermore relevant for criterion 13 (Climate-relevant emissions and objectives) of the German Sustainability Codex. It is also used for reporting on the Global Compact principles 7 (Precautionary approach) and 8 (Promoting environmental responsibility).

TOTAL CO$_2$E EMISSIONS (SCOPE 1 - 3)

Since the 2016 CR Report, Deutsche Telekom has provided a general overview of all its CO$_2$ emissions (Scope 1-3). To ensure comparability with the Scope 3 emissions presented in CO$_2$ equivalents (CO$_2$e), Scope 1 and Scope 2 emissions were converted into kilotons of CO$_2$e. Emissions are presented along Deutsche Telekom's supply chain. This allows for an overview of where most of the emissions are produced.

In 2019, market-based Scope 1 and 2 emissions totaled approx. 1.8 million metric tons of CO$_2$e across the Group, marking a reduction of more than 20 percent compared to the previous year.

Scope 3 emissions were reduced by 11 percent to some 12.8 million metric tons of CO$_2$e in 2019. The majority of emissions can be attributed to the procurement (in particular of devices and network technology) and use of our products and services (for sold or rented) fixed-line and cell phones, routers, and media receivers, and for products such as laptops or television sets that our customers use so they can make the most of our services. Of equal importance are the emissions resulting from the manufacture and transportation of technology for establishing our networks.

The decline in CO$_2$ emissions is primarily down to the conversion to green energy. We are now analyzing whether a reduction in energy consumption through all-IP will be offset by increases resulting from 5G, expanded network coverage, and higher quality fixed lines.

CO$_2$e-Emissionen (Scope 1-3)
Interactive graphics

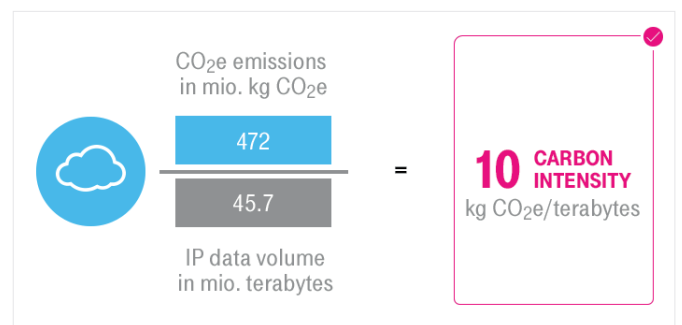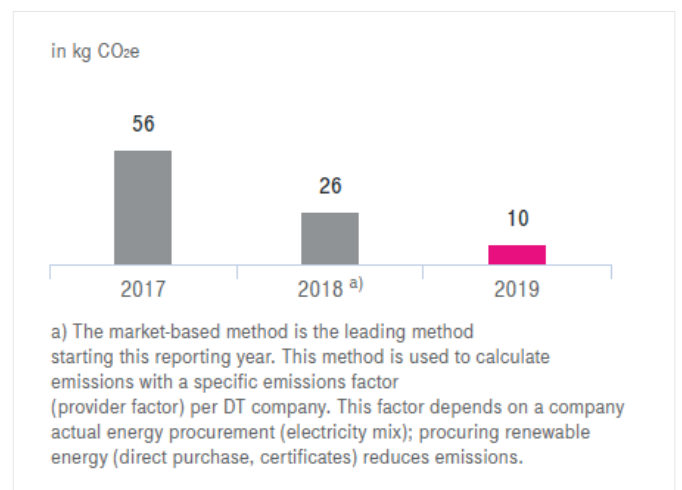|			
55 %	2 %	11 %	33 %

EMISSIONS FROM UPSTREAM ACTIVITIES	EMISSIONS FROM DEUTSCHE TELEKOM'S OWN ACTIVITIES	EMISSIONS FROM PURCHASED ENERGY	EMISSIONS FROM DOWNSTREAM ACTIVITIES
SCOPE 3 8,055 kt CO$_2$e	**SCOPE 1** 257 kt CO$_2$e	**SCOPE 2** 1,546 kt CO$_2$e	**SCOPE 3** 4,765 kt CO$_2$e
Transportation services, purchased products and services, capital goods, production waste, upstream energy and fuel supply chains, business travel, and employee commuting.	Operating the systems, buildings, and vehicles belonging to Deutsche Telekom.	Generation of district electricity and heating purchased by Deutsche Telekom.	Transportation of products sold to customers, use of sold and rented products and disposal and recycling of sold products.

✔ Data assured by PwC. For detailed assurance comments see „DT Group in Germany" and „T-Mobile USA".

CO$_2$e-Emissionen (Scope 1-3)
Interactive graphics

55 %	2 %	11 %	33 %

Commuting 517 kt CO$_2$e
Purchased transportation services 259 kt CO$_2$e
Business travel 88 kt CO$_2$e
Upstream energy and fuel supply chains 641 kt CO$_2$e
Capital goods 1,795 kt CO$_2$e
Upstream Scope 3 emissions 8,055 kt CO2e
Purchased products and services 4,698 kt CO$_2$e

CO$_2$e-Emissionen (Scope 1-3)
Interactive graphics

55 %	2 %	11 %	33 %

Telekom Scope 1 emissions 257 kt CO2e
Direct emissions from fossil fuels 100 kt CO$_2$e
Direct emissions from fuels for veh... fleet 156 kt CO$_2$e

CO$_2$e-Emissionen (Scope 1-3)
Interactive graphics

55 %	2 %	11 %	33 %

Indirect emissions from district heating 37 kt CO$_2$e
Telekom Scope 2 emissions 1,546 kt CO2e
Indirect emissions from electrical po... 1,509 kt CO$_2$e

CO$_2$e-Emissionen (Scope 1-3)
Interactive graphics

55 %	2 %	11 %	33 %

Disposal and recycling of sold products 19 kt CO$_2$e
Transportation of products sold to customers 258 kt CO$_2$e
Use of rented products 1,063 kt CO$_2$e
Downstream Scope 3 emissions 4,765 kt CO2e
Use of sold products 3,425 kt CO$_2$e

TOTAL CO$_2$E-EMISSIONS (SCOPE 1 & 2 EMISSIONS)

Our CO$_2$ emissions are largely driven by our electricity consumption. That's why the table below contains very detailed information about the Group numbers for the Scope 2 emissions resulting from our electricity consumption. We differentiate between the market-based and location-based methods, thereby adhering to the GHG Protocol Scope 2 Guidance. Market- and location-based emissions are reported in CO$_2$ equivalents (CO$_2$e). This change was made in order to allow a transparent comparison between Scope 1 to 3 emissions and to be consistent with the requirements of the Science-Based Targets Initiative, to which the new target is also geared. The leading reporting method is the market-based approach. This method is used to calculate emissions with a specific emissions factor (provider factor) per DT company. This factor depends on a company's actual energy procurement (electricity mix); procuring renewable energy (direct purchase, certificates) reduces emissions.a)

In contrast to the market-based method, with the location-based method the emissions factors for the respective country are used (the country mix factor of the International Energy Agency (IEA)). A company's actual energy procurement (electricity mix) is hence not taken into account, i.e., not even the procurement of renewable energy over and above the country mix.

Change compared to the previous year: The Scope 2 emissions calculated according to the market-based method are about 20 percent lower than in the previous year. The main reason for this is the direct purchase of renewable energy at T-Mobile US and the increased purchase of renewable energy certificates (RECS , GoO) at our national companies in Germany.

CO$_2$e emissions (Scope 1 & 2) in t

Scope 1 and Scope 2 („market-based") [a, b]	2017	2018	2019
Total in million	2.9	2.4	1.8 ✓
t CO$_2$e emissions Scope 1	284 510	276 727	256 476 ✓
t CO$_2$e emissions Scope 2 („market-based") [a, b]	2 611 055	2 077 415	1 545 541 ✓
t CO$_2$e emission reduction through additional purchase of electricity from renewable energies (PPA, GOO, RECS)	423 504	573 764	1 506 541
Scope 2 („location-based")			
t CO$_2$e emissions (Scope 2, „location-based")	3 454 776	3 476 569	3 440 818 ✓

a) If no provider factors are available for the market-based method, the country-related residual factor is used (based on the RE-DISS project of the European Commission, which assessed the national share of renewables). If there is no residual factor available either, the IEA factor is used (same as with the location-based method). As a rule, the value of the emission factor in the residual mix is higher than the IEA's country mix factor. Renewable energy certificates are included in all cases.
b) For our national company T-Mobile US, the market-based Scope 2 emissions were calculated using the eGRID emissions factors, which are reported by the American Environmental Protection Agency according to different grid regions in the USA. In addition, the quantities of electricity from renewable energy sources obtained under Power Purchase Agreements (PPAs) were taken into account in reducing emissions.

✓ Data verified by PwC. For detailed audit comments see „DT Group in Germany" and „T-Mobile USA".
✓ Data assured by PwC. For detailed assurance comments see „DT Group in Germany" and „T-Mobile USA".
✓ Data assured by PwC. The 2017 calculation was based on the utility's electricity mix. If this is was not possible, the residual mix or country mix was used. Values cannot be directly compared to the previous year. For detailed assurance com   ments see „DT Group in Germany" and „T-Mobile USA".

Reporting against standards

By reporting our direct and indirect CO2 emissions (Scope 1 & 2) in accordance with the Greenhouse Gas Protocol, we fully cover the GRI 305-1 (Direct GHG emissions) and GRI 305-2 (Energy indirect GHG emissions) and partially cover the E02-01 (Total Scope 1-3 greenhouse gas emissions) EFFAS indicator. This data is also relevant for criteria 11 and 12 (Usage of natural resources) and 13 (GHG emissions) of the German Sustainability Code. It is also used for reporting on the Global Compact principles 7 (Precautionary approach) and 8 (Promoting environmental responsibility).
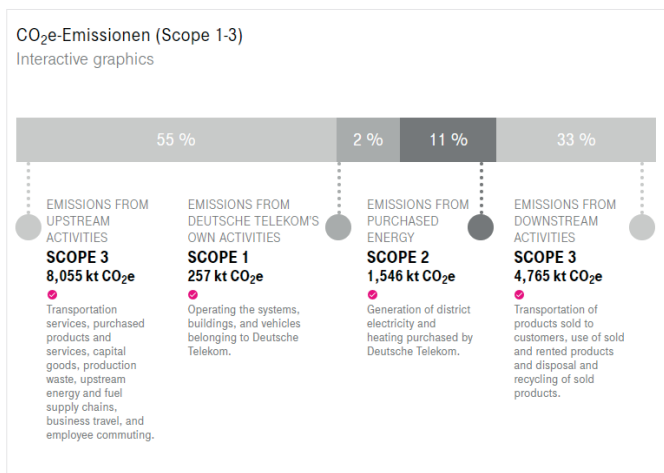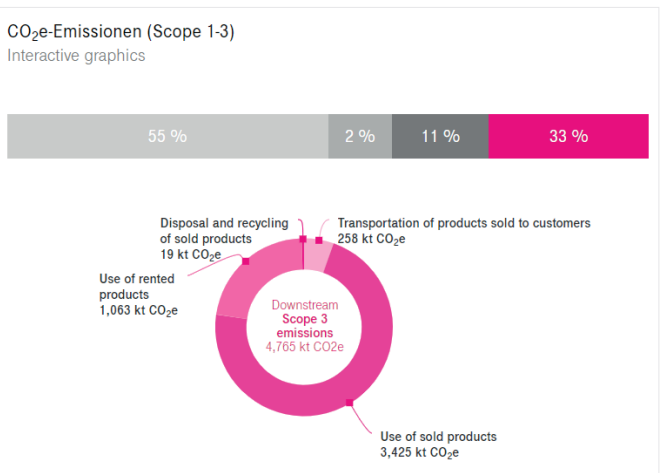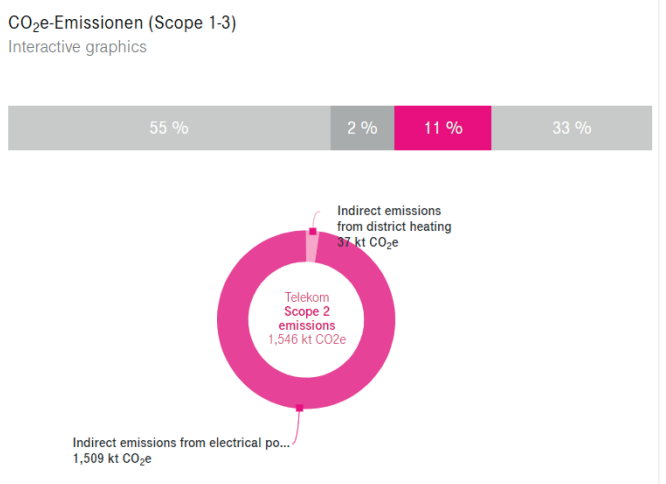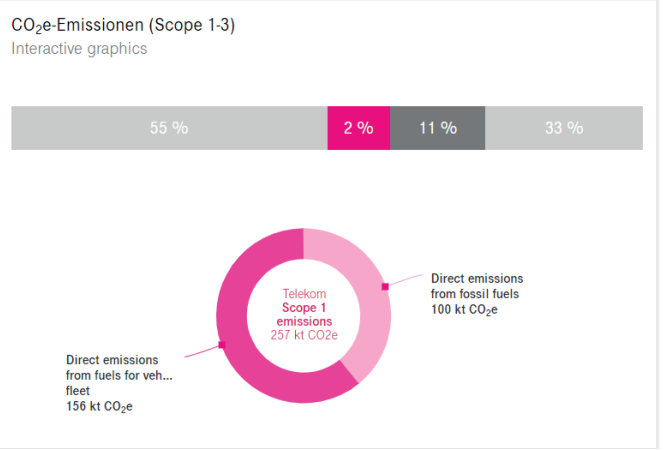
TOTAL CO$_2$E-EMISSIONS (SCOPE 3) DEUTSCHE TELEKOM IN EUROPE*

The majority of our total emissions can be classified as Scope 3 emissions. Scope 3 emissions are all emissions from the upstream and downstream value chain, which are generated in the supply chain, by business travel, commuter traffic ("upstream") or at the customer's premises by the use of products and services ("downstream"). Their recording is based on the globally recognized "Greenhouse Gas (GHG)" protocol.

The graph shows Scope 3 emissions from 2017-2019, classified by emission sources. Upstream emissions accounted for around 46% of Scope 3 emissions in 2019, while downstream emissions accounted for around 54%. The basic data used to calculate Scope 3 emissions are reported in the key figure tool. You will find more information on recording Scope 3 emissions along the value chain here.

in kt CO2e

	2017	2018	2019
Total	10,299	9,111	7,976
Downstream leased assets	1,034	1,088	1,063
Use of sold products	4,769	3,778	3,107
Employee commuting	470	385	359
Business travel of employees	361	359	
Upstream transportation & distribution	479	365	289
Purchased goods and services	1,816	1,567	1,226
	1,176	1,291	1,566

Downstream:
- Downstream leased assets
- End-of-life treatment of sold products
- Use of sold products
- Downstream transport

Upstream:
- Employee commuting
- Business travel of employees
- Waste generated in operations
- Upstream transportation & distribution
- Fuel- and energy-related activities
- Capital goods
- Purchased goods and services

Reporting against standards

By reporting this data, we fully cover the GRI 305-3 (Other indirect GHG emissions) and the E02-01 (Total Scope 1-3 greenhouse gas emissions) EFFAS indicator. This data is also relevant for criteria 11 and 12 (Usage of natural resources) and 13 (GHG emissions) of the German Sustainability Code. It is also used for reporting on the Global Compact principles 7 (Precautionary approach) and 8 (Promoting environmental responsibility).

CO_2 COMPENSATION

Preventing greenhouse gas emissions is one of our top priorities. CO_2 emissions that we are unable to prevent or reduce can be compensated by investing in certified climate protection projects in addition to devoting greater efforts to using renewable energy sources.

Telekom Deutschland compensated for just under 6,271 metric tons of CO_2 in the 2019 reporting year. These included emissions associated with our events (participants' travel to and from the event, room usage, etc.) and certain products and services (e.g., conference calls or web conferences). Our Event Policy specifies the ways in which we compensate for emissions generated by events.

ENABLEMENT FACTOR

ENABLEMENT FACTOR: CUSTOMERS SAVING ON CO_2 EMISSIONS

In addition to our own carbon footprint, we also calculate the positive CO_2 effects facilitated for our customers through using our products and solutions. The ratio between these two figures – the "enablement factor" – allows us to assess our overall performance when it comes to climate protection. Since 2014, we have examined the savings potential for various products, 16 of which were in 2019.
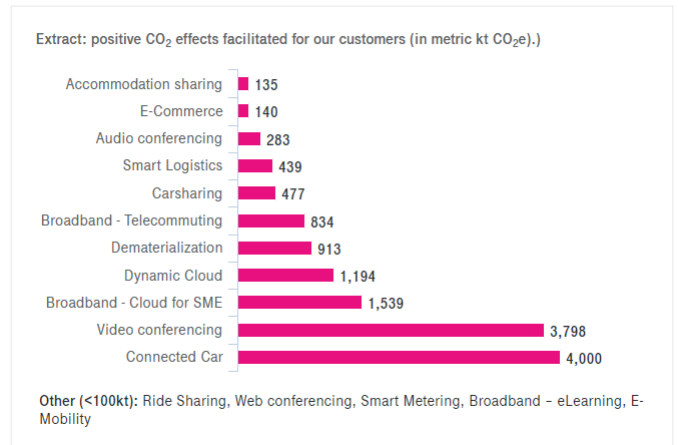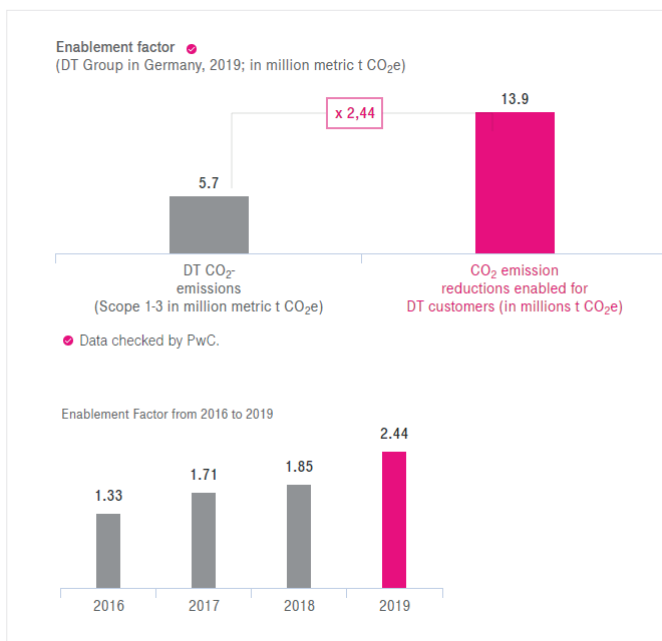
One example of savings made possible by our products is cloud computing, which enables our customers to reduce their CO_2 emissions by using our cloud services and outsourcing their existing infrastructure to our efficient data centers. Better servers, more energy-efficient data centers, and higher infrastructure capacity utilization can cut energy consumption and the associated emissions by up to 80 percent.

ESG KPI ENABLEMENT FACTOR FOR DT GROUP IN GERMANY

We use the "Enablement Factor" to measure our overall performance in climate protection. According to this, in 2019 in Germany the positive CO_2 effects enabled by our customers were 144% higher than our own CO_2 emissions (enablement factor of 2.44 to 1).

The positive CO_2 effects facilitated for our customers through the use of our products and solutions rose from 12.1 to 13.9 million tons in 2019.

With the ESG KPI "Enablement factor" we calculate the positive CO_2 effects that arise on the customer side through the use of our products.

Enablement factor ●
(DT Group in Germany, 2019; in million metric t CO_2e)

x 2,44

13.9

5.7

DT CO_2-emissions
(Scope 1-3 in million metric t CO_2e)

CO_2 emission reductions enabled for DT customers (in millions t CO_2e)

● Data checked by PwC.

Enablement Factor from 2016 to 2019

2016	2017	2018	2019
1.33	1.71	1.85	2.44

Extract: positive CO_2 effects facilitated for our customers (in metric kt CO_2e).)

Accommodation sharing	135
E-Commerce	140
Audio conferencing	283
Smart Logistics	439
Carsharing	477
Broadband - Telecommuting	834
Dematerialization	913
Dynamic Cloud	1,194
Broadband - Cloud for SME	1,539
Video conferencing	3,798
Connected Car	4,000

Other (<100kt): Ride Sharing, Web conferencing, Smart Metering, Broadband – eLearning, E-Mobility

Reporting against standards

Information on the enablement factor is relevant for GRI Indicator GRI 305-5 (Reduction of Greenhouse Gas Emissions). The information is relevant for the EFFAS KPI S13-01 (Intermodality). It is furthermore relevant for criterion 13 (Climate-relevant emissions and objectives) of the German Sustainability Codex. It is also used for reporting on the Global Compact principles 7 (Precautionary approach) and 8 (Promoting environmental responsibility).

ESG KPI ENABLEMENT FACTOR FOR DEUTSCHE TELEKOM GROUP IN EUROPE

In 2019, the positive CO_2 effects enabled by our customers across Europe were 74% higher than our own CO_2 emissions (enablement factor of 1.74 to 1).

The positive CO_2 effects made possible on the customer side by using our products and solutions amounted to almost 15.8 million tonnes in the reporting year.

With the ESG KPI "Enablement factor" we calculate the positive CO_2 effects that arise on the customer side through the use of our products.

Enablement factor
(DTAG excl. USA, 2019)

x 1.74

15.8

9.0

DT CO_2-emissions
(Scope 1-3 in million metric t CO_2e)

CO_2 emission reductions savings by DT customers (in millions t CO_2e)

Enablement Factor from 2016 to 2019

2016	2017	2018	2019
0.95	1.21	1.21	1.74

Extract: positive CO_2 effects facilitated for our customers (in metric kt CO_2e).)

E-Commerce	129
Accommodation sharing	221
Audio conferencing	259
Smart Logistics	439
Carsharing	602
Web Conferencing	860
Dematerialization	1,164
Broadband - Telecommuting	1,191
Dynamic Cloud	1,463
Broadband - Cloud for SME	1,986
Connected Car	2,442
Video conferencing	3,076

Other (<100kt): Smart Metering, Ride Sharing, Broadband – eLearning, E-Mobility

Reporting against standards

Information on the enablement factor is relevant for GRI Indicator GRI 305-5 (Reduction of Greenhouse Gas Emissions). The information is relevant for the EFFAS KPI S13-01 (Intermodality). It is furthermore relevant for criterion 13 (Climate-relevant emissions and objectives) of the German Sustainability Codex. It is also used for reporting on the Global Compact principles 7 (Precautionary approach) and 8 (Promoting environmental responsibility).
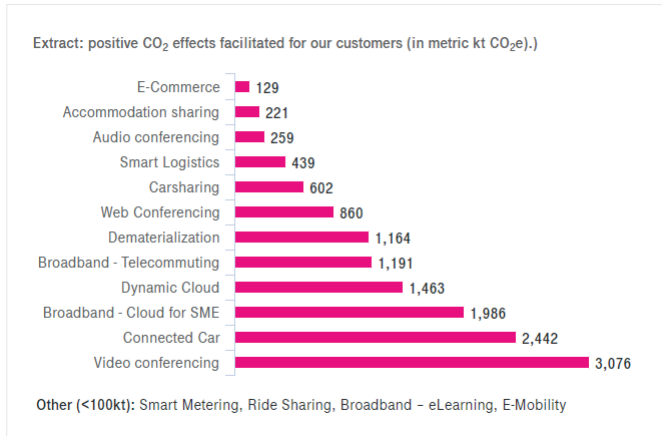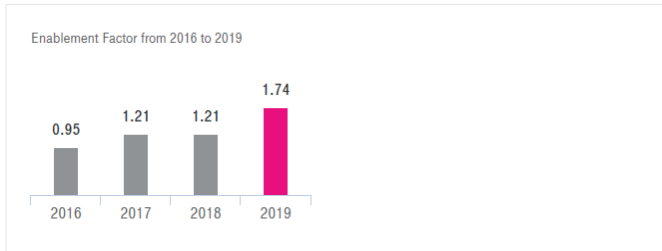
ENERGY CONSUMPTION & EFFICIENCY

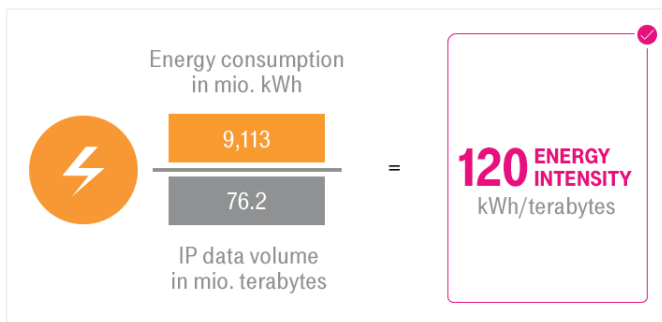### OUR APPROACH FOR ENERGY-EFFICIENT NETWORKS
We operate our own fixed-line and mobile networks in Europe and the United States. The majority of our energy requirements come from operating this network infrastructure. In the interest of our customers, we continue to increase the capacity and performance of our networks so that we can handle growing amounts of data and improve the speed and quality of data transmission. However, this also means higher energy requirements. In order to reduce our energy needs, we are pursuing the following approaches:

- We are updating our network infrastructure, e.g., by migrating to IP technology and removing equipment we no longer need.

- We are optimizing energy generation and supply with the help of technical innovation.

- We are working on firmly embedding the aspect of "energy efficiency" in the architecture and design phase of new technology selection through specifications and requirements.

- We use energy-efficient technology not just for our networks, but also for lighting, monitoring, and – most importantly – cooling our systems. Our internal energy service provider, Power & Air Solutions, whose energy management has been ISO 50001 certified since 2013, plays a key role in these activities.

ENERGY INTENSITY ESG KPI DEUTSCHE TELEKOM GROUP
Since 2016, we have reported on the Energy Intensity ESG KPI. In contrast to the existing Energy Consumption ESG KPI, the new ESG KPI shows energy consumption in proportion to the transmitted data volumes. Using data volume as a reference parameter makes it possible to create a direct link to the performance of our networks.

Our ambition: decrease KPI

Energy consumption in mio. kWh

9,113 / 76.2 = **120** ENERGY INTENSITY kWh/terabytes

IP data volume in mio. terabytes

● Data assured by PwC. For detailed assurance comments see „DT Group in Germany"

The ESG KPI figure also takes into account total energy consumption for all energy sources – fuel, gas, district heating and electricity. The data volume is composed of the transmitted IP data volumes (including Voice over IP, Internet, IP-TV).

in kWh *

2017	2018	2019
194	163	120

Reporting against standards
The Energy Intensity ESG img KPI is relevant for the GRI indicator GRI 302-3 (Energy Intensity). This information is relevant for EFFAS KPI E01-01 (Energy consumption, total). It is furthermore relevant for criterion 12 (Resource management) of the German Sustainability Codex. It is also used for reporting on the Global Compact Principles 7 (Precautionary approach) and 8 (Promoting environmental responsibility).

ENERGY INTENSITY ESG KPI DT GROUP IN GERMANY
Since 2016, we have reported on the Energy Intensity ESG KPI. In contrast to the existing Energy Consumption ESG KPI, the new ESG KPI places the energy consumption into a ratio with the managed data volumes. Using data volume as a reference parameter makes it possible to create a direct link to the performance of our networks.

Energy consumption in mio. kWh

3,382 / 45.7 = **74** ENERGY INTENSITY kWh/terabytes

IP data volume in mio. terabytes

● Data assured by PwC. Data is partly based on estimates, assumptions and extrapolations. The calculation method was adjusted in 2017. Values cannot be directly compared to the previous year.

The ESG KPI figure also takes into account total energy consumption for all energy sources – fuel, gas, district heating and electricity. The data volume is composed of the transported IP data volumes (including IP telephone, internet, IP-TV).

in kWh

142   110   74
2017 a)   2018   2019

a) The calculation method of the IP data volume was adjusted in 2017.

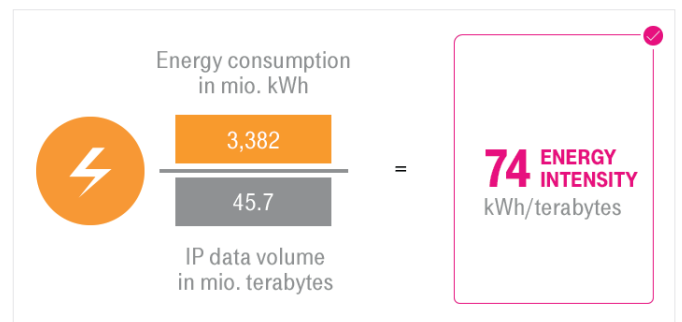### Reporting against standards

The Energy Intensity ESG KPI is relevant for the GRI indicator GRI 302-3 (Energy Intensity). This information is relevant for EFFAS KPI E01-01 (Energy consumption, total). It is furthermore relevant for criterion 12 (Resource management) of the German Sustainability Codex. It is also used for reporting on the Global Compact Principles 7 (Precautionary approach) and 8 (Promoting environmental responsibility).
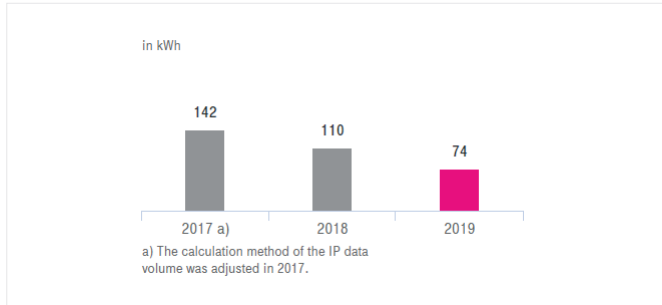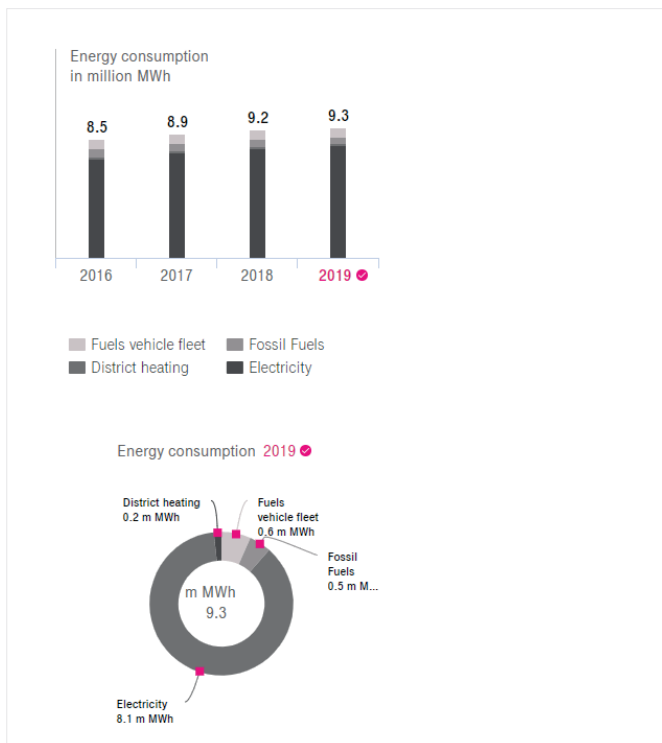
TOTAL ENERGY CONSUMPTION

Total energy consumption indecreased by 1 percent year over year as a result of the rapidly growing data traffic and the corresponding continuous network expansion. In order to achieve our climate goal, we are focusing on areas with especially high energy consumption, such as our networks and data centers. For instance, we are migrating our network infrastructure to IP technology, which is not only more powerful, but also consumes less electricity than existing technologies.
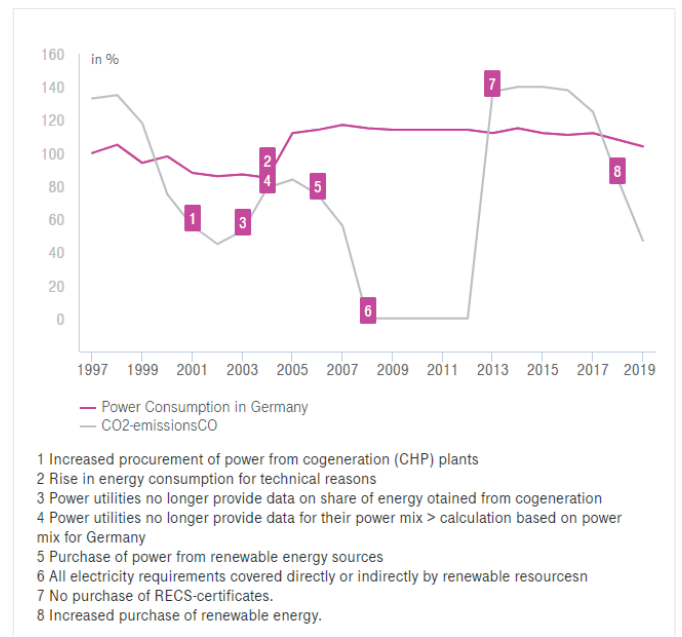
Energy consumption
in million MWh

8.5   8.9   9.2   9.3
2016   2017   2018   2019 ✓

■ Fuels vehicle fleet   ■ Fossil Fuels
■ District heating   ■ Electricity

Energy consumption 2019 ✓

District heating 0.2 m MWh
Fuels vehicle fleet 0.6 m MWh
Fossil Fuels 0.5 m M...
m MWh 9.3
Electricity 8.1 m MWh

⊘ Data assured by PwC. For detailed assurance comments see „DT Group in Germany" and „T-Mobile US".

Reporting against standards

By reporting our energy consumption from primary energy sources, we partially cover the GRI 302-1 (Energy consumption within the organization) GRI indicator and the E01-01 (Energy consumption, total) EFFAS indicator. By reporting fleet energy consumption, we also partially cover the GRI 307-1 (Environmental impact of transportation) GRI indicator. This data is also relevant for criterion 11 of the German Sustainability Code (Usage of natural resources). It is also used for reporting on the Global Compact principles 7 (Precautionary approach) and 8 (Promoting environmental responsibility).

DECOUPLING POWER CONSUMPTION AND CO_2 EMISSIONS

Deutsche Telekom was able to reduce the emissions generated by its electricity consumption to zero from 2008 to 2012 by purchasing RECS certificates (Renewable Energy Certificate System). However, we feel that these certificates have not had as positive an impact on the environment as we had hoped. Demand for certificates was generally limited. As a result, RECS certificates do not make a noticeable contribution to encouraging the expansion of renewable energy sources. That is why we feel it makes more sense both in terms of ecological and economic aspects to invest in reducing our energy consumption and increasing our energy efficiency than to purchase RECS certificates. We are also increasingly purchasing electricity from renewable energies.

in %

160 140 120 100 80 60 40 20 0
1997 1999 2001 2003 2005 2007 2009 2011 2013 2015 2017 2019

— Power Consumption in Germany
— CO2-emissionsCO

1 Increased procurement of power from cogeneration (CHP) plants
2 Rise in energy consumption for technical reasons
3 Power utilities no longer provide data on share of energy otained from cogeneration
4 Power utilities no longer provide data for their power mix > calculation based on power mix for Germany
5 Purchase of power from renewable energy sources
6 All electricity requirements covered directly or indirectly by renewable resourcesn
7 No purchase of RECS-certificates.
8 Increased purchase of renewable energy.

Reporting against standards

By providing this information, we fully cover the E16-05 (Alternative energy consumption) EFFAS indicator. This data is also relevant for criteria 3 (Strategic analysis, strategy and goals), 11 and 12 (Usage of natural resources) of the German Sustainability Code. It is also used for reporting on the Global Compact principles 7 (Precautionary approach) and 8 (Promoting environmental responsibility).

ENERGY EFFICIENCY IN BUILDINGS

Deutsche Telekom in Germany focuses its energy management efforts on energy savings. Accordingly, we continuously monitor and supervise all resources that require energy. Based on this data, we identify where there is potential for increasing efficiency. The goal of energy management is to minimize the primary demand for building electricity and heating energy. Sustainability aspects are crucial for the selection of future energy carriers.

1. Achieving these goals includes pursuing the following strategies:

Through innovative location and office concepts, we are reducing vacancies and optimizing the use of space in our buildings.

2. We identify the need for reduction in energy consumption by using specific indicators such as "kilowatt hours per square meter" to compare similar facilities. We also carry out load profile analyses for individual buildings to identify anomalies in their energy consumption.

3. Through communication measures, we want to raise awareness of energy consumption among our employees and motivate them to be energy-conscious in the workplace.

The Deutsche Telekom subsidiary Power & Air Solution Management GmbH (PASM) procures energy for the German Deutsche Telekom Group companies. Its energy management system is certified according to the ISO 50001 international standard. In addition, Deutsche Telekom's real estate holdings undergo an energy audit according to DIN standard 16247 every four years.

Heating and hot water

We regularly assess the need for repairs at our properties and conduct profitability analyses to further reduce consumption, concentrating on necessary and especially economic measures, such as:

- Energy optimization of heating systems (e.g., by replacing old burner technologies)

- Updating heat generators and related hydraulic components (such as pumps and valves)

- Using waste heat (e.g., by using heat recovery systems)

- Using combined heat and power generation (e.g., by combined heat and power units)

- Reducing supply losses when heating water (e.g., by switching to decentralized hot water supply)

Electricity

The supply infrastructure of office buildings accounts for the biggest share of building electricity consumption (e.g., pumps, ventilation and cooling systems, building automation systems, elevators, and lighting). To reduce electricity consumption, we are focusing our measures on the following areas:

- Using LED lighting and motion sensors

- Using efficient building technology (e.g., high-efficiency pumps, frequency-dependent ventilation)

- Optimizing pre-programmed usage profiles (such as through absence profiles)

- Using efficient building automation systems

Building shell

The energy efficiency of the building shell is critical for all construction and renovation measures. This includes the energy-based design of facades, roofing, doors, and windows.

ESG KPI "PUE" – REDUCED CO_2 GENERATION AT DATA CENTERS

An important indicator for controlling our climate protection measures and the efficiency of our data centers is the annual "Power Usage Effectiveness (PUE)" value.

The PUE factor is an indicator of the increased efficiency of the infrastructure in our data centers. The factor is calculated using the ratio between the total electrical energy consumed by the data center and the amount of electrical energy consumed by IT. We were able to reduce the average global PUE factor at our T-Systems data centers from 1.85 to 1.64 between 2011 and 2019. A reduction from 1.67 to 1.56 was also achieved for Germany between 2008 and 2019.

To reduce CO_2 emissions at our data centers (DC), we are optimizing energy consumption at individual data center locations and improving processes throughout the global data center landscape. Our state-of-the-art data centers, e.g., in Munich or Biere, are set up for a PUE value of 1.36 and are therefore much more efficient than the average for German data centers, which lies at about 1.8. We are planning to reduce the PUE factor of our fixed-line network in Germany to 1.4 by the year 2020. For this value, we also forecast an additional reduction in the coming years. This will allow us in part to compensate for increasing energy requirements due to growing volumes of data and new features.

Data Center PUE

Legend: Germany (pink), Global [a] (gray)

Year	Germany	Global [a]
2011	1.63	1.84
2014	1.63	1.76
2015	1.54	1.79
2016	1.54	1.66
2017	1.57	1.64
2018	1.56	1.63
2019	1.56	1.64

a) International + DT Group in Germany
● Data assured by PwC.
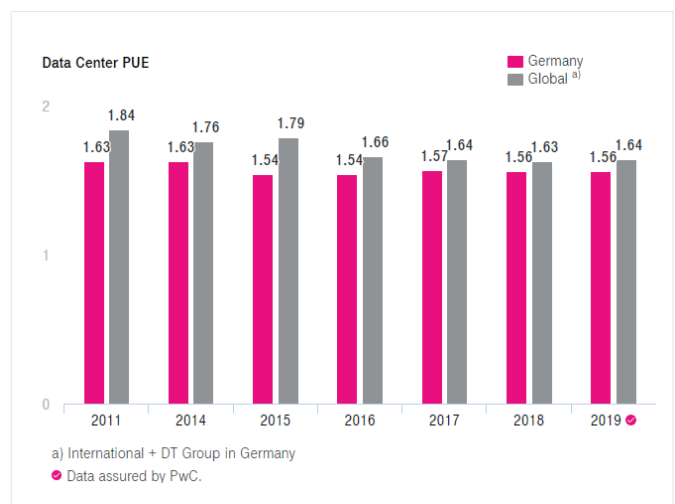
Data centers are becoming more energy-efficient

The "DC11@2018" program ran from 2013 to 2018. Its objective was to combine data center capacity worldwide with the latest IT technology and hence improve energy efficiency. The goal was to achieve an average PUE value of 1.4. To do this, data center space and locations were reduced and existing data center infrastructure was virtualized. This involved decommissioning several old data centers in Germany. At the Biere and Munich data centers and at other international data centers such as the Barcelona site in Spain, air conditioning was optimized.

However, we were not able to achieve the targeted PUE value of 1.4. At the end of 2019, the same figure was 1.64. This is in part due to the gradual shutdown of old data centers, which become less efficient during decommissioning as less capacity is used. Another reason is the commissioning of the newly built Biere data center (second construction phase), which initially produced low efficiency due to low capacity utilization. It is now in the ramp-up phase and efficiency is improving along with increased capacity utilization.

DATA CENTERS ARE BECOMING MORE ENERGY-EFFICIENT

PUE factor

⚡ 1.85

⚡ 1.56

The PUE factor (energy input)
fell from 1.85 (2008) to 1.56 (2019).

2008   2019
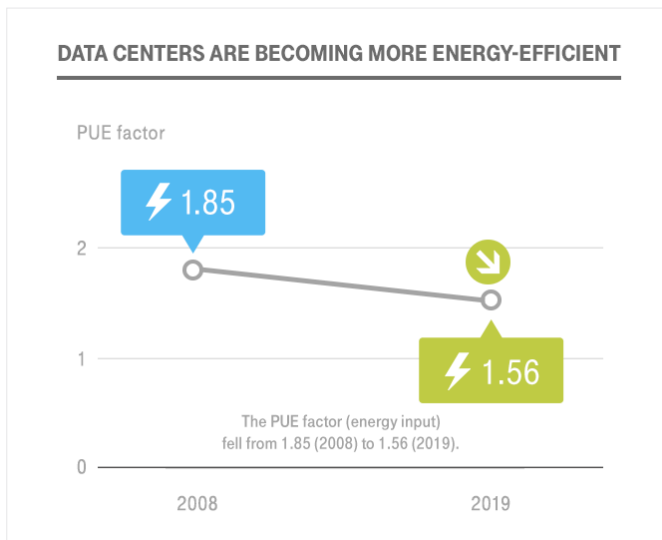
Additional measures were identified at the end of the "DC11@2018" program. As a result, the follow-up program "Data Center Next" was launched at the beginning of 2019 with the aim of further homogenizing the IT landscape and purposefully optimizing utilization of the data center infrastructure according to IT requirements in order to further improve efficiency. The program utilizes factors that have a positive influence on a data center's PUE development, such as selective cooling and raising the temperature within the possible range, while taking into account defined limit values.

Our target PUE value for our highly efficient data center in Biere is 1.3. To achieve this target, it will be necessary to adhere to a prescribed temperature range, achieve a capacity utilization of at least 80 percent, and create an IT landscape that is as homogeneous as possible. By taking steps such as migrating data from inefficient data centers to Biere, we achieved a PUE metric there of 1.32 by the end of 2019. The data center was also awarded the respected LEED Gold sustainability certification (Leadership in Energy and Environmental Design).

RENEWABLE ENERGY

OUR APPROACH FOR MORE RENEWABLE ENERGY

Renewable energies are an important element in avoiding greenhouse gases: By 2021, we want to obtain all of our electricity from renewable energies. To do that, we are sourcing more green electricity directly, acquiring corresponding guarantees of origin, or concluding power purchase agreements (PPAs), as is the case in the United States. Whenever possible and practicable, we invest in our own power plants – for instance in the construction of cogeneration plants and the installation of photovoltaic systems.

We have been recording the "Renewable Energy" ESG KPI since 2016. In addition, we have developed parameters that apply Group-wide and let us assess electricity procurement at our national companies in terms of sustainability aspects in order to further increase the share of electricity from renewable sources in the future.

Since 2019, we have also been testing alternatives for a climate-neutral power supply for mobile masts using fuel cells. They are economical, silent, low-maintenance, and, thanks to the use of bio-methanol, they are one thing in particular: carbon neutral.
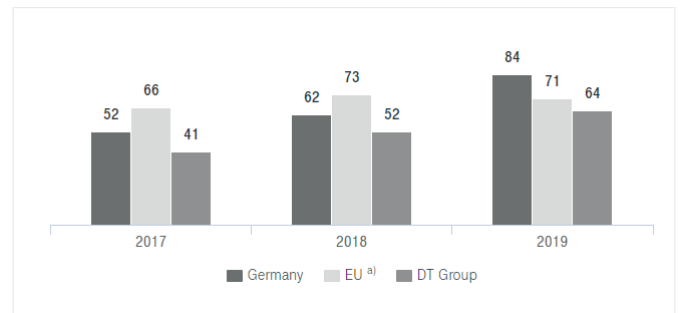
RENEWABLE ENERGY ESG KPI

The Renewables ESG KPI is calculated based on the share of renewable energy in the total electricity consumption. We are committed to increasing our reliance on renewable energy throughout the Group. The new climate protection target includes obtaining 100 percent of energy requirements from renewable sources. To this end, all national companies can purchase renewable energy directly as well as through certificates (guarantees of origin for electricity from renewable sources) if needed.

In 2019, Deutsche Telekom obtained 64 percent of its electricity from renewable sources.

The average share of electricity from renewable sources in the country mix across all countries where Deutsche Telekom is active was 31 percent. This was based on the supplier-specific electricity mix, the residual mix or the average country mix according to the U.S. Energy Information Administration, depending on the statistics available. The residual mix uses country-related residual factors (based on the RE-DISS project of the European Commission, which assessed the national share of renewables following subtraction of declared quantities of electricity). The share of renewable energy in the residual mix is typically lower than the share in the country mix. For Germany, the EEG surcharge paid is taken into account when calculating the share of renewable energy.

The share of electricity obtained from renewable sources based on the country mix amounted to 24 percent ("remaining" country mix). [b]

Share of renewable energy in the total electricity consumption (in %)

	2017			2018			2019		
	D	EU [a]	Group	D	EU [a]	Group	D	EU [a]	Group
Electricity from renewable energy (in GWh)	1 497	1 154	3 110	1 702	1 335	4 091	2 242	1 336	5 196
Total electricity consumption (in GWh)	2 879	1 738	7 546	2 769	1 840	7 874	2 656	1 880	8 102
Renewable Energy (ESG KPI)	52%	66%	41%	62%	73%	52%	84% 🔴	71%	64% 🔴
Ren. energy mix	49%	25%	30%	53%	30%	32%	52%	30%	31%
Certificates	6%	40%	12%	17%	49%	18%	32%	48%	22%
Self-generation	0.12%	0.04%	0.05%	0.12%	0.04%	0.05%	0.12%	0.04%	0.05%
Direct purchase	0.0%	12.9%	3.3%	0.0%	13.0%	10.7%	0.0%	12.9%	17.7%
„Remaining" country mix [b]	46%	13%	26%	44%	11%	23%	52%	10%	24%

[a] EU = National companies in Europe excluding Germany and T-Systems

[b] The „remaining" country mix represents the remaining share of renewable energy from the national electricity mix, after subtracting direct purchases, certificates, and self-generation.

🔴 Data assured by PwC. The 2017 calculation was based on the utility's electricity mix for the first time, which also takes renewable energy from the EEG surcharge into account for Germany.. The 2017 calculation was based on the utility's electricity mix. If this is was not possible, the residual mix or country mix was used. Values cannot be directly compared to the previous year. For detailed assurance comments see „DT Group in Germany" and „T-Mobile USA".

RENEWABLE ENERGY IN THE GROUP

We are committed to increasing our reliance on renewable energy throughout the Group. To this end all European national companies can also purchase renewable energy certificates if needed.

in MWh

5,195,520

■ Self-produced heat: 15
■ Biogas: 902
■ Self-produced electricity: 3,916
■ RECS certificates: 42,911
■ Direct sourcing: 1,436,283
■ GOOs (guarantees of origin): 1,773,573
■ Sourcing renewable energy from power mix: 1,937,920

2019
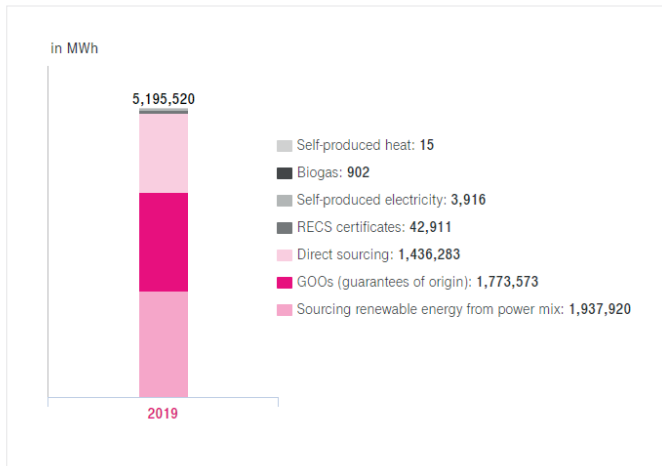
RENEWABLE ENERGY IN THE NATIONAL COMPANIES

Group-wide, we have set ourselves the goal of using electricity from renewable energy sources alone from 2021. In the reporting period, the share of renewable energy at our national companies was an average of almost 30 percentage points above the respective country mix*. To achieve this, the national companies can also consider acquiring certificates (guarantees of origin) and concluding power purchase agreements (PPAs) for electricity obtained from renewable energy.

Our national companies in Greece (OTE), Croatia, the Netherlands, Austria, and Hungary are already pioneers in this field and cover 100 percent of their electricity needs with renewable energies. Due to the EEG levy, 50 percent of the electricity purchased in Germany already consists of renewable energies. As a result of the current market situation, the rest will be covered by the purchase of guarantees of origin. T-Mobile US is planning on procuring its electricity entirely from renewables by 2021 – predominant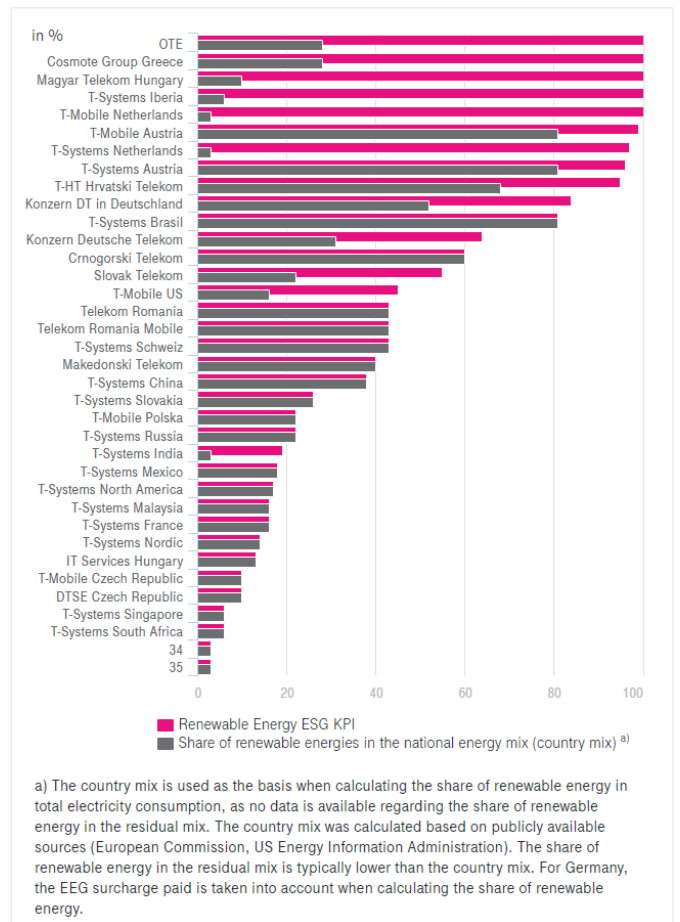ly from wind power. In order to achieve these targets, T-Mobile US has concluded long-term agreements (12-15 years) with wind and solar park operators. That gives the power producers security of investment. As a result, in the United States, two new wind farms have already been set up and a further wind farm and four solar parks are to follow by 2021.

We have been reporting on the Renewable Energy ESG KPI since 2016. It is calculated based on the share of renewable energy in total electricity consumption, and is compared here to the share of renewable energy in the national energy mix (country mix) for all national companies.

in %

OTE
Cosmote Group Greece
Magyar Telekom Hungary
T-Systems Iberia
T-Mobile Netherlands
T-Mobile Austria
T-Systems Netherlands
T-Systems Austria
T-HT Hrvatski Telekom
Konzern DT in Deutschland
T-Systems Brasil
Konzern Deutsche Telekom
Crnogorski Telekom
Slovak Telekom
T-Mobile US
Telekom Romania
Telekom Romania Mobile
T-Systems Schweiz
Makedonski Telekom
T-Systems China
T-Systems Slovakia
T-Mobile Polska
T-Systems Russia
T-Systems India
T-Systems Mexico
T-Systems North America
T-Systems Malaysia
T-Systems France
T-Systems Nordic
IT Services Hungary
T-Mobile Czech Republic
DTSE Czech Republic
T-Systems Singapore
T-Systems South Africa
34
35

0   20   40   60   80   100

■ Renewable Energy ESG KPI
■ Share of renewable energies in the national energy mix (country mix) [a]

a) The country mix is used as the basis when calculating the share of renewable energy in total electricity consumption, as no data is available regarding the share of renewable energy in the residual mix. The country mix was calculated based on publicly available sources (European Commission, US Energy Information Administration). The share of renewable energy in the residual mix is typically lower than the country mix. For Germany, the EEG surcharge paid is taken into account when calculating the share of renewable energy.

* In the calculation of the share of renewable energy in electricity procurement, the provider mix, the residual mix, or the country mix is used as available, according to the IEA factor (in this order). The share of renewable energy in the residual mix is typically lower than the share in the country mix. For Germany, the EEG surcharge paid is taken into account when calculating the share of renewable energy.

MOBILITY

OUR STRATEGY FOR CLIMATE-FRIENDLY MOBILITY IN GERMANY

Since 2008, we have been able to reduce CO_2e emissions caused by our vehicle fleet by more than 40 percent or 74 kt CO_2. Two factors were chiefly responsible for this: the increased use of CO_2-optimized vehicles and reduced vehicle demand. Each year, our fleet shrinks by some 1,000 vehicles, as modern technologies allow us to make fewer service calls to our customers.

The transition to climate-friendly mobility requires not only environmentally friendly drive systems (such as electric/natural gas) but also intelligent connectivity of all existing and new forms of mobility – for instance, we want to combine company and public transport on one digital platform for employees commuting between home and work. The key terms here are "sharing" and "Mobility as a Service" (MaaS).

To achieve our goal, we are pursuing a three-pillar mobility strategy:

- Improve: establish a more efficient and continuously sustainable fleet and integrate methods of micro-mobility (e.g., bicycles)

- Connected fleet: link existing and new mobility services, and expand digital pooling and sharing solutions

- Innovate: build an "MaaS" platform for Deutsche Telekom employees and develop additional supporting products and services

Last year, we were able to significantly increase the number of alternative drives. We started regular operation of electric and eco-friendly natural gas vehicles, or are about to do so, for various fleet segments.

Through our involvement in a nationwide funding project sponsored by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and the Federal Ministry of Economics and Technology (BMWi), we will add further locations for electromobility in the next two years. We are working together on this with other units in the Group: ComfortCharge as the operator of the charging infrastructure, the Deutsche Telekom field service as a partner for installation and support, and Get Charge as charging current and billing service provider.

Nevertheless, the high acquisition costs of electric vehicles compared with combustion vehicles and the required charging infrastructure significantly limit their use. Despite subsidies and lower fuel and maintenance costs, the vehicles are still substantially more expensive than diesel or gasoline-powered vehicles. Also, the available range of models is still smaller compared to models with conservative drives.

NUMBER OF VEHICLES

The total number of vehicles at our company decreased year over year by around 1 percent.For detailed comments on the figures for each individual company, please refer to the interactive benchmarking tool. .

	2016	2017	2018[a]	2019
Total number	**41 663**	**40 768**	**40 225**	**39 906**
Number of vehicles with diesel engines	34 941	34 640	34 460	33 547
Number of vehicles with gas engines	6 396	5 792	5 411	5 370
Number of alternative fuel vehicles	326	336	354	989
Number of company cars	12 161	11 836	11 520	11 602
Number of service vehicles	29 502	28 932	28 705	28 304

[a] The values were corrected compared to the information published in the previous year's report.

The total number of our vehicles with alternative drive systems has more than doubled compared to the previous year. When purchasing company and business vehicles, we continue to use alternative or low-consumption drive systems wherever economically feasible.

Reporting against standards

Logistics and transport are carried out by service providers at Deutsche Telekom. The environmental impacts of transportation are influenced by the contractual arrangements with service providers. This data is also relevant for criterion 11 (Usage of natural resources) of the German Sustainability Code.

FUEL CONSUMPTION

Overall fuel consumption fell by approximately 4 percent, and by 3 and 6 percent respectively for company cars and service vehicles. For detailed comments on the figures for each individual company, please refer to the interactive benchmarking tool.

| in liter	2016	2017	2018	2019 ●
Fuel consumption (total)	**67 813 891**	**65 641 719**	**63 830 580**	**61 183 482**
Fuel consumption by diesel-powered vehicles	51 097 161	49 482 133	47 739 113	44 757 224
Fuel consumption by gasoline-powered vehicles	16 575 266	16 074 082	15 981 500	16 217 429
Fuel consumption by vehicles with alternative drives	141 464	85 505	109 967	208 830
Fuel consumption by company cars	23 816 501	22 141 361	20 999 018	19 796 562
Fuel consumption by service vehicles	43 997 390	43 500 359	42 831 562	41 386 920

● Data audited by PwC. For detailed assurance comments see „DT Group in Germany" and „T-Mobile USA". Data is partly based on estimates, assumptions and projections.

Reporting against standards
Logistics and transport are carried out by service providers at Deutsche Telekom. The environmental impacts of transportation are influenced by the contractual arrangements with service providers. This data is also relevant for criterion 11 (Usage of natural resources) of the German Sustainability Code.

JOB TICKET

In 2019, 14,000 employees of the Deutsche Telekom Group in Germany used a discount season ticket provided by their employer to commute by public transport. This reduction is due to relocation of sites.

Number

2016	2017	2018	2019
16,497	15,600	15,200	14,000
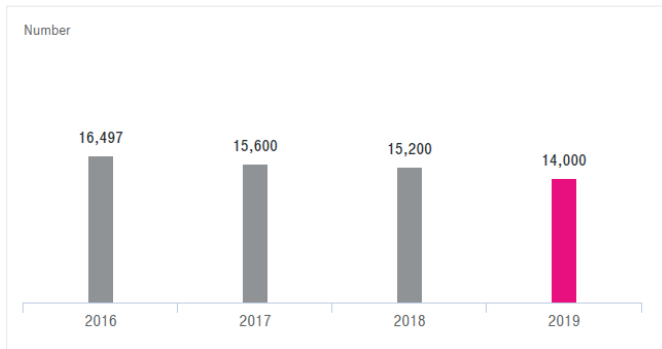
We offer regional discount season tickets (monthly or annually) to our employees at many of our German Deutsche Telekom sites, especially in high-density population areas. The offer encourages our employees to use climate-friendly public transportation and helps them keep their commuting costs down.

Reporting against standards
By reporting on the use of discount season tickets, we partially cover the V04-13 (Percentage of services to reduce impact on climate) EFFAS indicator. This data is also relevant for criteria 2 (Implementation of the sustainability strategy) and 10 (Innovation and product management) of the German Sustainability Code. It is also used for reporting on the Global Compact principles 7 (Precautionary approach) and 8 (Promoting environmental responsibility).

CIRCULAR ECONOMY & RESOURCE EFFICIENCY

OUR APPROACH TO RESOURCE CONSERVATION AND ENVIRONMENTAL PROTECTION

facturing companies. The resource utilization for the manufacturing and use of our products and network infrastructure occurs in up- and downstream stages of the value chain – with our suppliers and customers. This is why we are committed to the responsible handling of resources within our value chain.

Here are the most important activities along our value chain:

We reduce the use of plastic, paper, and packaging in key processes throughout the value chain. For example, we have halved the size of SIM cards, thereby saving 20.8 metric tons of plastic in the reporting year. It is planned to implement the half-size SIM card in all European national companies in the course of 2020.

We promote the responsible use of raw materials among our suppliers and the reuse of materials. For example, we support cell phone collection initiatives in various countries.

With our health, safety, and environmental management system (HSE) we have made a commitment to continually improving our performance in these areas. The system is based on the international standards ISO 45001 on occupational health and safety, ISO 14001 on environmental management, and ISO 9001 on quality management.

Ourenvironmental guidelinesummarizes all of the current voluntary commitments in effect throughout the Group.

With the new Group-wide initiative "We care for our planet", we are bundling existing and new projects for resource conservation under one new roof. The initiative strengthens the movement for more sustainability throughout the Group. Our Green Pioneers have already motivated employees at Deutsche Telekom AG to take part in numerous campaigns inside and outside Deutsche Telekom to make better use of resources.

Resource efficiency is also a priority at the workplace.

We regularly collect Group-wide data on the amount of waste we produce. Our International Waste Management Framework guarantees standardized guidelines for all of our national companies. They are required to use this framework as a basis for identifying their own measurable targets and then monitor target achievement. This approach, coupled with the absence of quantitative specifications, gives us flexibility when addressing the specific requirements of each country and company.

The Take Back Mobile Devices ESG KPI measures the ratio of mobile phones in circulation to the number of used devices collected (excluding T-Mobile US). We have also introduced a binding Group-wide guideline with requirements for the recycling of copper cables, which are being partially replaced over the course of our fiber-optic roll-out.

EMPLOYEE COMMUNITIES PROMOTE SUSTAINABILITY

Green Pioneers (Telekom Germany):
The internal "Green Pioneers" ambassador program was launched in September 2018. The aim of this grassroots initiative is to promote a fundamental shift toward more responsible management and conduct in all parts of the Group.

There are now more than 200 employees at 40 locations and in more than 20 departments acting as Green Pioneers who specifically look out for improvement potential in their area of activity.

The Corporate Responsibility department creates the framework conditions for the Green Pioneers. Its community management is responsible, among other things, for providing the initiative's communication platform in the internal social network You and Me (YAM). Regular virtual and personal meetings allow users to exchange information and experiences, share knowledge through internal and external expert talks, and plan activities.

Depending on their location, interests and expertise, the Green Pioneers come together to form thematic or regional "hubs".

Many Green Pioneers are active within the scope of flexible working methods, using them to establish modern work models ("80/20" and "Jobvisit") and gain new technical and methodological knowledge while strengthening Group-wide collaboration.

The Green Pioneers act as internal multipliers for change: they motivate employees to be involved in numerous resource conservation campaigns, such as organizing an exchange for office supplies, clothing exchange campaigns, plant and waste collection campaigns, and an internal company ride-sharing agency.

Numerous employee initiatives aimed at sustainability and environmental protection are also active at the national companies of Deutsche Telekom AG, as at the following companies, for example:

T-Mobile Netherlands:
In 2019 T-Mobile Netherlands has created a committed employee community to engage as many people as possible regarding recycling, efficiency and circular ambitions. Three teams have been set up: Climate & Energy, Circular business, and Sustainable Business Opera-

tions. The teams in turn are made up of three groups: 1) experts - employees who are dealing with waste, recycling and product streams on a daily basis, 2) ambassadors – people who feel committed to the topic and want to contribute to "Stop Wasting", and 3) our most important waste and energy partners/suppliers. Together these teams are responsible for creating a long-term vision, setting annual goals, formulating action plans on how to realize these goals, but also to inspire the rest of the organization to join them.

T-Systems Iberia (Spain):
During the last quarter of 2019, T-Systems Iberia created the community T-OGETHER, the launch followed in the beginning of 2020. T-OGETHER is a group of volunteers committed to promoting sustainable initiatives. At the heart of the community is the executive committee consisting of currently ten committed employees. These volunteers are supported by an advisory committee, comprised of environmental, Corporate Responsibility and communications experts. The aim of T-OGETHER is to drive ideas around sustainability in line with the company's environmental and social objectives and also to raise awareness regarding environmental issues among all employees. The members develop initiatives and propose them to the company's management. Once an initiative and a budget has been approved, the executive committee starts with the implementation.

IT-Services Hungary:
At IT-services Hungary a community called "ITSH Environmentally Conscious Club" focusses on raising awareness among the employees in order to reduce electricity and water consumption, decrease paper usage and promote a more effective company and pool car usage as well as selective waste collection. Additionally, IT-Services Hungary is currently in the process of founding an Environmental SPoC (Single Point of Contact) network enabling employees to connect with their colleagues more easily regarding environmental concerns and ideas.

Similar to the Green Pioneers in Germany, twenty Change Agents work to promote sustainability at T-Systems Singapore. In other national companies, such as T-Mobile Poland, Hrvatski Telekom (Croatia), T-Mobile U.S. or Crnogorski Telekom (Montenegro), employee communities are already active or at the stage of creation.

To find out more about the commitment of your employees and corporate responsibilities at our national companies please visit the company profiles.
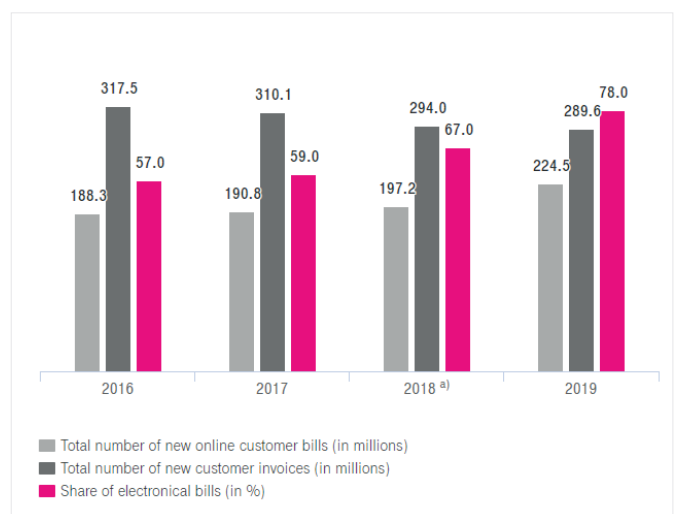
RESOURCE EFFICIENCY AT THE WORKPLACE
We try to use as many green office supplies as possible in order to improve resource efficiency at the workplace. In 2019, the percentage of sustainable products ordered was 30 percent. We also have the following measures:

- Our "IT Remarketing" project: used IT hardware is refurbished so that it can be reused.

- Some of our office products are labeled with the EU Ecolabel, the Fairtrade seal, the Organic Farming seal, the Blue Angel eco-label, and the FSC® and PEFC environmental labels.

- A total of 26 percent of the products in our office products catalog in Germany are classified as sustainable.

- Office supplies are delivered largely in accordance with the CO_2-neutral certificate.

- Since January 1, 2018, we have procured only environmentally certified office paper, which has been awarded the "Blue Angel" label or the "Nordic Swan" certificate, through a paper wholesaler.

- To reduce the amount of paper used throughout the Group, we ask our employees to opt out of having salary statements sent by post and have them provided online instead.

- On our "You and Me" social network, we also offer employees a platform where they can exchange unneeded office supplies instead of reordering them.

- Our partnership with the charitable organization "AfB gemeinnützige GmbH", which offers jobs for people with limitations. We give some of our used IT hardware (e.g., laptops) to the organization for reconditioning and reselling.

- We are working on modernizing the media technology used within our company to meet the requirements laid down in the Minamata Convention. We are therefore currently replacing devices that still contain this heavy metal with new mercury-free versions while sending the old devices to be professionally recycled or disposed of.

- Where possible, we are opting for projectors with state-of-the-art lasers or laser-LED hybrids that work without any conventional lamps.

ONLINE BILLING FOR MOBILE AND FIXED-LINE CUSTOMERS IN GERMANY
More than 224 million online bills were sent out in 2019. This is the equivalent of around 78 percent of all bills and credit notes for mobile and fixed-line customers in Germany. Since 2017, the data has been collected using a more precise calculation method.

	2016	2017	2018 [a]	2019
Total number of new online customer bills (in millions)	188.3	190.8	197.2	224.5
Total number of new customer invoices (in millions)	317.5	310.1	294.0	289.6
Share of electronical bills (in %)	57.0	59.0	67.0	78.0

[a] The values for 2018 were corrected compared to the information published in the previousyear's report.

Reporting against standards

By reporting on the use of discount season tickets, we partially cover the V04-13 (Percentage of services to reduce impact on climate) EFFAS indicator. This data is also relevant for criteria 2 (Implementation of the sustainability strategy) and 10 (Innovation and product management) of the German Sustainability Code. It is also used for reporting on the Global Compact principles 7 (Precautionary approach) and 8 (Promoting environmental responsibility).

FURTHER RESOURCE PROTECTION MEASURES

Print-on-Demand

The advantage of the print-on-demand approach is obvious. Brief job-related instructions are printed on a daily basis and do not need to be produced in advance, transported, or stored. Changes to document templates are in use with the customer the very next day, which results in a far shorter response time and means out-of-date materials no longer need to be destroyed as was sometimes previously the case. The new concept has significantly reduced material usage, which is in keeping with the Deutsche Telekom goal of ensuring sustainable management that conserves resources. Brief instructions for the Magenta-Zuhause rate plans marked the first step. In this initial project phase, paper consumption is already being reduced by 37.6 metric tons per year. The next step will be to investigate whether print on demand can also be used for other equipment documentation with particular specifications (several sheets, brochure included, enclosure of SIM card, etc.).

- Reduction of **paper consunption** since project start: 140 t Paper
- Reduction of **CO_2 emissions** since project start: 180 t CO_2

RECUP returnable cup

In 2018, Deutsche Telekom and Sodexo – the company running our canteens in Germany – joined forces to introduce the sustainable alternative of RECUP returnable cups. A reusable RECUP can replace around 500 disposable cups and can then simply be recycled. In return for a deposit of 1 euro, our employees get their coffee in a reusable RECUP. This can be returned to any participating partner, where the deposit is returned and the RECUP rinsed and reused.

The initiative started at the Deutsche Telekom sites of Stuttgart-Bad Cannstatt and Munich, Dachauer Strasse in November 2018. Many more sites were added in 2019, boosting the number of RECUPS by 115 % to more than 12,000 pieces.
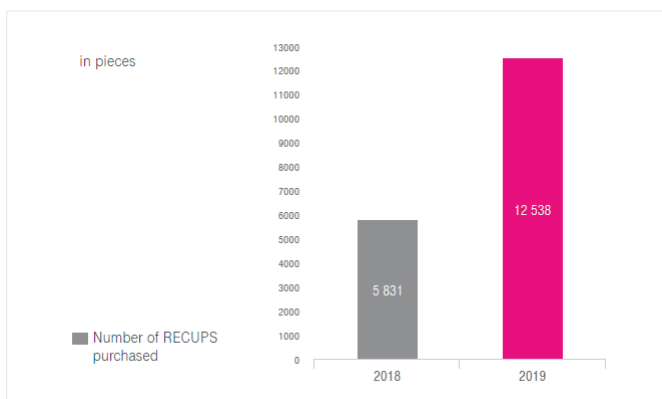
WASTE MANAGEMENT & RECYCLING

MOBILE DEVICE COLLECTION

Deutsche Telekom is voluntarily committed to collecting used cell phones beyond the legal requirements. This allows for functional devices to continue being used and the remaining devices to be professionally recycled. We transport all collected devices in a controlled and safe manner to the Telekom Recycling Center. Each device is then electronically recorded and registered in a database. Around 10 to 15 percent of them are suitable for reuse. A DEKRA-certified process is used to carefully erase all of the previous users' data from these cell phones and smartphones. Defective cell phones or devices, for which certified data erasure would be too costly, are properly recycled using state-of-the-art, environmentally-friendly processes at the Telekom Recycling Center in Western Europe. Up to 100 percent of the materials are reused – as recycled metals or for energy generation.

Deutsche Telekom complies with high security standards as regards data protection during the entire process for returning old cell phones. During the collection, transport and thorough erasure of data from the used devices by a certified specialist company in Germany, we rely on secure solutions which correspond to state-of-the-art technology. The entire collection process by our partner Teqcycle was certified by DEKRA in terms of data protection compliance.

Old mobile devices can be returned by post or deposited in a Deutsche Telekom collection box. Everyone can get involved in cell phone collection via the online portal and order a free collection box.

In order to reduce the ecological footprint when buying new smartphones, we have developed the sustainable smartphone lifecycle - a central element of our environmental program.

The proceeds from marketing and recycling are used to support projects in nature conservation and environmental protection as well as social projects organized by the partners of the cell phone collection center. And, as a bonus, the joint cell phone collection system set up by Deutsche Telekom and Teqcycle was awarded the Blue Angel eco-label.

"TAKE BACK MOBILE DEVICES" ESG KPI [A)]

We are reporting the Take Back Mobile Devices ESG KPI based on the reference value "number of devices in circulation." This makes it possible to more precisely illustrate the ratio of the number of cell phones brought to market to the number of used devices collected. When customers use the devices for longer periods of time, the environment benefits from this decision and, as a result, this has a positive impact on the KPI. More than 374 thousand mobile devices were collected throughout the Group (not including TMUS, AMC, Maktel, Crnogorski, DTSE units) in 2019, an increase of 1 percent compared to the previous year.

The "Take-back of mobile devices" ESG KPI for the Group in 2019 is 35.5, which means that 3.6 % of the end devices put into circulation were taken back through collection campaigns. Out of 1000 devices put into circulation annually, we take back 36.

Our ambition: increase KPI

In 2019, about 4.1 million mobile devices were collected at TMUS alone. The KPI would be 93 for TMUS and 82 group-wide incl. TMUS. The aim of the scheme to take back old cell phones is to give them a second life and, if that isn't possible, to properly recycle them to recover the valuable raw materials inside them. Thanks to this, over 3 million used cell phones have been reused or recycled in Germany since 2003, thus conserving resources. In this way, we have helped to improve the eco-balance of mobile devices.

Mobile devices collected vs. mobile devices sold [a)]
(thousand/million pieces)

	2016	2017	2018 [b)]	2019
	39.7	27.4	35.1	35.5

a) The Group value includes companies that have submitted the data necessary to calculate the KPI (currently e.g. without T-Mobile US, Crnogorski Telekom, Maktel, Telekom Albania and the DTSE units). T-Systems is not relevant.
b) The value for 2018 was corrected compared to the information published in the previous year's report.

The Take Back Mobile Devices ESG KPI measures the ratio of collected devices (in thousands) to the number of devices in circulation (in millions). The collected devices are recorded in kilograms or in units. When using kilograms, we apply a Group-wide conversion factor of 7.25 units per kilogram unless another conversion factor is typically used in that country. Mobile devices in circulation include smartphones, simple phones, tablets and cordless phones. Units are reported by Procurement for reasons of data quality.

Reporting against standards

By reporting the Take Back Mobile Devices ESG KPI as an indicator of progress achieved in the resource-efficient and environmentally friendly use of products, we partially cover the E14-01 (Recycling ratio) EFFAS indicator. This data is also relevant for criteria 7 (Rules and processes), 10 (Innovation and product management), 11 and 12 (Usage of natural resources) of the German Sustainability Code. It is also used for reporting on the Global Compact principles 7 (Precautionary approach) and 8 (Promoting environmental responsibility).
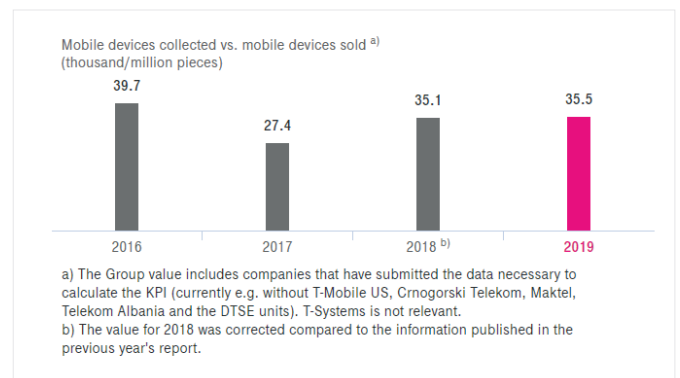
WASTE MANAGEMENT AND VOLUME

Our waste management is organized according to uniform principles across the Group. The implementation lies in the responsibility of the national companies. On a Group level, we have not set a goal for the reduction of hazardous and non-hazardous waste. Instead, our national companies are developing their own waste strategies or updating their current strategies on the basis of our International Waste Management Framework, which we adopted in 2013. They are also setting their own targets, giving top priority to reducing hazardous waste such as lead batteries.

Group-wide waste increased slightly by 15 percent compared to 2019. This increase is mainly due to the increase in technical waste. The quantities of technical waste fluctuate from year to year depending on projects that are implemented irregularly.

Copper cable recovered since 2010
in thousand tons

Waste generation
in t

Data audited by PwC. Data is partly based on estimates, assumptions and projections. Data is partly provided by external service providers. For detailed assurance comments see „DT Group in Germany", „Slovak Telekom", „OTE", „Cosmote Group Greece" und „T-HT Hrvatski Telekom".
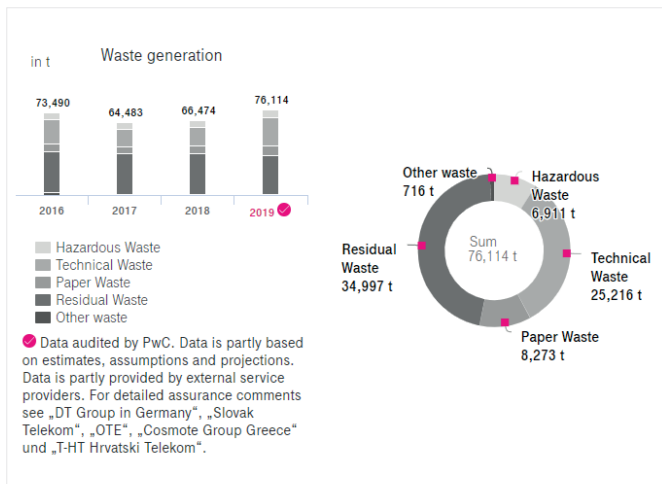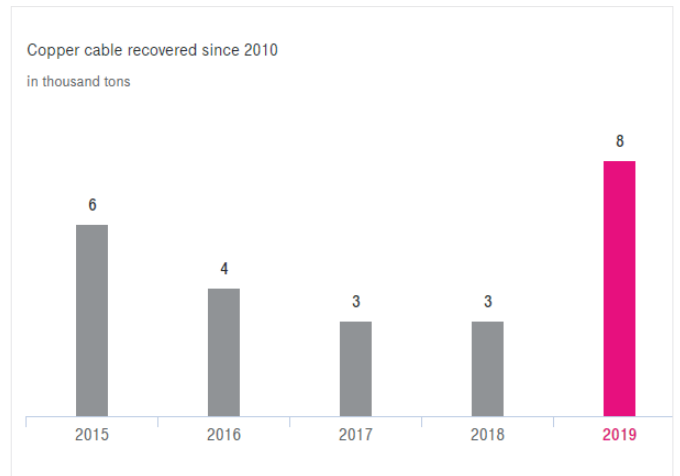
RECOVERED COPPER CABLES

Copper cables were the main component of telephone lines for decades. These are being partially replaced over the course of our fiber-optic roll-out. In 2016, we therefore introduced a Group-wide, mandatory policy requiring copper cable recycling. This policy provides a guideline to our national companies when it comes to the recycling and disposal of used cables.

In 2019, Deutsche Telekom removed around 7,900 metric tons of copper cable from duct systems in Germany alone. Due to intensified measures, significantly more cables could be identified for recovery in 2019. The cable is processed in accordance with environmental standards at certified waste disposal facilities, and up to 90 percent of the material is recycled.

ADDITIONAL ECOLOGICAL INFORMATION

WATER CONSUMPTION

As a service provider, we almost exclusively use water within the scope of our office activities. Water consumption also plays but a minor role along our supply chain. For that reason, water is not a main focal area in our CR management activities. Nevertheless, reducing our water consumption is part of our environmental guideline. We measure our annual consumption by means of our water consumption indicators.

In 2019, Group-wide water consumption decreased by 21 percent. For detailed comments on the figures for each individual company, please refer to the interactive benchmarking tool.

in m³

Year	Value
2016	2,751,845
2017	2,666,455
2018	2,745,254
2019	2,157,504
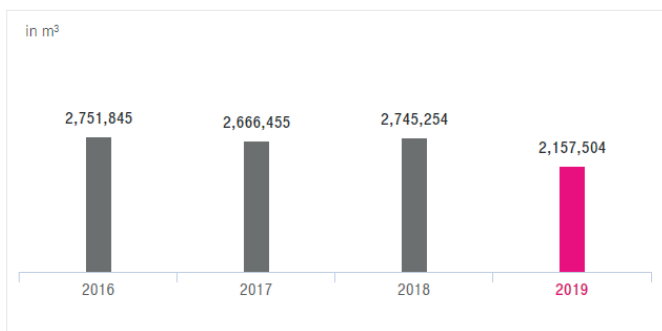
PROTECTING BIODIVERSITY

One major cause of species extinction is the fact that more and more sity at our suppliers' premises at the start of the value chain. The space taken up by our core business is also significantly lower than in other industries.
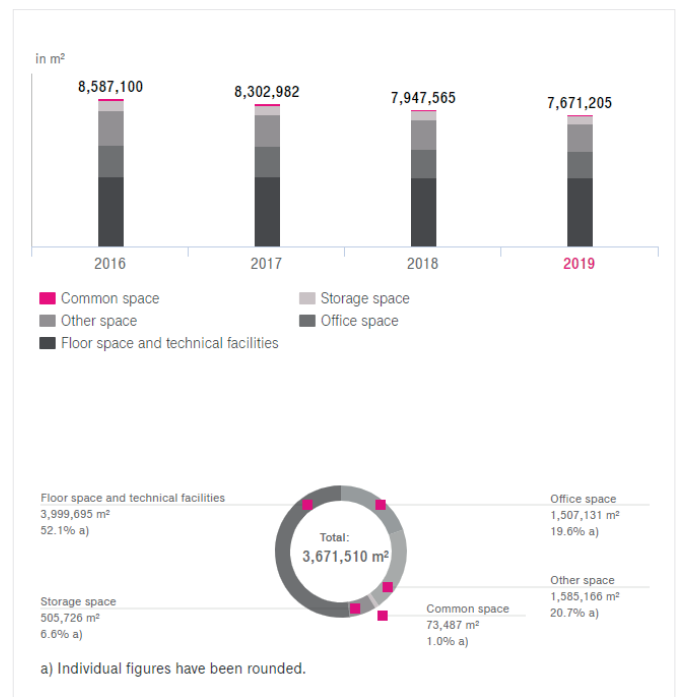
Nevertheless, we are concerned about protecting biodiversity wherever we can. ICT solutions can help preserve biodiversity, such as through our "Bee and Me" project, which helps beekeepers protect their bees. Deutsche Telekom also emphasizes the protection of biodiversity as it expands its network and complies with relevant nature conservation regulations. Environmentally friendly measures helped us provide the famous Eltz castle with mobile coverage without disturbing the habitats in the nature reserve.

In addition, we also cooperate with environmental and nature conservation organizations to financially support nature and species protection. Proceeds from the used mobile device collection campaigns benefited the following organizations, among others: Landesbund für Vogelschutz Bayern e.V., Pro Wildlife e.V, projects for the protection of gorillas of the Frankfurt Zoological Society, and species protection projects of the Hellabrunn Zoo, Munich.

In 2019, there was increased public discussion on possible negative effects on animals and plants due to electromagnetic fields from mobile communications. The Federal Office for Radiation Protection held an international workshop on this topic in 2019 and determined that, based on the current state of scientific knowledge, there is no scientifically reliable evidence of a risk to animals and plants from high-frequency electromagnetic fields below the threshold.

LAND USE

The property used by Deutsche Telekom in Germany covers most of our demands for technology, office and storage space as well as providing space for other needs. Total take-up decreased year-on-year with a total of 7,598 square meters of space being used.

in m²

Year	Value
2016	8,587,100
2017	8,302,982
2018	7,947,565
2019	7,671,205

■ Common space ■ Storage space
■ Other space ■ Office space
■ Floor space and technical facilities

Floor space and technical facilities
3,999,695 m²
52.1% a)

Office space
1,507,131 m²
19.6% a)

Storage space
505,726 m²
6.6% a)

Total:
3,671,510 m²

Other space
1,585,166 m²
20.7% a)

Common space
73,487 m²
1.0% a)

a) Individual figures have been rounded.

Reporting against standards
This data is relevant for criterion 11 (Usage of natural resources). It is also used for reporting on the Global Compact principles 7 (Precautionary approach) and 8 (Promoting environmental responsibility).

SOCIAL COMMITMENT

OUR APPROACH TO SOCIAL RESPONSIBILITY

The digital revolution is changing almost every area of our lives. We want to help allow all people to shape these changes in a positive, active, and equal way. In short, we want everyone to #TAKEPART. That's why, as part of our social commitment, we are also working on breaking down barriers to digital participation.

We believe there are three key factors for ensuring everyone can participate in our digital society on equal terms – technical access to fast networks, the affordability of equipment and services, and the ability to use digital media competently.

- **Access:** We are continuously expanding our network to enable technical access.

- **Affordability:** With different rates for every budget and our social rate, we are striving to make digital access affordable for everyone.

- **Ability/Competent use of digital media:** Internet users should have positive experiences and suffer no harm online. Data security and data protection are top priorities for us. It is also important for everyone to use media in a competent, responsible, and critical manner, and in line with basic democratic values. We are therefore committed to media and democratic competence.

By focusing on promoting digital participation, our social commitment correlates closely with our core business. We consider ourselves responsible not only for our products and our network, but also for ensuring that people can interact with them confidently. This allows us to put our expertise as a telecommunications provider to the best possible use for the benefit of society.

As one of the major employers, part of our social responsibility in 2019 was to support refugees in their integration into the German labor market.

In carrying out our social commitment, we not only implement our own projects and initiatives, but also encourage the volunteer efforts of our employees. In addition, we provide financial support, for example, by being involved as a sponsor and providing support in the area of disaster response.

The national companies carry out independent regional initiatives. We also work closely across national borders when it comes to our social involvement and share experience and best practices. Close cooperation with social players such as NGOs, associations, and initiatives also plays an important role.

Measuring success

We use a set of KPIs to measure our success:

- The Community Investment ESG KPI reflects our social commitment in terms of financial, human, and material resources.

- The Beneficiaries ESG KPI measures the number of active contributors as well as the target groups they reach.

- The Media Literacy ESG KPI highlights the percentage of projects and activities that help people use media proficiently. It is highly relevant to us, as it correlates closely with our core business.

Our measures are based on the Sustainable Development Goals (SDGs) of the United Nations. We have listed the activities with which we are pursuing SDGs in an overview.

PROMOTING MEDIA LITERACY AND DEMOCRATIC COMPETENCE

We have made it our mission to promote the safe and competent use of digital media – and the ability to use them in line with basic democratic values. We are therefore advocating trust and opinion forming online through a variety of projects and initiatives. We also provide updates about the responsible and critical use of media on our Group website and in our sustainability magazine "We Care".

Our focus for 2019 was "digital democracy": What benefits does the digital world offer for political participation and opinion forming? Where is democracy threatened by what happens on the internet – for instance, through open or veiled populism, hate speech, fake news, and the manipulation of public opinion? In 2019, we reached many thousands of people with snackable content, discussion rounds, and workshops on the topic of "digital democracy," at IFA in Berlin, for instance. We aim to raise awareness and highlight alternative courses of action, for example, on the question of how to identify fake news and how to apply this knowledge when using social media.

Teachtoday

The Teachtoday initiative supports children, young people, parents, and grandparents as well as teaching professionals with hands-on tips and materials about safe, proficient media usage. It covers a wide range of issues from the areas of family, school, and recreation. The materials are available at www.teachtoday.de in seven languages (German, English, Croatian, Montenegrin, Polish, Romanian, and Hungarian).

A media obstacle course also presents media use in a fun way. Topics such as play times, privacy, and cyberbullying are addressed at different stations.

Teachtoday also has its own YouTube channel with short catchy videos about safe, proficient internet use, data protection, and how truthful people are online. It includes interviews on children's rights, conducted on World Children's Day 2019.

The Scroller children's media magazine is geared specifically to children aged nine to twelve to improve their media literacy. It is available in both an interactive web version and a free print format.

At the National Youth Conference "Medien 2019" in Rostock in March 2019, "Teachtoday" presented materials that media scouts can use in their schools. More than 300 "media scouts" took part: they are specially trained young people who advise their fellow students on how to use the internet.
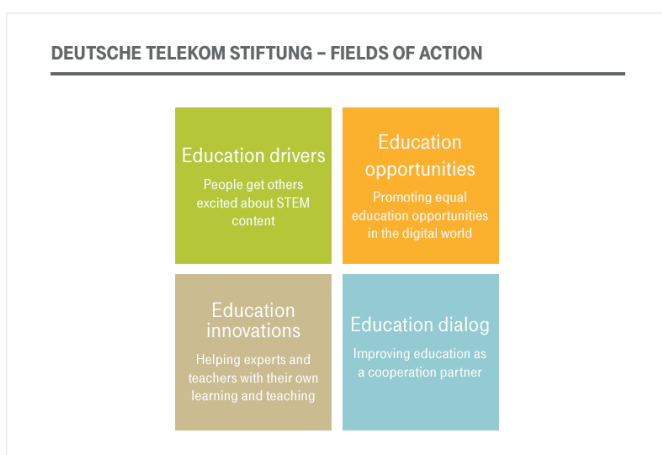
#TAKEPART Stories

#TAKEPART Stories (#DABEI-Geschichten) is a Deutsche Telekom initiative that addresses socially relevant digitalization topics in a practical way and turns them into opportunities for disseminators. The initiative highlights potential for participation and responsible conduct on the internet and aims to encourage a critical discussion with these options. Our goal is to provide ideas for the responsible use of digital media and to promote them so that participation in the digital space can succeed. In this way, the initiative contributes to our #TAKEPART campaign.The material can be used for self-study, but is also suitable for disseminators working with learner groups. The team uses innovative, didactically effective formats to develop the material together with modern technologies in the form of modules. Ten modules are available in German and English, as well as in simple language. No matter how complex a topic is, we think it's important to leave it up to the user to determine whether it's important for them. We ensure appropriate linguistic and didactic preparation of the material.

At #TAKEPART Stories you will also find information about Digital Friendship and opinion making on the internet. In 2019 we published two new modules on the topics "Living in the city of the future" and "Digital democracy".

Deutsche Telekom Stiftung's commitment

The Deutsche Telekom Stiftung is committed to better education in STEM subjects (science, technology, engineering, and mathematics), with numerous programs and projects . It does so because it is convinced that a modern education system must give young people the best possible preparation for meeting global challenges such as digital transformation, climate change, electromobility, and biodiversity.
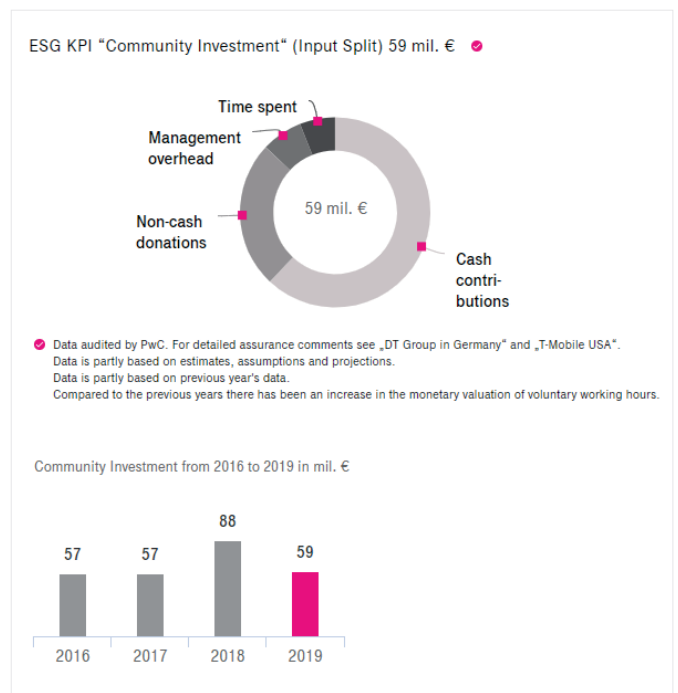
DEUTSCHE TELEKOM STIFTUNG – FIELDS OF ACTION

Education drivers
People get others excited about STEM content

Education opportunities
Promoting equal education opportunities in the digital world

Education innovations
Helping experts and teachers with their own learning and teaching

Education dialog
Improving education as a cooperation partner

COMMUNITY INVESTMENT ESG KPI

We report a set of three KPIs for calculating the impact of our social commitment. They comprise the Community Investment ESG KPI, the Beneficiaries ESG KPI and the Media Literacy ESG KPI. Our activities are based on the methods employed by the London Benchmarking Group (LBG), which incorporate the aspects, "input," "output" and "impact".The Community Investment ESG KPI illustrates activities in which Deutsche Telekom was involved in the community either financially, through its employees, or through donating materials.

Our ambition: increase KPIThe investment volume for our entire network infrastructure in 2019 was € 13.1 billion (with more than € 5.5 billion of this in Germany), and we are already providing LTE to 98 percent of the population in our national companies. What's more, we operate the largest fiber-optic network in Germany, with more than 500,000 kilometers of cables, and are driving the expansion of a large-scale NB-IoT infrastructure for the cities of the future. Thanks to the Internet rollout, our investments are making an important contribution to facilitating access to fast Internet for large sections of the public. This, in turn, is the foundation for the positive development of our business KPIs, e.g. the Media Literacy ESG KPI. Furthermore, our products and services are contributing to climate protection and resource efficiency. Our products range from ICT solutions such as video conferencing and Industry 4.0 to sustainable connected farming and Smart City concepts.

Additionally, the Community Investment ESG KPI makes an important contribution to the Sustainable Development Goals. In 2019, more than 24 million euros of the community investments have contributed to the SDG 4 (quality education).

ESG KPI "Community Investment" (Input Split) 59 mil. € ⬤

Time spent
Management overhead
Non-cash donations
59 mil. €
Cash contributions

⬤ Data audited by PwC. For detailed assurance comments see „DT Group in Germany" and „T-Mobile USA".
Data is partly based on estimates, assumptions and projections.
Data is partly based on previous year's data.
Compared to the previous years there has been an increase in the monetary valuation of voluntary working hours.

Community Investment from 2016 to 2019 in mil. €

2016	2017	2018	2019
57	57	88	59

BENEFICIARIES AND MEDIA LITERACY ESG KPIS

The report comprises a set of three KPIs for calculating the impact of our social commitment. In addition to the Community Investment ESG KPI, we report the Beneficiaries and the Media Literacy ESG KPI here. Our activities are based on the methods employed by the London Benchmarking Group (LBG), which incorporate the aspects, "input," "output" and "impact".The Beneficiaries ESG KPI reflects the number of people who got involved in community activities and the number of people in the target group that participate in or benefited from such activities (e.g. media literacy trainings, DSL connection in schools and crisis helpline).

Our ambition: increase KPIThe Media Literacy ESG KPI reflects the share of people we have reached through programs addressing this topic. This KPI establishes a direct correlation between these activities and our core business. The ESG KPI reached 41 percent by the end of 2019 and our aim is to achieve a share of 45 percent by 2020.

ESG KPI "Beneficiaries"   13.0 mil. persons
ESG KPI "Media literacy" 41.00%

Share of target group reached by media skills activities

Other

Data audited by PwC. For detailed assurance comments see „DT Group in Germany" and „T-Mobile USA".
Data is partly based on estimates, assumptions and projections.
Data is partly based on previous year's data.

Beneficiaries from 2016 to 2019 in mil. people

2016	2017	2018	2019
15	19	15	13

Media Literacy from 2016 to 2019 in %

Target: 45%

2016	2017	2018	2019
40	41	42	41

ENGAGEMENT@TELEKOM

We support the social commitment of our employees with our range of corporate volunteering opportunities. Through their commitment, they play a major role in strengthening social cohesion, broadening their own horizons, and boosting their social skills. This in turn has a positive impact on teamwork at the company.

Our corporate citizenship program engagement@telekom pursues two aims – to support our employees' current involvement and encourage them to find new ways to contribute to society. To that end, we give them opportunities to volunteer: they can get involved in a good cause on numerous Social Days, for example.

One focus is on projects that promote media literacy, where employees help people better understand digital phenomena, thus laying the groundwork for participation in the digital world. In 2019, employees also intensified their commitment to the environment. Among other things, they started their own activities as part of the Green Pioneers program which helps us reach our Group targets – for example, to reduce CO_2 emissions.

Volunteer involvement is an important component of our training. That is why we organized a fundraising run this year focusing on the participant's health as well as on the topic of "volunteer involvement". The participants had the opportunity to have their type assessed for the national bone marrow registry of the DKMS (German "Deutsche KnochenMark-Spenderdatei" or "German Bone Marrow Donor File"). Moreover, by taking part in the run the participants supported the association Gesicht Zeigen! Für ein weltoffenes Deutschland e.V ("Show your face! For an open-minded Germany e.V").

Number	2016	2017	2018	2019
Number of volunteering projects	285	379	666	2 097
Number of volunteers (employees)	30 259	28 477	28 785	39 649
Working hours	51 114	58 660	66 506	97 033

ENGAGEMENT@TELEKOM

ENGAGEMENT@TELEKOM
covers the entire social commitment of Deutsche Telekom AG

COLLABORATION PARTNERS
Partnerships with employee participation

CORPORATE VOLUNTEERING CORPORATE GIVING
Encouraging employees' volunteering activities

JOINT COMMITMENT WITH PARTNERS

We have taken on the task of driving forward the social discussion on digital responsibility. To do this, we participate in various alliances and partnerships such as the "Corporate Digital Responsibility" initiative run by the Federal Ministry of Justice and Consumer Protection. By signing the Charter of Digital Networking and through our involvement in its supporting association, we emphasize our commitment.

We have longstanding partnerships with many organizations, associations, and initiatives with whom we work as part of our social commitment, for example:

- With the Telefon Seelsorge crisis hotline,

- With the Nummer gegen Kummer youth counseling line, run by an association offering advice in conflict and crisis situations,

- With Aktion Deutschland Hilft

- With "Deutschland sicher im Netz e.V. (DsiN)" to support activities aimed at IT safety and data privacy (among other things, we support the "Digitale Nachbarschaft" (Digital Neighborhood) project, where volunteers provide tips and advice on digital opportunities and data security),

- With the "German Association of Senior Citizens' Organizations" (BAGSO) to promote media literacy among older people (among other things, we support their "Goldener Internetpreis" (Golden Internet Award) for proficient internet users ages 60 and up) and

- As a participant in the "Woche des bürgerschaftlichen Engagements" (Community Volunteering Week) sponsored by the National Network for Civil Society.

FINANCIAL COMMITMENT AND SPONSORSHIPS

In Germany we are involved in the fields of sport, culture, and social issues. The national companies are also engaged in these areas. In addition to providing funding, we help artists, athletes, event organizers, and associations with their communication and marketing activities. The Sponsorship Policy provides the framework for sponsoring activities. Being involved in the regions where we are based is another important aspect. Examples of our involvement include:

- Music sponsorship

- Theater funding

- Competitive sport sponsorship with partners such as the DFB (German Football Association), FC Bayern Munich, Telekom Baskets Bonn, and Deutsche Sporthilfe, DFB's Sepp Herberger Foundation, and the German National Paralympic Committee

- Recreational sport sponsorship

- Sponsorship of social activities associated with partnerships
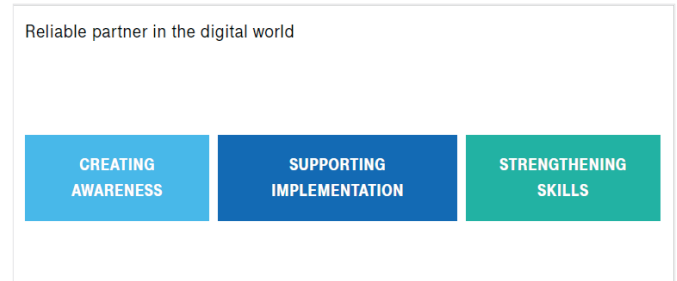
Corporate giving

Through our corporate giving program, we support the work of aid organizations worldwide – preferably in the form of long-standing partnerships – and provide rapid assistance in disaster situations. Our Group Donation Policy lays out the guidelines for these activities.

OUR APPROACH TO TRUSTWORTHY INTERACTION ON THE INTERNET

The Initiative D21, Germany's largest charitable network for the digital society, sponsored by Deutsche Telekom, and its Digital Index 2018/2019, confirmed that the degree of digitalization in Germany has continued to rise compared to last year. The index shows that the proportion of people outside the digital bubble has dropped by 4 percent since 2017. Over the same period, the group of people at the leading edge of digital progress has grown by three percent. Nonetheless, there are still major differences between various sections of the population. Having access to modern information technologies is the basis for the ability to participate in the knowledge and information society.

We are committed to ensuring that everyone, regardless of age, background or education, can participate in digital society. That is why we are continuing to rapidly expand our infrastructure and improve transmission speeds with new, secure technology. At the same time, we use our social initiatives to reduce potential obstacles to ICT use. We develop our own offers and support partner initiatives with our expertise in this area. In doing so, we always set specific targets – whether for ourselves or in collaboration with our partners.

As we work toward giving as many people as possible the opportunity to participate in the digital world, we set the following focal points for our commitment:

Reliable partner in the digital world

| CREATING AWARENESS | SUPPORTING IMPLEMENTATION | STRENGTHENING SKILLS |

Creating awareness

We have taken on the task of driving forward the social discussion on digital responsibility. To do this, we participate in various alliances and partnerships such as the "Corporate Digital Responsibility" initiative run by the Federal Ministry of Justice and Consumer Protection. We also want to work with our stakeholders to continue developing our guidelines for working responsibly with artificial intelligence, which we published in 2018. We emphasize our commitment as a member of the Charter of Digital Networking.

If the digitalization process is to succeed, it is vital that people have faith in the confidentiality of their personal data. Data protection and data security are top priorities for us. However, handling personal data with due care and attention is also an important element. We promote this approach through our online advice portal sicherdigital.de and a focus topic in our sustainability magazine "We Care", for example. In addition, our website "Media, sure! But secure." pools various initiatives with the aim of promoting responsible and critical interaction with media and to thereby improve participation of people in the digital world.In addition, we revised our Social Media principles in 2019 supporting our goal to ensure a respectful and appreciative dialogue both within the company and outside, as well as a communication culture that reflects this.

Supporting implementation

With our expertise, we support projects and initiatives that offer digital solutions for social challenges:

- As part of our corporate volunteering activities, our employees participate in a wide range of projects. Additional information can be found here [Verlinkung zu Management & Facts: engagement@ telekom].

- We are making a contribution to dementia research through the virtual reality game "Sea Hero Quest VR".

- We are supporting external initiatives, for instance through our membership of the association Deutschland sicher im Netz e.V. (DSiN – Making Germany Safe on the Net), which serves as a central point of contact for IT security and data protection issues.

- As part of the "Telekom@School" initiative, we offer free broadband connections to schools throughout Germany in order to further improve access to modern information technologies. This gives children and young people the opportunity to learn how to use digital media irrespective of their family background.

- We also offer special rates to enable low-income customers and people with disabilities to make phone calls and surf the web at reasonable prices. More than one million customers in Germany take advantage of these special plans each year.

Strengthening skills

"Teachtoday" is part of our initiative "Media, sure! But secure." focused on promoting safe, proficient media use for children and young people, parents and teaching professionals and offers practical and everyday tips and materials. One example is the free children's magazine "Scroller". The children's media magazine published by Deutsche Telekom's Teachtoday initiative addresses important issues related to learning with digital media and encourages children to help shape the digital world themselves.

Our commitment also encompasses the following:

- "Code+Design Camps": Young people attending these camps – who may or may not have any prior experience with programming – get to know new technologies and develop their skills under the guidance of professional mentors.

- We support the Digitale Nachbarschaft (Digital Neighborhood) project, which trains people to volunteer as IT ambassadors.

- We are involved in the Digital-Kompass (Digital Compass), which offers the association safe, straightforward, and free help to take advantage of digital opportunities. Workshops, manuals, webinars, and tutorials are offered.

- In partnership with BAGSO, the German National Association of Senior Citizens' Organizations), we promote media literacy among older people and also support the "Goldener Internetpreis" (Golden Internet Award) for competent internet users age 60 and up.

- Along with four other foundations, the Deutsche Telekom Stiftung fosters the education and digitalization forum "Forum Bildung Digitalisierung" that aims to improve education and equal opportunities using digital media.

- With #DABEI-Geschichten (#TAKEPART Stories), Deutsche Telekom invites users to address issues from the digital world in order to better understand them: from digital democracy and digital friendship to data protection and security – easy to understand, innovative, and full of tips! Suggestions and tips are offered for those working with learning groups. Documents are also available in simple language.

The Deutsche Telekom Stiftung carries out numerous initiatives and projects that cover the full range of institutional education and utilize countless activities and programs to boost achievement in STEM subjects (science, technology, engineering, and mathematics).

REFUGEE AID: INTEGRATION INTO WORK, INTEGRATION INTO SOCIETY

Deutsche Telekom's commitment to refugees started in 2015 as a humanitarian aid task force with the following measures:

- Free Wi-Fi hotspots in first aid facilities

- Deutsche Telekom buildings provided for use by the Federal Office for Migration and Refugees

- Deployment of staff at the Federal Office for Migration and Refugees

- Support for private volunteer work by employees

In 2016, the first-aid initiative developed into the "Deutsche Telekom helps refugees" project, which aims to integrate refugees into the labor market.

Promoting long-term integration

In 2019, 450 positions were filled with refugees at Deutsche Telekom and partner companies – in the form of internships, as part of a training program, in the "Internship PLUS Direct Entry" program, or in permanent positions.

56 refugees who have previously completed a program at Deutsche Telekom were able to take up subsequent employment at Deutsche Telekom or a partner company of Deutsche Telekom. They will have, for example, switched to vocational training or a cooperative study program following an internship, or entered into permanent employment after their training.

In 2019, the first participants also successfully completed the "Internship PLUS Direct Entry" program. More than 70 percent of them switched to long-term follow-up employment. "Internship PLUS direct entry" is a program that was launched by Deutsche Telekom in 2016 in cooperation with the Federal Employment Agency, Deutsche Post DHL Group, and Henkel. A three to six-month orientation phase was followed by a two-year employment contract. In 2018, we continued and further developed the program for Deutsche Telekom. We created new jobs in areas with an especially high demand for staff, such as technical and customer service. The program will continue to run until 2021. In 2018, we received the "HR Excellence Award" for the "Internship PLUS direct entry" program for innovative flagship projects in human resources management in the Group Corporate Social Responsibility category.

We also created internship positions for refugees in 2019 with the aim of providing them with their first step into the German working world. Many of these positions were awarded through applicant days, at which the focus was on getting to know each other, not on querying prior experience or looking at certificates.

In 2019, Deutsche Telekom again supported its employees in their volunteer refugee work, for example, in cooperation with Volunteer Vision in the eStart program. At the end of the year, 150 Deutsche Telekom employees acted as language tutors to help refugees learn German.

Over the last few years, we have gained a lot of experience in integrating refugees into the labor market. This has been incorporated into our standard HR procedures, helping to create a sustainable basis for integrating refugees into our company. At the end of 2019, we were able to stop using the special processes created to integrate refugees.

Information about Germany: Handbook Germany
Refugees and anyone new to Germany can find information about living, studying, and working in the Handbook Germany. The handbook emerged from the refugee portal we launched in 2015 in collaboration with the Federal Chancellery, Adobe, and Neue Deutsche Medienmacher (New German Media Professionals). Information is currently offered in seven languages, with Pashto (spoken in Afghanistan/Pakistan), French, and Turkish alongside German, Arabic, English, and Farsi. Deutsche Telekom supports the site's editing team in its capacity as technology partner. Handbook Germany was distinguished once again in 2019, this time with the "Smart Hero Award" in the Diversity and Equal Opportunity category awarded by the foundation "Stiftung Digitale Chancen".

Number of places

Year	Number of places
2016	175
2017	340
2018	440
2019	450

● Data 2019 assured by PwC.
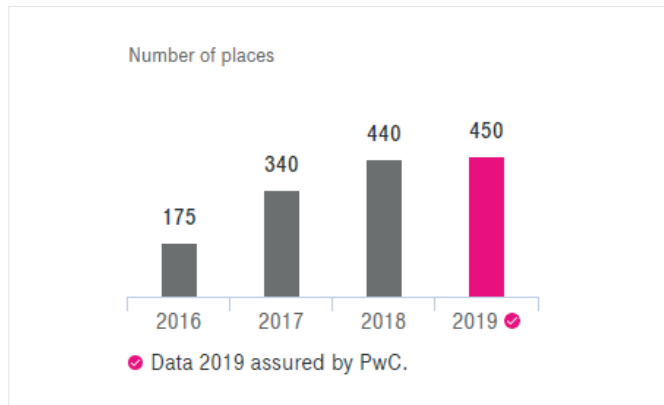
EMPLOYEE RELATIONSHIPS

OUR APPROACH TO EMPLOYEE RELATIONS

We pursue dialog-oriented employee relations throughout the Group and engage in trust-based, constructive collaboration with employee representatives and unions. The works councils, central works councils, and Group Works Council represent the interests of our employees at our Group 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 disabled employee representatives at the unit, company, and Group levels.

As the underlying laws and contracts vary from country to country, codetermination matters are managed locally together with trade unions and employees' representatives. Group management is involved in all major issues as a matter of principle.

We have set Group-wide standards for managing employee relations. These were formalized in our Guiding Principles and our Group's Employee Relations Policy. You can find comprehensive information about conduct in relation to human rights at our Group in the Human rights section.

EMPLOYEE RELATIONS POLICY

The Employee Relations Policy, which has been rolled out throughout the Group, defines the core elements of Deutsche Telekom's human resources policy and describes what we stand for in our relationships to our employees around the globe. Our Employee Relations Policy addresses the following topics:

- Employee development
- Handling change responsibly
- Healthcare and sustainability
- Fair pay
- Achieving a good work-life balance
- Leadership
- Diversity
- Ban on discrimination
- Communication
- Collaboration with employee representatives

We constantly monitor our Employee Relations Policy. Deutsche Telekom publishes reviews on the reports of our national companies on our Group portal under "Responsible Employer".

REVIEWED: EMPLOYEE RELATIONS AT OUR NATIONAL COMPANIES

What progress have our national companies been making in implementing our Employee Relations Policy? We examine this issue by means of special reviews. Two to three national companies are subject to such a review each year. They use the results to further improve their relations with employees. The reviews also help us conduct a Group-wide assessment of employer/employee relations and any human rights risks involved in our business activities.

If necessary, we formulate additional measures, including a "Human Rights Impact Assessment and Engagement", a process for estimating the actual and potential effects of business activities on human rights. The process also assesses the ability of the organization to prevent, mitigate, or eliminate these effects altogether. Since 2019, we have been holding local workshops to provide training on and raise awareness of human rights issues. In 2019, we conducted such an assessment at T-Systems India. In the reporting period, we also conducted employee relations policy reviews at T-Mobile Poland and Deutsche Telekom Außendienst GmbH. We publish the detailed results on our website.

FLEXIBLE WORKING MODELS FOR A WIDE RANGE OF NEEDS AT DEUTSCHE TELEKOM IN GERMANY

Designing work so that it is flexible and meets individual needs makes it easier for employees to achieve a good work-life balance, and prevent stress and the feeling of being overworked. That is why we encourage flexible working models. Our offer ranges from flexitime and part-time work to lifetime work accounts.

Promoting part-time work

Deutsche Telekom supports the establishment of part-time jobs and guarantees employees the possibility to return to their original working hours. In Germany, 13 percent of employees under collective agreements and 18.5 percent of civil servants took advantage of part-time models (as at December 31, 2019). In addition, a total of 29 executives throughout Germany were working part-time (as at December 31, 2019). Detailed information about our numerous part-time regulations is available here.

Mobile working

Mobile working is the normal state of affairs for us. The first mobile working collective agreement arranged between Deutsche Telekom and ver.di has been in effect since 2017. Among other things, it includes rules regarding telecommuting and mobile working.

Part-time training for single parents

Deutsche Telekom has been offering single mothers or fathers up to the age of 25 the opportunity to complete a part-time training program or

cooperative course of study since 2011 in collaboration with the German Federal Employment Agency.

Parental leave network

The "Stay in contacT" parental leave network enables employees to stay in touch with the company during parental leave and exchange information about job-related topics.

Lifetime work accounts and leave of absence

For the implementation of individual life plans, the majority of employees at Deutsche Telekom can set up a specialsavings account. Gross salary conversions or the conversion of up to 80 overtime hours per year can be saved on these lifetime work accounts. In total, we have set up 12,263 accounts for employees and 724 accounts for civil servants (as of December 31, 2019). The savings can be used for a sabbatical, for an earlier exit from working life or for an increase in part-time salary. For those without savings there is also the option for leave of absence without pay. T-Systems employees can also release long-term time savings that result from (project-related) overtime.

Leave of absence for personal reasons

In case of special reasons, employees have the option of being released from their work at short notice after consultationand approval by their manager. For instance, this is an option when caring for a relative or after the statutory parental leave. In the individually agreed period, employees are exempt from performing their work and payment of the remuneration is suspended. All other aspects of the employment relationship remain unaffected.

Time-off for education

Time-off for education is based on the current offer of leave of absence without pay and makes it possible for employees to take up to four years off for a degree course or a doctorate. The employment contract is put on hold during this time and the employee does not receive any pay. Civil servants employed at the company can also take advantage of this offer in the form of a "leave of absence without pay for reasons of private interest." This time does not apply to their pension and no remuneration is paid.

The 80/20 model

Since 2017, we have been using the 80/20 model to give our employees the opportunity to spend up to 20 percent of their working time on projects outside of their usual remit. This allows them to work with teams from other departments. Use of the model is voluntary and is tied to a specific Group project.

Phased retirement

We offer all Group employees over the age of 54 the option of phased retirement. Separate regulations apply to employees and to civil servants. There are two options for the phased retirement: the block model or the part-time model. During the reporting year, a total of 1,634 phased retirement contracts were concluded with employees both covered and not covered by collective agreements. Among civil servants there were 638 such contracts (as at December 31, 2019).

Underlying regulations

These are based on the laws and regulations applicable in the individual countries. Working hours at Deutsche Telekom in Germany are governed by collective agreements and works agreements. We document the daily working hours of our employees covered by collective agreements by means of electronic time recording in work time accounts. This guarantees compliance with legal and company regulations; for example, it makes sure that the weekly working hours for a specific flexitime balancing period are complied with. At a large corporation like Deutsche Telekom, regulations are diverse and cannot be fully specified for all the Group companies.

ACHIEVING A GOOD WORK-LIFE BALANCE AT DEUTSCHE TELEKOM IN GERMANY

We offer our employees attractive offers to help them achieve a better work-life balance. Achieving this requires more flexible work models, family-friendly options, effective health promotion and not least, a sustainable anchoring of work-life balance in the corporate culture:

- Childcare offers: At a number of sites with large numbers of employees, Deutsche Telekom provides childcare facilities, holiday childcare programs, and parent-and-child offices.

- Free advisory and referral services: Through our cooperation partner "awo lifebalance" and an online service, we support our employees with childcare (including emergency care), care for relatives, and household services.

- Employee networks: Through various networks, such as the "Fathers' Network" or "Stay in contacT", we provide information for reconciling work and family life, as well as contacts and discussion forums.

- Family fund: We support employee projects that help them improve their work-life balance.

- Social fund: We provide fast financial aid to employees who find themselves in financial difficulties through no fault of their own. We also offer subsidies for recreational activities for severely disabled children.

- Welfare service: We provide support for children who have lost one or both parents, are committed to employees in crisis situations and students from low-income families, and promote leisure activities for senior citizens.

- Recreation service: Employees can take advantage of low-cost family holidays, such as at one of our 18 holiday resorts.

Our complete range of offers for a better work-life balance can be found at www.telekom.com/work-life.

DIGITAL COLLABORATION

The key to effective and transnational cooperation is simple, fast and virtual communication. Thus, the volume of online conference minutes has continued to grow steadily in 2019.

	2015	2016	2017	2018	2019
WEBEX (conference minutes, in mio.)	533.86	672.52	763.73	835.10	883.88
Jabber (Number of Jabber accounts)	15 110	27 254	37 062	42 102	64 668
You-and-Me (Number of created user profiles)	104 297	120 325	121 876	125 670	133 306

DIALOG AND COOPERATION WITH EMPLOYEE REPRESENTATIVES

We negotiated and adopted over 150 agreements in 2019 through constructive dialog with our works councils.

Two key transformation projects we conducted in 2019 in close coordination with the works councils were the organizational measures "Technology & Innovation 2018" and "T-Systems Transformation".

In addition, 85 collective agreements were concluded with the union ver.di during the year. Apart from the collective bargaining agreements, the focus in 2019 was on concluding arrangements on harmonizing the Group's remuneration systems as far as possible.

Collective bargaining plays an important role and has a long tradition at our company. The percentage of employees covered by collective agreements is published in the non-financial statement in our Annual Report.

Constructive dialog

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 involved in all major issues as a matter of principle. Information is available in the 2019 Annual Report.

FAIR PAY AND BENEFITS

We offer our employees competitive, performance-based pay oriented to the relevant national market. Our remuneration policies are structured to guarantee equal pay for men and women and do not discriminate.

Executive compensation at Deutsche Telekom is based on our Group-wide Global Compensation Guideline. We also offer our employees additional benefits such as our company pension scheme.

As part of our Group-wide employee survey, we regularly ascertain how satisfied our employees are with their pay and also conduct other surveys on specific topics and in specific units.

In 2018, we compiled a report on equal pay and equality for the first time in order to comply with the new legal requirements of the Act to Promote Transparency of Pay Structures. It is published every five years. You can find the latest report as an annex to the 2017 management report.

SALARY DEVELOPMENT AT DEUTSCHE TELEKOM IN GERMANY

In the 2018 collective bargaining round, the salaries of roughly 60,000 employees covered by collective agreements at Deutsche Telekom AG and in the Germany operating segment were raised in two stages by a total of 5.2 percent for employees in the lower pay groups and 4.8 percent for employees in the higher pay groups. The second salary increase took effect on May 1, 2019. The duration of collective wage agreements is mostly 26 months; they may be terminated for the first time at March 31, 2020.

For the T-Systems segment, salaries rose in the first stage from January 1, 2019 by 3.0 percent in the lower pay groups and by 2.0 percent in the higher pay groups. A further salary increase of 2.5 percent will follow on January 1, 2020 for all T-Systems employees covered by collective agreements. The collective agreement is valid for a total of 33 months (Sunday, April 1, 2018 to Thursday, December 31, 2020).

The salaries of trainees and cooperative degree students were raised by 30 euros in May 2019. Subsistence allowance for apprentices not living with their parents increased by 20 euros to €250.

Harmonization of remuneration systems

Together with the trade union, we succeeded in harmonizing the remuneration systems in Germany as far as possible from 2018. For instance, non-sales was converted to a fixed annual salary effective January 1, 2019, eliminating variable remuneration. In addition, we achieved the goal of introducing global, uniform job descriptions from 2020, which will initially be used in Germany. This will help gradually establish new, market-oriented, and future-proof job descriptions throughout the Group.

SALARY DEVELOPMENT AND REMUNERATION SYSTEMS AT T-SYSTEMS IN GERMANY

In the course of the 2018 collective bargaining round, the salaries of roughly 20,000 employees covered by the collective agreement were raised in two stages by a total of 5.5 percent for the lower pay groups and 4.5 percent for the higher pay groups. After the first increase on January 1, 2019, the second increase took place on January 1, 2020. The new collective wage agreement has a term of 33 months and will expire on December 31, 2020.

In 2019, we began to gradually harmonize regulations for variable remuneration at T-Systems as well. Non-sales will also be converted to a fixed annual salary in 2021.

EMPLOYEE SATISFACTION

EVERY TWO YEARS: EMPLOYEE SURVEY

Every two years we conduct our employee survey in order to obtain feedback from our employees, discover weaknesses, and implement suitable measures to eliminate those weaknesses. Some 76 percent of employees throughout the Group took part in the last employee survey in 2019. The Group index value for commitment – our gage for employee satisfaction – was 4.0 on a scale of 1 to 5, with 5 being the highest.

TWICE A YEAR: THE PULSE SURVEY

Deutsche Telekom wants to pursue an open dialog and productive exchange with its employees. New working models and state-of-the-art communication options, as well as regular employee surveys, help us to accomplish this. In addition to the employee survey, we also gauge employee satisfaction every six months through a pulse survey. The pulse survey in November 2019 saw a 69 percent response rate among employees.
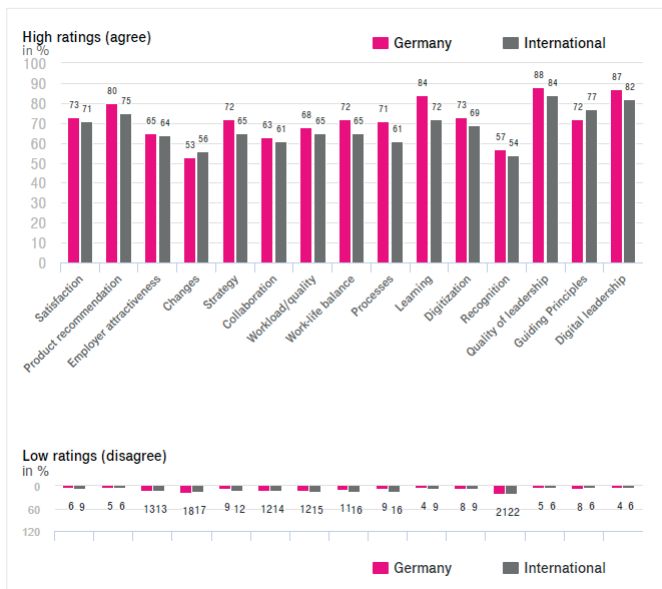
High ratings = Very good, good/agree fully, agree.
Low ratings = Poor, very poor/do not agree, do not agree at all.
"Neither agree nor disagree" ratings are not included.
Explanations of questions asked:
- Satisfaction = How do you feel in the company?
- Product recommendation = I recommend the products/services of our company to potentialcustomers outside of my work environment.
- Employer attractiveness = I would recommend our company as a great place to work.
- Changes = I can understand the changes in our company.
- Strategy = I can clearly explain to others the strategy of Deutsche Telekom.

- Collaboration = In my experience, we all work together as partners at Deutsche Telekom in theinterests of the Group's success.
- Workload/quality = In my team, the workload and quality requirements are consistent with oneanother.
- Work-life balance = The current working hours allow a good balance between private(family/leisure act.) and job-related interests.
- HR development = Our company offers sufficient training opportunities to support myprofessional development.
- Processes = Processes and procedures allow me to effectively meet my (internal and/ orexternal) customers' needs.
- Recognition = Considering all my efforts and achievements, I feel that I have received theappropriate amount of recognition at work.
- Guiding Principles = I feel that the Guiding Principles are reflected in my day-to-day work.
- Learning = Our company supports innovative learning formats and offerings.
- Digitalization = I feel that digital platforms/tools support dialog, networking, knowledgesharing, and collaboration at our company.
- Recognition = Considering all of my efforts and achievements, I feel that I have received theappropriate amount of recognition at work.
- Quality of leadership = My supervisor acts with integrity and walks the talk.
- Guiding Principles = I feel that the Guiding Principles are reflected in my day-to-day work.
- Code of Conduct = Our Code of Conduct is the basis for my behavior in my day-to-day work.

EMPLOYEE IDENTIFICATION WITH CR COMMITMENT ESG KPI

We use the Employee Identification with CR Commitment ESG KPI to determine the degree to which our staff identify with, or how satisfied they are, with our CR commitment. This is based on the Group employee survey (excluding T-Mobile US), which we conduct every two to three years. The last survey has been conducted in May 2019.

Our ambition: increase KPI
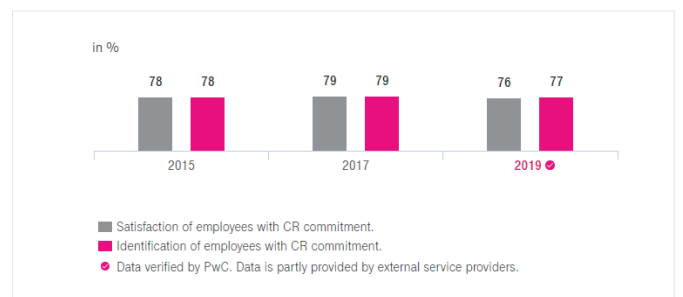
Reporting against standards

This data is relevant for criteria 7 (Control) and 14 (Employment Rights) of the German Sustainability Code. It is also used in our reporting on Global Compact img Principles 3 (Freedom of association) and 6 (Elimination of discrimination).

SATISFACTION AND COMMITMENT INDEX

Satisfaction rate	2016	2017	2018	2019
Germany	88%	86%	81%	85%
International	86%	84%	82%	82%
Group (total)	87%	85%	82%	83%

Engagement-Index (Commitment-Index), scale of 1 to 5 [b]	2016 [a]	2017	2018 [a]	2019
All employees	4.1	4.1	4.1	4.0 ●
All managers	4.5	4.5	4.5	4.4
Employees excl. managers	4.0	4.0	4.0	4.0

The calculated values are taken from the pulse and employee survey results current at the time. The most recent pulse and employee survey were conducted in 2019.

[a] from prior year's employee survey
[b] Divergences from previous reports are due to the fact that the commitment index referred all employees up to the year 2014.

● Data assured by PwC.

The Employee Satisfaction KPI has improved steadily in recent years. This is largely due to sets of measures which guarantee improvements right down to individual teams. We base this on the employee survey carried out every two years and monitor how effective these measures are through the half-yearly pulse survey. This allows us to continuously analyze and optimize our processes. It gives us the opportunity to continually improve employee satisfaction.

DIVERSITY

OUR APPROACH TO DIVERSITY AND EQUAL OPPORTUNITY
Diversity is our strength
At our company, women and men, young and old as well as people with different abilities and cultural backgrounds from some 150 countries work together very successfully. This diversity helps us remain competitive around the world with good ideas and outstanding products, and consolidate our position as an attractive employer.

For us, diversity means that we offer our employees numerous opportunities to develop professionally and grow personally, regardless of their gender, age, sexual orientation, health situation, ethnic background, religion, or culture. Our Group-wide Diversity Policy, the six Guiding Principles, the Group's Employee Relations Policy and our "Code of Human Rights & Social Principles" form the foundation of our commitment to diversity. We are also a founding member of the corporate initiative "Diversity Charter" and aim to promote and use diversity both within and outside of the company.

As early as during the hiring process we emphasize diversity and consider options other than just traditional educational and life paths. Good examples of this are our entry-level training scheme for young people who are disadvantaged in terms of their social and educational background and our part-time apprenticeships/degree programs for single parents.

We support an effective work-life balance with an extensive work-life portfolio to allow our employees to realize their abilities in the best possible way. At the end of 2019, 10.8 percent of employees covered by collective agreements and 13.4 percent of Deutsche Telekom civil servants throughout Germany were working part-time. 7.6 percent (as at December 31, 2019) of our employees in Germany are disabled, putting us well over the statutory quota of 5 percent. More than one percent of our apprentices and those in cooperative study programs in Germany are young people with disabilities. This is also above-average in view of the total number of disabled people in Germany.

Equal opportunity is a particularly important issue for us - one for which we have been fighting for more than two decades. Our goal is to increase the number of women in expert and managerial positions; we want to fill 30 percent of leadership positions in middle and upper management worldwide with women. To that end, we have initiated several measures.

DIVERSITY CHARTER
The Diversity Charter is an independent economic initiative that is supported by around 3,000 companies and institutions in Germany. The Charter's goal is to create a work environment free of prejudice. All employees deserve respect and appreciation – regardless of gender, nationality, ethnic origin, religion or belief, disability, age, sexual orientation, and identity. Deutsche Telekom is a founding member of the initiative.

COMMITMENT TO INCREASING THE NUMBER OF WOMEN IN MANAGERIAL POSITIONS
Our goal is to have women occupy at least 30 percent of positions in middle and upper management. To this end, we have initiated a host of measures:

- Expanding our opportunities to achieve a good work-life balance through parental leave models, flexible working hours, and childcare services

- The "Careers with children" mentoring program for female candidates for the Supervisory Board

- Specifically addressing female talent through cooperative activities and at events

- Many more support and networking services

Our diverse range of measures has allowed us to continuously increase the share of women in middle and upper management – from 12.5 percent in 2010 to 26 percent on December 31, 2019. With 40 percent on the Group's Supervisory Board, we have surpassed both our own goal as well as the statutory gender quota introduced in Germany on January 1, 2016. Our quota for women, which we want to achieve by the end of 2020, also applies to the two levels beneath Board of Management level, the management of the national companies, and the internal supervisory boards in Germany. With these efforts, we are significantly surpassing the statutory regulations in effect in Germany since 2015.

We also work to increase the number of women participating in technical cooperative study programs. While in 2010 the share of women was only 11 percent in Germany, it has meanwhile risen to 14.3 percent (as at December 31, 2019).In 2019, our women's network Women@ Telekom organized its second AI hackathon, this year on the topic of cybersecurity. A diverse group of some 55 experts from the programming, data science, and graphic design fields took part.

PERCENTAGE OF WOMEN IN TOTAL WORKFORCE

In recent years, we have succeeded in maintaining the proportion of women in the total workforce at over a third and expect a slight upward trend in the future.

- **35.2%** Percentage of women in total workforce
- **64.8%** Percentage of men in total workforce
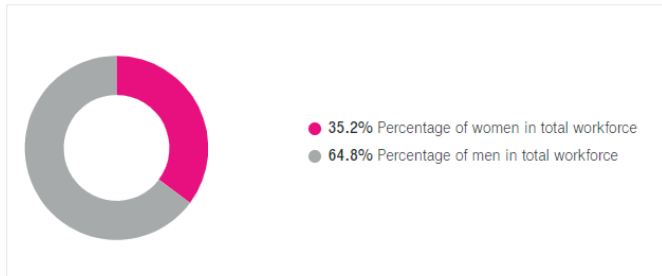
PERCENTAGE OF WOMEN IN MIDDLE AND UPPER MANAGEMENT

In 2019, as well, we continued pursuing the goal of archiving 30% women in management positions. In Germany, the percentage of women in middle and upper management rose from 21.0 percent to 21.9 percent in 2019. Likewise, the figure for the entire Group increased and now stands at 26 percent. In the national companies outside Germany (excluding TMUS), the figure declined slightly due to a reduction in mandates and the deconsolidation of Albanian Mobile Communications.

in %

	Germany	International	Group (total)
2016 a)	21.2	29.5	25.4
2017	21.1	30.2	25.4
2018	21.0	30.3	25.4
2019 ⦿	21.9	29.9	26.0

⦿ Data checked by PwC.

a) In 2016, the classification was made according to job clusters and not to management groups as in the years before. Therefore the comparability of the data is limited.

You can find further information in the HR Factbook.

Reporting against standards

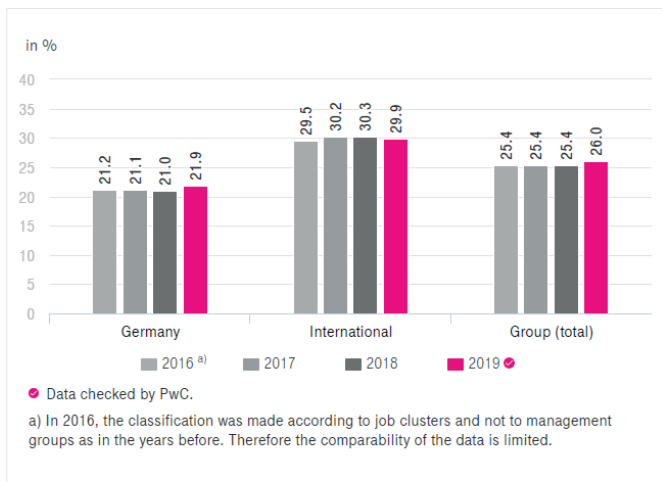By reporting the percentage of women in middle and upper management, we fully cover the GRI 405-1 (Diversity of governance bodies and employees) GRI indicator and the S10-02 (Percentage of women in managerial positions) EFFAS indicator and partially cover the S10-01 (Percentage of women in total workforce) EFFAS indicator. This data is also relevant for criterion 15 (Diversity and health) of the German Sustainability Code. It is also used for reporting on the Global Compact principle 6 (Elimination of discrimination).

PERCENTAGE OF WOMEN ON THE MANAGEMENT BOARD

In 2019, as well, we continued pursuing the goal of achieving 30% women in management positions. Two of our nine board members are female.

Deutsche Telekom is one of the few DAX Groups where women have been part of the Board of Management for several years now. In addition, more and more women are working in international management teams below the Board of Management level.
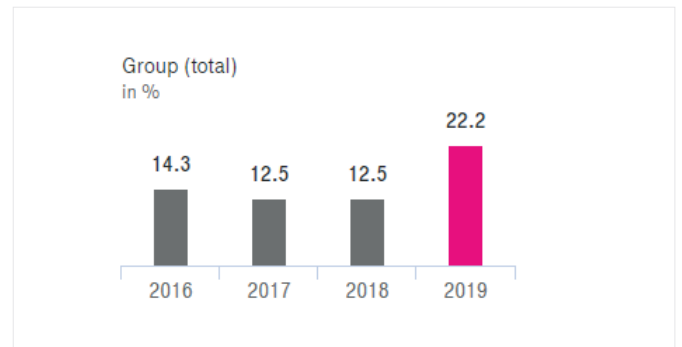
Group (total)
in %

2016	2017	2018	2019
14.3	12.5	12.5	22.2

You can find further information here and in the HR Factbook.

Reporting against standards

By reporting the percentage of women on the management board, we fully cover the GRI 405-1 (Diversity of governance bodies and employees) GRI indicator and the S10-02 (Percentage of women in managerial positions) EFFAS indicator and partially cover the S10-01 (Percentage of women in total workforce) EFFAS indicator. This data is also relevant for criterion 15 (Diversity and health) of the German Sustainability Code. It is also used for reporting on the Global Compact principle 6 (Elimination of discrimination).

PERCENTAGE OF WOMEN ON THE SUPERVISORY BOARDS OF DEUTSCHE TELEKOM'S NATIONAL COMPANIES

In the supervisory boards of our fully-consolidated European subsidiaries, the percentage of women totals 25 percent (in Germany: 39.5 percent).

Women in Supervisory Board (fully-consolidated European subsidiaries)
(in %)

- **25.0 %** Year 2019 ⦿
- **26.0 %** Year 2018
- **27.0 %** Year 2017
- **26.0 %** Year 2016 a)

a) Proportion of internal active female employees in top and middle management was not reported in 2016.

⦿ Data assured by PwC. Data cannot be directly compared to the previous year, due to a new calculation method.
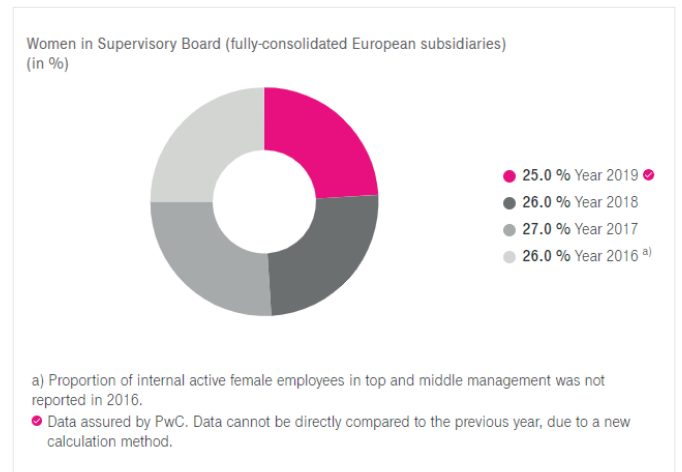
You can find further information in the HR Factbook.

PROMOTING DIVERSITY AMONG OUR YOUNG TALENT

We are committed to diversity among our junior staff and support young people with migrant backgrounds: as of December 31, 2019, 10 percent of the trainees and students on a cooperative degree program employed by us were of a nationality other than German; a total of 59 nations are represented.

Since 2011, we have been collaborating with the German Federal Employment Agency to offer single parents the opportunity to complete a part-time apprenticeship or cooperative study program. 13 young people began their part-time training with this program in 2019.

We offer refugees opportunities to embark on a career through our "Internship PLUS direct entry" program.

EMPLOYEES WITH DISABILITIES

Deutsche Telekom has already exceeded the prescribed minimum rate of 5 percent of disabled employees for a good many years, so that it heads the list of DAX 30 companies on this count. In 2019 the value of 7.6% could be maintained.

in %	2012	2013	2014	2015	2016 [a]	2017 [b]	2018 [c]	2019 [d]
Group (total) in Germany	6,4	6,4	7,0	7,2	7,5	7,5	7,6	7,6

[a] excl. Deutsche Telekom Capital Partners Management GmbH, Detecon International GmbH, Cronon AG, Strato AG, Deutsche Telekom Clinical Solutions GmbH, Orbit GmbH, operational services GmbH & Co. KG

[b] excl. Deutsche Telekom Capital Partners Management GmbH, Detecon International GmbH, Deutsche Telekom Clinical Solutions GmbH, Orbit GmbH, operational services GmbH & Co. KG, HÄVG GmbH

[c] excl. Deutsche Telekom Capital Partners Management GmbH, Detecon International GmbH, Deutsche Telekom Clinical Solutions GmbH, Orbit GmbH, operational services GmbH & Co. KG, HÄVG

[d] excl. Deutsche Telekom Capital Partners Management GmbH, Detecon International GmbH, Deutsche Telekom Clinical Solutions GmbH, Orbit GmbH, operational services GmbH & Co. KG, HÄVG, goingsoft Deutschland, Toll4Europe GmbH

You can find further information in the HR Factbook.

Reporting against standards

By reporting this data, we partially cover the GRI 405-1 (Diversity of governance bodies and employees) GRI indicator. This data is also relevant for criterion 15 (Diversity and health) of the German Sustainability Code. It is also used for reporting on the Global Compact principle 6 (Elimination of discrimination).

HUMAN RIGHTS

OUR APPROACH TO PROTECTING HUMAN RIGHTS

Deutsche Telekom has made an express commitment to the UN Guiding Principles on Business and Human Rights published by the United Nations Human Rights Council in 2011. These principles require businesses to systematically identify the impact their operations have on human rights, and to prevent, mitigate or compensate these where necessary. In order to meet these requirements, we have developed an extensive program to implement the UN Guiding Principles and introduced an ongoing process comprised of several interconnected measures and tools (see diagram).

HUMAN RIGHTS DUE DILIGENCE AT DEUTSCHE TELEKOM
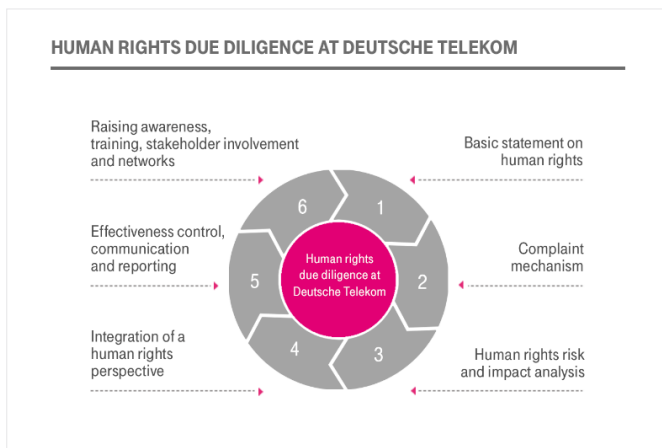
1. Mission statement on human rights

The obligation to respect human rights, individual rights and freedom of opinion, to safeguard the right to collective agreements and to guarantee diversity and equal opportunity is anchored in the following basic policies of Deutsche Telekom:

Guiding Principles
Code of Human Rights & Social Principles
Employee Relations Policy
Diversity Policy

2. How we handle human rights complaints:

We receive complaints about possible human rights violations at all times via the anonymous whistleblower portal "Tell me!" and our contact point for human rights, which has been in place since 2013. The contact point can be reached via the public email address human-rights@telekom.de. A complete overview of contact options can also be found on the "Tell me!" portal. We look into all tip-offs and reports received and introduce countermeasures as soon as the information is identified as plausible. You can find out how we handled the reports we received in 2019 here. In addition, human rights aspects have also been integrated since 2013 into due diligence activities conducted in the context of mergers and acquisitions.

3. Analysis of human rights risks and their potential impact:

To review the potential impact of our business activities on human rights, we prepare a central Human Rights & Social Performance Report every year. In 2019, all 117 of the companies surveyed declared in this report that they comply with the Code of Human Rights & Social Principles. The report indicated no violations for 2019.

4. Human rights and employee relations at our national companies:

We also introduce special evaluation processes as required to assess employer-employee relations in the national companies with which we implement our Employee Relations Policy. In this context, we also take into account the results provided by our Human Rights & Employee Relations Cockpit.

This is a tool to measure progress at our national companies on the basis of five indicators pertaining to human rights:

Employee satisfaction (source: semi-annual pulse survey)
Willingness to recommend Deutsche Telekom as an employer (source: semi-annual pulse survey)
Health rate (source: HSE cockpit)
Number of employees giving notice (source: HSE cockpit)
Human rights risks at national companies (according to Maplecroft Human Rights Risk Index)
The respective national company is classified according to a traffic light system for each key figure. The results are then discussed with the regional managers at the national companies and measures like human rights impact assessments and employee relations policy reviews are arranged as necessary.

5. Ensuring the effectiveness and adherence of human rights in the supply chain:

We expressly require our suppliers to assume responsibility as a way of making sure human rights are also protected within our sphere of influence outside of our Group. To this end, we supplemented our sustainable procurement strategy with supplier management to improve our sustainability performance in our supply chain and ensure respect for human rights. Audits of our suppliers are one component, among others. Detailed results of our Group-wide auditing program are available here.

6. Raising awareness, training, stakeholder engagement, & networks:

To ensure that human rights are safeguarded in accordance with our principles and our Code of Human Rights, we offer all employees worldwide online training courses on the subject of human rights. These are supplemented by internal communication campaigns with information about important aspects of the issue, such as anti-discrimination.

We are also involved in numerous networks such as the Global Compact and Econsense. Together with other companies, policymakers, and civil society, we can draw attention to existing grievances and press ahead with solutions.

CODE OF HUMAN RIGHTS & SOCIAL PRINCIPLES
In 2017 we revised our Social Charter and renamed it our "Code of Human Rights & Social Principles" . This was adopted by the Board of Management in November 2017.

This update underscored our commitment to protecting human rights and to the goals of the German National Action Plan on Business and Human Rights adopted by the Federal Government in 2016.

Our Code of Human Rights & Social Principles also represents our commitment to

- the guidelines and Declaration of Principles concerning Multi-national Enterprises and Social Policy of the International Labour Organization (ILO).

- the Convention of the Organization for Economic Cooperation and Development (OECD),

- the Universal Declaration of Human Rights, and the Guiding Principles on Business and Human Rights and the United Nations Global Compact.

REPORTS AND INQUIRIES REGARDING HUMAN RIGHTS
Between January 1 and December 31, 2019, we received eight reports related to human rights through our contact point for human rights or via the "Tell me!" whistleblower portal.

- Most of the inquiries and reports related to the topic of "compliance and verification of human rights at Deutsche Telekom". Not all of these tip-offs were deemed plausible.

- We also received several fundraising and support questions, which we forwarded to the appropriate departments.

- Of course, all reports were treated as confidential.

HUMAN RIGHTS AND SOCIAL PERFORMANCE REPORT
Deutsche Telekom has made an express commitment to the UN Guiding Principles on Business and Human Rights published by the United Nations Human Rights Council in 2011 and has anchored these principles in its Code of Human Rights & Social Principles.

Social Performance Report
To review possible impacts on human rights, we have operated a central Contact Point for Human Rights since 2013, and we prepare a Social Performance Report each year. In 2019 all 117 fully consolidated companies of Deutsche Telekom state whether they comply with the principles of the Code of Human Rights & Social Principles. The report again shows no violations of our Social Charter for January to December 2019.

Whistleblower Portal
Whistleblower portal 'Tell me!': 8 tip-offs relating to human rights issues in 2019.

Assessments & Review

- A Human Rights Impact Assessment in 2019 (designed to assess the actual and potential consequences of corporate activities on human rights and the ability of the organization to prevent, mitigate, or compensate these consequences): T-Systems India.

- An 'Employee Relations Policy' review in 2019: T-Mobile Polska und Deutsche Telekom Außendienst.

The Human Rights & Employee Relations Policy Cockpit is also used to measure impacts on human rights. To this end, the national companies collect data related to five human rights indicators and evaluate them according to a traffic light system.

✅ Data assured by PwC.

Reporting against standards
Statements by the participants in the Social Performance Report are relevant for GRI Indicator G4-HR9 (Operations that have been subject to human rights reviews). Some of the information is relevant for the EFFAS indicator S07-02 (Percentage of total facilities certificated according to SA 8000 standard). It is furthermore relevant for criterion 17 (Human rights) of the German Sustainability Code. It is also used in our reporting on Global Compact Principles 1 and 2 (Protection of international human rights).

DEMOGRAPHY AND COMPANY PENSION SCHEME

AGE STRUCTURE AT THE DEUTSCHE TELEKOM GROUP

The average age in the Group is 41.4 years. The average age in Germany is rising but is balanced out by the average age at international level (37.5 years).

in %

Ø age in 2016 a) (in years): 40.7 Ø age in 2017 b) (in years): 41.0
Ø age in 2018 c) (in years): 41.2 Ø age in 2019 c) (in years): 41.4

a) does not include data for: Deutsche Telekom Capital Partners Management GmbH, Detecon International GmbH, Cronon AG, Strato AG, Deutsche Telekom Clinical Solutions GmbH, Orbit GmbH, operational services GmbH & Co. KG, T-Systems North America, T-Systems Canada, Deutsche Telekom North America, DT International Finance B.V., OTE Plc, Deutsche Telekom (UK) Limited, Detecon- and ICSS-Companies.
b) excl. Deutsche Telekom Capital Partners Management GmbH, Detecon International GmbH, Deutsche Telekom Clinical Solutions GmbH, Orbit GmbH, HÄVG GmbH, operational services GmbH & Co. KG, DT International Finance B.V., OTE Plc, Deutsche Telekom (UK) Limited, Detecon- and ICSS-Companies
c) excl. Deutsche Telekom Capital Partners Management GmbH, Detecon International GmbH, Deutsche Telekom Clinical Solutions GmbH, Orbit GmbH, HÄVG GmbH, operational services GmbH & Co. KG, Toll4Europe, DT International Finance B.V., T-Systems Polska, DT North America, T-Systems Canada, T-Systems North America, IWS SK CES, Detecon- and ICSS-Companies
a) does not include data for: Deutsche Telekom Capital Partners Management GmbH, Detecon International GmbH, Deutsche Telekom Clinical Solutions GmbH, Orbit GmbH, HÄVG GmbH, operational services GmbH & Co. KG, Toll4Europe, goingsoft Deutschland GmbH, DT International Finance B.V., GTS-Ukraine, T-Mobile Infra, IWS SK CES, Detecon- and ICSS-Companies

Reporting against standards

By reporting on this data, we partially cover the GRI 405-1 (Diversity of governance bodies and employees) GRI indicator and fully cover the S03 -01 (Age structure/distribution) EFFAS indicator. This data is also relevant for criterion 15 (Diversity and health) of the German Sustainability Code. It is also used for reporting on the Global Compact principle 6 (Elimination of discrimination).

AGE STRUCTURE IN THE DEUTSCHE TELEKOM GROUP IN GERMANY

Demographic shifts and low natural attrition explain why the proportion of employees over the age of 55 has risen from 15 to 22 percent in the past five years. The average age of employees in Germany rose to 46.5 years in 2019. One advantage is that this allows Deutsche Telekom to harvest the vast know-how of its many experienced employees.

Ø age in 2016 a) (in years): 45.8 Ø age in 2017 b) (in years): 46.1
Ø age in 2018 c) (in years): 46.3 Ø age in 2019 d) (in years): 46.5

a) excl. Deutsche Telekom Capital Partners Management GmbH, Detecon International GmbH, Cronon AG, Strato AG, Deutsche Telekom Clinical Solutions GmbH, Orbit GmbH, operational services GmbH & Co. KG
b) excl. Deutsche Telekom Capital Partners Management GmbH, Detecon International GmbH, Deutsche Telekom Clinical Solutions GmbH, Orbit GmbH, HÄVG GmbH, operational services GmbH & Co. KG, DT International Finance B.V., OTE Plc, Deutsche Telekom (UK) Limited, Detecon- and ICSS-Companies
c) excl. Deutsche Telekom Capital Partners Management GmbH, Detecon International GmbH, Deutsche Telekom Clinical Solutions GmbH, Orbit GmbH, operational services GmbH & Co. KG, HÄVG GmbH, Toll4Europe, DT Deutsche Telekom International Finance B.V.
d) excl. Deutsche Telekom Capital Partners Management GmbH, Detecon International GmbH, Deutsche Telekom Clinical Solutions GmbH, Orbit GmbH, operational services GmbH & Co. KG, HÄVG GmbH, Toll4Europe, goingsoft Deutschland
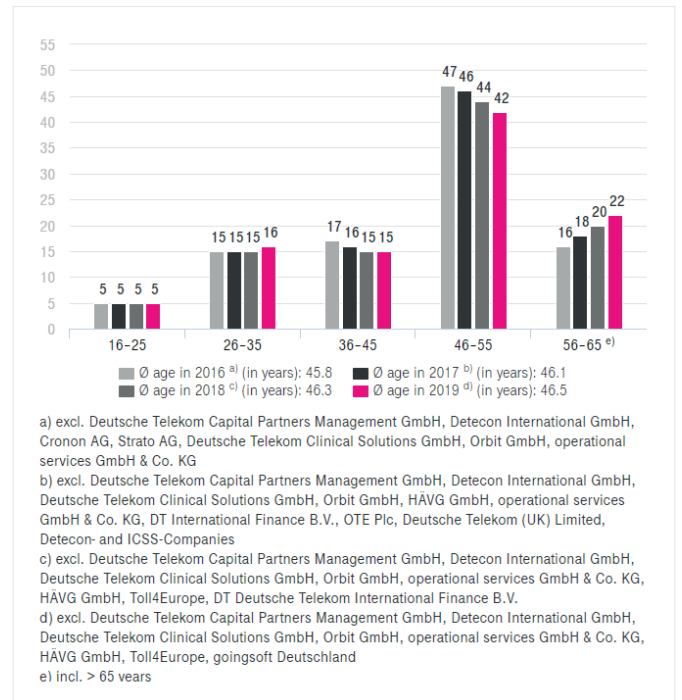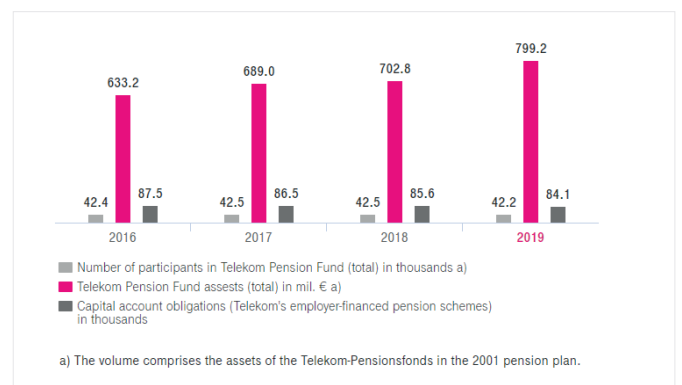e) incl. > 65 years

Reporting against standards

By reporting on this data, we partially cover the GRI 405-1 (Diversity of governance bodies and employees) GRI indicator and fully cover the S03 -01 (Age structure/distribution) EFFAS indicator. This data is also relevant for criterion 15 (Diversity and health) of the German Sustainability Code. It is also used for reporting on the Global Compact principle 6 (Elimination of discrimination).

COMPANY PENSION SCHEMES

The increase in fund assets can be attributed to the payments of the increasing number of plan participants (as was the case in previous years). Because the majority of participants in the 2001 pension plan are still active, i.e., still paying into their retirement plans, this increase will remain steady over the next few years.

■ Number of participants in Telekom Pension Fund (total) in thousands a)
■ Telekom Pension Fund assets (total) in mil. € a)
■ Capital account obligations (Telekom's employer-financed pension schemes) in thousands

a) The volume comprises the assets of the Telekom-Pensionsfonds in the 2001 pension plan.

Investments in the capital market made by Deutsche Telekom for company pension schemes and similar obligations in Germany are based on our sustainability principles. These principles were integrated into our socially responsible investment strategy for Deutsche Telekom pension providers, which we introduced in 2013, in the form of exclusion criteria. They prohibit investments in companies that produce NBC weapons, anti-personnel mines or cluster bombs or that trade in these or have repeatedly violated the UN Global Compact principles. Deutsche Telekom pension funds are also prohibited from purchasing government securities from governments that are subject to sanctions in accordance with public international law. Our pension providers agreed to our socially responsible investment strategy in 2013. This strategy was reviewed in 2017 and now incorporates Best-in-Class strategies and engagement approaches.

We are convinced that putting this strategy into practice will help improve our financial risk indicators. This strategy will also promote perception of Telekom as a socially responsible company. It will help us avoid high-risk, controversial investments and, instead, invest in long-term, stable values that are in line with our principles of sustainability.

Reporting against standards
By reporting this data we fully cover the GRI 201-3 (Defined benefit plan obligations and other retirement plans) GRI indicator.
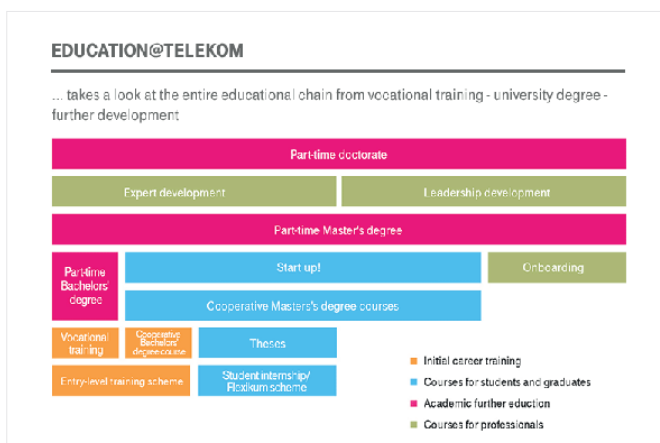
TRAINING AND DEVELOPMENT

OUR APPROACH TO TRAINING AND DEVELOPMENT

We offer employees of Deutsche Telekom a wide range of individual vocational training and development programs. The cornerstones for this are our Employee Relations Policy and the Guiding Principles.

Ensuring employability

We help the experts of tomorrow gain qualifications through our comprehensive training and continued education offers in both the technical and commercial fields. In 2019, we provided 2,150 training positions throughout the Group, of which 1,450 apprenticeships, 675 openings for students on cooperative Bachelor's degree courses, and 25 for students on cooperative Master's degree courses. That makes us one of the largest training providers in Germany.

We promote lifelong learning in all phases of employment and support our employees on their own individual learning path. To be able to identify individual needs for development in a targeted manner and provide tailored offerings, we obtain an overview of our employees' skills. We offer our employees a wide range of individual training and development options, such as work abroad or work/study programs. Under the Bologna@Telekom program, we have been giving employees the chance to participate in a part-time university program for ten years now – and gain qualifications ranging from Bachelor's to Master's degrees. A total of 1,800 employees have taken up this offer since it was launched 10 years ago.

Digitals skills are the key to the future

Our employees around the globe spent some 4 million hours on training and skills development in 2019, 46 percent of which was on digital offerings, which is 5 percent more than in 2018. Many of our courses can now be booked via the global Learning Management System (LMS).

In 2019, digital courses accounted for 60 percent of the training which could be booked via the LMS. In 2019, Deutsche Telekom began making long-term changes in the learning culture at the Group. With the "youlearn" initiative, we are pursuing the goal of turning Deutsche Telekom into a learning organization. For this, the company is focusing increasingly on supporting everyday, self-directed learning with content that should also be more enjoyable. In 2019, "youlearn" launched new information portals for learning opportunities, an improved search function, new digital learning content, and a new experience-based learning platform. In addition, a "Learning Challenge" motivates employees to participate in voluntary informal learning. One remarkable example of self-managed, autonomous learning is the employee initiative "Learning from Experts" launched in 2018: by the end of 2019, some 450 experts had shared their knowledge in brief, digital sequences with a community of almost 50,000 colleagues.

Strengthening leadership skills in the digital age

We also adapt our management development programs to the challenges of the digital age. Since 2017, our extensive training catalog has included classroom teaching as well as entirely digital offerings. As a result, we not only strengthen leadership skills, but also virtual leadership abilities, and offer many opportunities to network.

As part of our "Lead to win" performance and development process, our top-level managers receive feedback on their current performance profile and have an opportunity to address their needs for development. We have consistent tools for performance assessment in Germany in the shape of "Compass" for employees covered by collective agreements and civil servants, and the Performance & Potential Review for managers and employees not covered by collective agreements. The Performance & Potential Review is also used at many national companies.

Agile transformation of Deutsche Telekom in Germany

In Germany, we are boosting our use of agile methods in the fields of product and process development. The goal is to intensify our focus on the customer and speed up our delivery capability.

To this end, we have more closely dovetailed the cooperation model for the business and IT segments. In addition, management has been simplified and an overarching business and IT architecture created to increase standardization of our products.

The agile transformation at Telekom Deutschland is bolstered by a comprehensive range of training and education programs. Along with typical training courses on agile working, this includes four-month classes for specific role profiles such as "Product Owner" or "Scrum Master" as well as a leadership program for managers.

youlearn at T-Systems

In 2019, the issues of skills management and learning were high on the agenda Group-wide. We are systematically building up skills at T-Systems. The basis for this are approximately 200 "skill profiles": they reflect not only what the job requires today, but also what will be needed in the near future. Using a self-assessment, our employees can see how well they already fit a profile. They can close any gaps with targeted training courses and retraining or further training programs.

In 2019, T-Systems launched the #youlearn SAP Program, a one-year qualification program for junior employees in the SAP field. There are also other new development paths, such as for sales employees and junior project managers. One special feature is the training program to become a digital engineer, which is aimed at T-Systems' employees. Together with the Business School of RWTH Aachen University, we will train these digital "all-rounders" within nine months. The first 20 digital engineers started and completed their training in 2019.

TRAINING PROGRAM FOR CYBER SECURITY PROFESSIONALS

Data security experts are still in short supply on the German labor market, which is why we developed our part-time training program for cyber security professionals (certified by the Chamber of Commerce and Industry) in 2014. The two-and-a-half-year program is integrated into their regular tasks and supplemented by topic-based and general modules in a variety of formats (classroom courses, e-learning, blended learning). Those who complete the development program receive a certificate for IT security professionals from the German Chamber of Commerce and Industry. They can obtain credits in their Bachelor's and Master's program for the skills they have acquired as part of the further training. Given the demand, including from other companies and public agencies, we have opened up our further training to employees from other organizations. The sixth year's intake embarked on the program in 2019 and comprises 13 employees from Deutsche Telekom and five participants from other companies and public administration authorities.
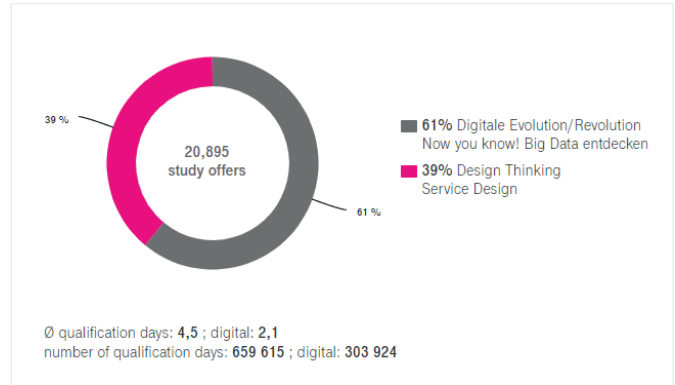
The verdict now that the first three years have completed the program is a positive one. Of the 29 graduates from the 2014, 2015, and 2016 intake, 28 were kept on at Deutsche Telekom.

TRAINING PROGRAM PREPARES FOR SUPERVISORY BOARD POSITIONS

In 2014, we became the first DAX company to develop a training program to prepare employees for supervisory board positions. The program was developed in collaboration with the European School of Management and Technology (ESMT). We are particularly interested in encouraging women to take a seat on the supervisory board. We have trained a total of 64 potential supervisory board members so far, around half of which work at national companies outside of Germany. Around half of the program's graduates were then appointed to a Deutsche Telekom Supervisory Board.

SKILLS DEVELOPMENT AT TELEKOM TRAINING IN GERMANY

Deutsche Telekom offers its employees a range of advanced training measures, which enable them to develop and brush up their skills.

20,895 study offers

■ 61% Digitale Evolution/Revolution Now you know! Big Data entdecken
■ 39% Design Thinking Service Design

39 %

61 %

Ø qualification days: **4,5** ; digital: **2,1**
number of qualification days: **659 615** ; digital: **303 924**

You can find further information here and in the HR Factbook.

Reporting against standards

By reporting this data we fully cover the GRI 404-1 (Average hours of training per year per employee) and GRI 404-2 (Programs for upgrading employee skills and transition assistance programs) GRI indicators as well as the S02-02 (Average expenses on training per FTE p.a.) EFFAS indicator. This data also covers criterion 16 (Steps taken to promote the general employability of all employees) of the German Sustainability Code.

INTERNATIONAL DEVELOPMENT AND LEADERSHIP PROGRAMS

The object of our international development and leadership programs is for high potentials and high achievers to gain a foothold in the Group, to keep them loyal to the company and to position them in suitable jobs. These programs focus on development of the upcoming leader generation and on support in coping with the challenges they face now and in the future. At the same time, the programs aim to enhance their sense of belonging, increase knowledge exchange and promote personal responsibility.

For 2019, 952 participants were included in the Global Talent Pool.

		2016	2017	2018	2019
Participants Trainee-Programm Start up! [a]	total	18	32	44	71
Participants Trainee-Programm Start up! [a]	of which women	28%	50%	59%	44%
Participants Global Talent Pool [b]	total	253	858	976	952
Participants Global Talent Pool [b]	of which women	35%	25%	26%	26%

[a] The program lasts 15-18 months. The numbers listed are annual new hires.
[b] Group-wide program for top talents. The program lasts 12 months (starts every summer). Replaces the former „Global Talent Pool" program. New audience scope hinders the comparability with previous years data.

2019 saw the continuation of successful formats, ongoing improvements based on participant feedback, and the redesign of individual courses. After two successful rounds, we continued our state-of-the-art levelUP! executive program in 2019. In total, over 2,100 executive staff have already participated in this program.
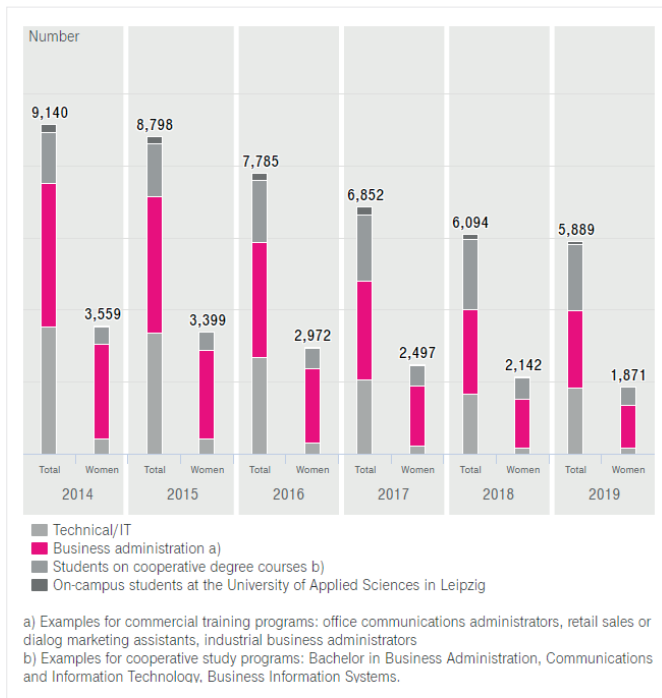
levelUP! is designed to help managers tackle future challenges and facilitate their own development journey. The main aspect pursued in 2019 was to focus on leadership in an agile context.

levelUP!
LEADERSHIP FOR TOMORROW

Participants

700

International 28 %

Germany 72 %

You can find further information here and in the HR Factbook.

APPRENTICES AND TRAINING PROGRAMS DEUTSCHE TELEKOM GROUP IN GERMANY

In 2019, we recruited more than 5,900 junior employees for training or a cooperative degree program. More than 32% of them were women. The decrease on the previous year's figures is in line with the general employment trend at Deutsche Telekom.
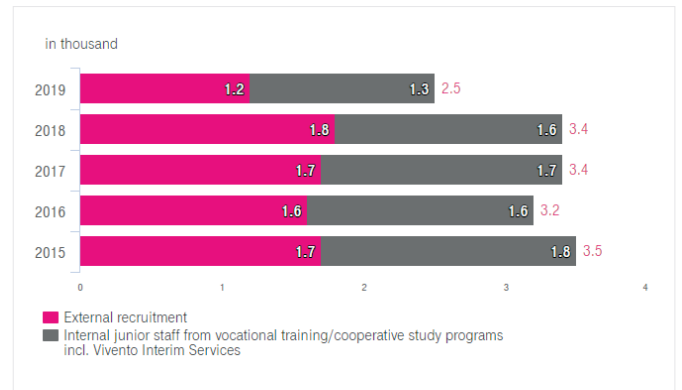
Number

	2014	2015	2016	2017	2018	2019
Total	9,140	8,798	7,785	6,852	6,094	5,889
Women	3,559	3,399	2,972	2,497	2,142	1,871

- Technical/IT
- Business administration a)
- Students on cooperative degree courses b)
- On-campus students at the University of Applied Sciences in Leipzig

a) Examples for commercial training programs: office communications administrators, retail sales or dialog marketing assistants, industrial business administrators
b) Examples for cooperative study programs: Bachelor in Business Administration, Communications and Information Technology, Business Information Systems.

You can find further information here and in the HR Factbook.

Reporting against standards

By reporting this data we partially cover the GRI 404-1 (Average hours of training per year per employee) GRI performance indicator. This data is also relevant for criterion 15 (Diversity and health) of the German Sustainability Code.

EMPLOYEE RECRUITMENT DEUTSCHE TELEKOM GROUP IN GERMANY

In 2019, Deutsche Telekom hired almost 1,200 new employees from the external labor market in Germany. In addition, we gave around 1,300 internal junior staff permanent jobs on completion of their vocational training or cooperative study courses. A total of 8,300 employees were recruited outside Germany.

in thousand

	External recruitment	Internal junior staff	Total
2019	1.2	1.3	2.5
2018	1.8	1.6	3.4
2017	1.7	1.7	3.4
2016	1.6	1.6	3.2
2015	1.7	1.8	3.5

- External recruitment
- Internal junior staff from vocational training/cooperative study programs incl. Vivento Interim Services

You can find further information here and in the HR Factbook.

OCCUPATIONAL HEALTH AND SAFETY

OUR APPROACH TO HEALTH AND OCCUPATIONAL SAFETY

The Board of Management assumes overall responsibility for occupational health and safety, and environmental protection. We combine and control our programs for "Safety and Health at Work" at Group level; health and safety managers are responsible for implementing these programs locally. The general responsibilities, duties, and programs for health and safety management are outlined in the Health & Safety Environment handbook. The handbook serves to harmonize and align our management systems with common targets across the Group.

Occupational health and safety is effectively incorporated into our structures via certified management systems and appropriate policies and guidelines. The basis for this is the ISO 45001 standard. We were one of the first DAX companies to have our health and safety management systems certified according to ISO 45001. By the end of the reporting year, 92 German and international locations were audited according to ISO 45001 and ISO 14001. Their certification was renewed in all cases.

We support our employees in maintaining and promoting their health with a host of target-audience-specific measures and extensive programs. At the same time, safety in the workplace is our highest priority. We view occupational health and safety legislation as minimum requirements. Awareness-raising, prevention, and individual responsibility are our top priorities. Our portfolio of occupational health and safety measures also includes a wide range of voluntary measures to promote health within the company.

These include, for example:

- An annual, comprehensive health check by the company doctor
- Vaccinations and hygiene measures
- Bowel cancer screening
- Seminars on recuperation ability, health-oriented leadership
- Online training on health and occupational safety
- Driver safety training

EFFECTIVENESS OF OUR HEALTH AND SAFETY MEASURES

We systematically evaluate the effectiveness of our measures. This includes reviewing the results of our employee survey, evaluating stress prevention measures under collective agreements, competitor analyses, and other indicators. We analyze this data each year to derive measures that exceed the statutory requirements.

Different performance indicators reflect the effectiveness of our corporate health management activities:

- At Deutsche Telekom in Germany, the health rate for 2019 (including long-term illnesses) was 94.0 percent (prior year: 93.6 percent). Excluding long-term illnesses, the health rate in 2019 stood at 95.5 percent (prior year: 95.3 percent). The health rate is reported to the Board of Management at the end of each quarter. We aim to bring the Group-wide health rate up to 95.9 percent by 2020 (excluding long-term illnesses).

- The total number of work-related accidents continued to decline in the reporting year in comparison with the previous year. The accident rate in Germany for 2019 was 6,8 accidents (resulting in over three days of absence) per thousand employees, well below the industry average.

- The Group-wide health index – calculated in 29 countries as part of the last employee survey in 2019 – remained stable at 3.6 (on a scale from 1.0 to 5.0). Despite the stress experienced, and against the backdrop of the transformation processes, the well-defined, available resources had a buffering effect.

In 2019, Health & Safety Management was honored at several international locations. Among others, the OTE Group Greece, T-Systems Iberia, and IT Services Hungary received awards.

PSYCHOSOCIAL COUNSELING AS PART OF CHANGE MANAGEMENT

Psychosocial counseling for transformation processes by the Employee and Executive Advisory Service plays an important role throughout Deutsche Telekom AG. The goal is to help affected employees, managers and teams deal with professional and private changes, and prevent psychosocial crises.

To this end, we offer free and anonymous individual counseling and consultation hours. Once they are registered, employees can take advantage of personal counseling sessions. They can receive immediate telephone advice via the TALKTIME hotline and, if necessary, will be put straight through to local experts or specialist offices. The counselors have a duty to maintain confidentiality and are familiar with the specifics of the company.

We also support specialists and managers with appropriate tools, such as presentations and workshops on the topics of "Change", "Addressing change constructively", "Shaping change successfully" and coping with psychological stress factors. We provide specific information about the availability of these services at the locations affected by change processes.

Transformation programs such as "Shaping the future" at DT Technik GmbH not only lead to changes in the organization of the companies, but also alter the duties and ways of working. This can result in stressful situations for the employees. The focus of our psychosocial counseling services in 2019 was therefore on the impact of the transformation programs. Another issue was the transformation into an agile organization. Various training modules were held for managers to prepare them for their changed leadership roles.

Necessary restructuring activities also led to site closures during the reporting period. Employees often took the resulting change of location as an opportunity to take advantage of individual counseling.

DIGITALIZATION AND HEALTH – JOINT PROJECT LAUNCHED WITH HEALTH INSURER BARMER

In 2017, we launched a model project "Digitalization and Health" together with health insurer BARMER. With scientific support from the University of St. Gallen and the University of Cologne, among others, we are working on solutions to improve the health, motivation, and performance of employees in the context of digitalization. Deutsche Telekom is thus the first company to systematically tackle this range of topics together with a health insurer, in this case, BARMER. Over a period of three years, we will develop and evaluate different innovative apps, solutions, and measures that will undergo intensive field testing by Deutsche Telekom employees.

In 2019, our employees also tested the "Digital Health Guide", an online platform that helps employees select suitable health services and makes them easier use. Employees were also able to test an app called NutriAssist. It analyzes individual requirements for micronutrients such as vitamins, minerals, and omega fatty acids, and provides corresponding nutritional advice. The pilot project "Healthy and mindful leadership" was also launched in 2019. Its goal is to improve employee's digital health literacy. It is aimed at managers as important disseminators. Based on the results of the pilot projects, a decision will be made whether and how the programs will be used at Deutsche Telekom in the future.

HEALTH RATE

Nationally, the health rate for the Deutsche Telekom Group in 2019 showed a slight improvement of 0.4 percent year-on-year, and stood at an average of 94 percent (including the long-term sick). Musculoskeletal disorders, respiratory diseases, and mental health problems account for the bulk of illness-related absenteeism at Deutsche Telekom AG.

The health rate is reported to the Board of Management at the end of each quarter. We aim to bring the Group-wide health rate up to 95.9 percent by 2020 (excluding long-term illnesses).

Targeted health protection programs were implemented in the individual companies. Across all segments, management training courses on the topic of "healthy leadership" were either introduced or continued. The aim is to raise managers' awareness of this issue and train them accordingly. Additionally, a structured absence management system will be put in place to ensure that employees and managers regularly communicate about illness-related absences so that appropriate action can be taken early on.

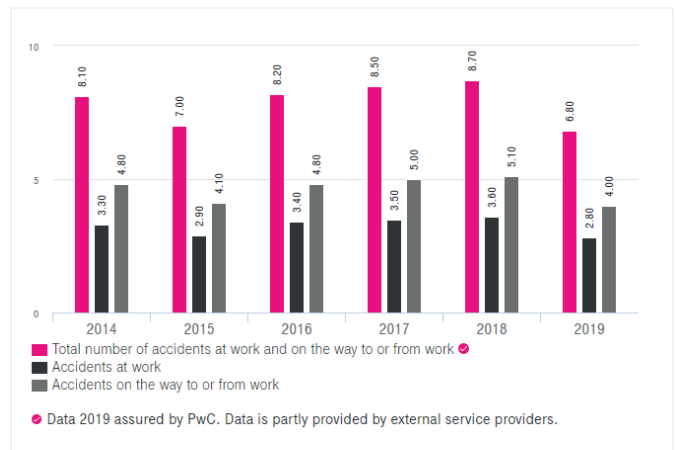|	2012	2013	2014	2015	2016	2017	2018	2019
Group (national)	94,2	93,9	94,4	94,0	93,8	93,7	93,6	94,0 ●

● Data assured by PwC.

Reporting against standards

In combination with data on work-related accidents, the health rate data partially covers the GRI 403-2 (Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities) GRI performance indicator. This data is also relevant for criterion 15 (Diversity and health) of the German Sustainability Code.

WORK-RELATED ACCIDENTS IN GERMANY

The number of work-related and commuting accidents was lower than in 2018. The accident rate is well below the average at comparable companies.

Deutsche Telekom has a health and safety management system in place to reduce the number of work-related accidents. This certified system makes it possible to map the entire health and safety process and to develop sets of measures to further improve employee safety.

■ Total number of accidents at work and on the way to or from work ●
■ Accidents at work
■ Accidents on the way to or from work

● Data 2019 assured by PwC. Data is partly provided by external service providers.

You can find further information here and in the HR Factbook.

HEADCOUNT AND PART-TIME WORK

WORKFORCE DEVELOPMENT WORLDWIDE

The Group's headcount fell by 2.4 percent compared with the end of the prior year. Development across the segments was varied. The number of employees in our Germany operating segment declined by 3.4 percent as a result of efficiency enhancement measures and the take-up of socially responsible instruments in connection with the staff restructuring. The total number of employees in our United States operating segment increased by 0.9 percent as of December 31, 2019 compared with the prior year, primarily due to ongoing growth in our business. In our Europe operating segment, the headcount was down 7.4 percent compared with the end of the prior year. This was due in part to the sale of Telekom Albania. The headcount also decreased in Romania, Hungary, and Poland in particular. The number of employees in our Systems Solutions operating segment increased by 1.7 percent compared with the end of 2018, mainly due to the first-time inclusion and expansion of a service unit in India. The remaining headcount in this segment decreased by 3.5 percent on account of restructuring measures. In the Group Development operating segment, the 31.7 percent increase in the number of employees can be attributed to the inclusion of Tele2 Netherlands in the Netherlands. The headcount in the Group Headquarters & Group Services segment was down 6.3 percent compared with the end of 2018, mainly due to the ongoing staff restructuring at Vivento and the lower headcount in the Technology and Innovation unit.

Number	2012	2013	2014	2015 [a]	2016 [a]	2017 [a]	2018	2019
Germany	67 497	66 725	68 754	67 927	66 410	64 798	62 621	60 501
USA	30 288	37 071	39 683	44 229	44 820	45 888	46 871	47 312
Europe	57 937	53 265	53 499	48 920	46 808	47 421	48 133	44 591
Systems Solutions	52 106	49 540	46 244	37 850	37 472	37 924	37 467	38 096
Group Headquarters and Group Services	21 858	21 995	19 631	23 548	20 258	19 351	18 606	17 430
Group Development				2 768	2 572	1 967	1 976	2 603
Group (total)	229 686	228 596	227 811	225 243	218 341	217 349	215 675	210 533

[a] Since January 1st 2017 we report the Board division technology and innovation via the segment Group Development and the segments Group Headquarters & Group Services. Year on year data has been adjusted accordingly.
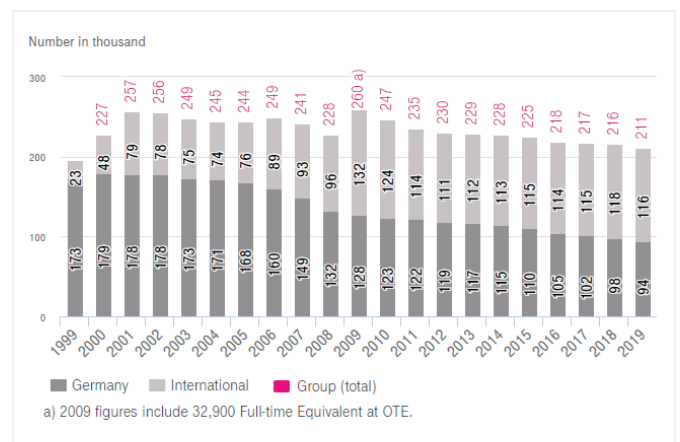
Reporting against standards

In combination with additional headcount data, the data on the trend in employee numbers worldwide fully covers the GRI 401-1 (New employee hires and employee turnover) GRI indicator. It also partially covers the S01-01 (Percentage of FTE leaving p.a.) EFFAS indicator.

DEUTSCHE TELEKOM WORKFORCE 1999-2019

Our strategy to become the leading telecommunications provider in Europe is reflected in the trend in our international employee headcount. The number of employees working at sites outside Germany has risen notably since the turn of the millennium – albeit with fluctua-

tions in some places. Whereas 88.2 percent of company employees were working in Germany in 1999, the rate has leveled at around 50 percent since 2015. The figure for 2019 was below 45 percent.

Number in thousand

a) 2009 figures include 32,900 Full-time Equivalent at OTE.

Reporting against standards

This data is relevant for criterion 15 (Diversity and health) of the German Sustainability Code.

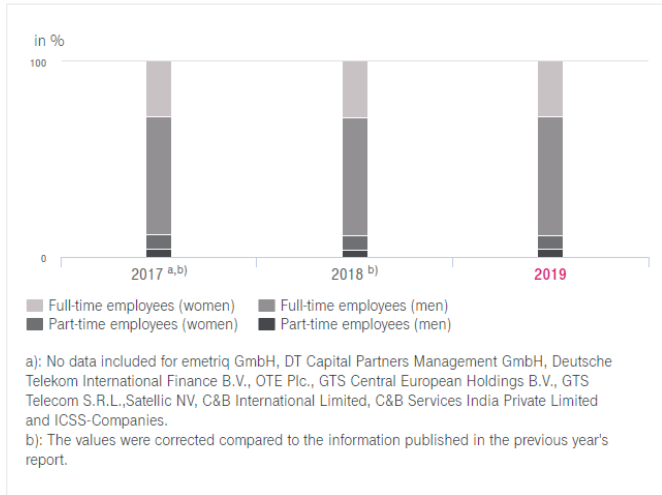## NUMBER OF EMPLOYEES BY COUNTRY

1	Germany	94,111
2	Greece	12,063
3	Hungary	11,742
4	Slovakia	8,345
5	Romania	5,695
6	Croatia	5,112
7	Poland	4,291
8	Czech Republic	3,471
9	Austria	2,905
10	Spain	2,309
11	Netherlands	2,148
12	Russia	1,794
13	Macedonia	1,068
14	Montenegro	495
15	Switzerland	492
16	United Kingdom	321
17	France	154
18	Belgium	114
19	Denmark	53
20	Italy	22
21	Ukraine	<6

USA (inkl. T-Mobile US)	47,650
India	1,935
Brazil	1,671
Mexico	872
South Africa	675
Malaysia	645
China	214
Singapore	103
Thailand	39
United Arab Emirates	23
Canada	<6

PART-TIME EMPLOYEES DEUTSCHE TELEKOM GROUP

We believe it is important to offer our staff flexible working conditions that fit their needs at every stage of their lives. This includes the opportunity to work part-time, but also the guaranteed option of returning to work when the employee no longer wants to work part-time. We also offer this to young parents so that they can balance starting their career through training or a part-time cooperative study course with the demands of family life as a single parent. Part-time training is available in all of our training programs, and means apprentices spend 25 hours per week either in the company, in school, or in the training center. The highlight: like all apprentices, part-time apprentices can cut their

training to two and a half years and therefore apply for a job earlier than would have otherwise been possible. A success model all round, since Deutsche Telekom also benefits from the young people's commitment.

in %

Full-time employees (women)   Full-time employees (men)
Part-time employees (women)   Part-time employees (men)

a): No data included for emetriq GmbH, DT Capital Partners Management GmbH, Deutsche Telekom International Finance B.V., OTE Plc., GTS Central European Holdings B.V., GTS Telecom S.R.L.,Satellic NV, C&B International Limited, C&B Services India Private Limited and ICSS-Companies.
b): The values were corrected compared to the information published in the previous year's report.
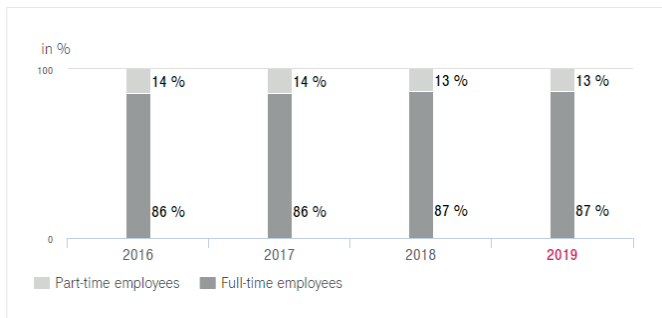
Reporting against standards
By reporting this data, we partially cover the GRI 102-8 (Information on employees and other workers) GRI indicator.

PART-TIME EMPLOYEES DEUTSCHE TELEKOM GROUP IN GERMANY
The percentage of part-time employees came to around 13 percent in 2019, and thus remained stable compared to the previous year.

in %

Part-time employees   Full-time employees

Reporting against standards
By reporting this data, we partially cover the GRI 102-8 (Information on employees and other workers) GRI indicator. This data is also relevant for criteria 14 (Employee rights) and 15 (Diversity and health) of the German Sustainability Code. It is also used for reporting on the Global Compact principles 3 (Freedom of association and the right to collective bargaining) and 6 (Elimination of discrimination).

FLUCTUATION & STAFF RESTRUCTURING

SOCIALLY RESPONSIBLE STAFF RESTRUCTURING

Against the backdrop of digitalization and the associated changes, we must secure our future viability and competitiveness in the long term. This process is connected to complex staff restructuring. We are creating new jobs in growth fields and are training qualified personnel to fill these positions. Other areas are the focus of restructuring activities involving workforce reduction. We make sure that all restructuring measures are implemented in a socially responsible way for our employees. In doing so, we support them in the best way possible on our journey to a digitalized working world.

The personnel service provider Vivento has provided support for implementing staff restructuring at Deutsche Telekom in Germany for many years. Since 2013, Vivento has been exclusively responsible for providing support and placement services for civil servants. In 2019, the focus was primarily on transfers of civil servants to the Customs Office, the armed forces, and the Federal Central Tax Office. Employees were assisted in finding positions with federal, state, and local administrative authorities. 321 civil servants (FTE) employed at Deutsche Telekom in Germany opted for a permanent transfer to federal, state, or local authorities in 2019. Since Vivento was established 16 years ago, it has helped more than 52,000 employees (FTE; as at December 31, 2019) to gain a new role.

Surplus staff have been looked after for several years in the segments, including T-Systems or Telekom Deutschland: the segments offer a special consulting concept for professional reorientation. Employees are accompanied and supported holistically from an early stage in their change process with the aim of finding permanent new employment.

JOB SERVICE & PLACEMENT (JSP): STAFF RESTRUCTURING AT T-SYSTEMS

Deutsche Telekom's systems solutions business is currently undergoing a transformation. Around 5,600 job cuts are planned between 2018 and the end of 2020. In 2019 there was a focus on topics such as the transfer of activities to nearshore sites (cost-effective production sites outside of Germany) and automation. At the same time, we were creating new positions in growth areas such as cloud and security and used the savings for investment as well as to make our prices more competitive. Job Service & Placement (JSP), our internal service provider, advises and supports employees with a comprehensive program through the necessary change processes. T-Systems is also supporting the restructuring process in a socially responsible manner by means of instruments such as phased retirement, early retirement, and severance payments.

HOLISTIC STAFF RESTRUCTURING AND TRANSFER MANAGEMENT AT TELEKOM DEUTSCHLAND GMBH

Holistic staff restructuring and transfer management was established at Telekom Deutschland GmbH in 2017 in order to win employees over to the idea of a career change early on.

In the case of tasks which are currently or soon to be eliminated, or which will require different skills in future, the colleagues affected will be given anticipatory advice regarding opportunities for professional reorientation. Managers are also actively involved in the change process. Together with them, internal and external employment alternatives are considered and specific personal labor market profiles developed. In addition, assistance is provided for the individual application process and training is offered where necessary. Since 2018, around 600 employees nationwide received consultations in the Germany segment. Approximately two-thirds of them were able to find new options through these measures.

TOOLS FOR SOCIALLY RESPONSIBLE STAFF RESTRUCTURING DEUTSCHE TELEKOM GROUP IN GERMANY

We continued our efforts to engage in socially acceptable staff restructuring. To this end, the Group continued to rely on the already proven tools of early retirement, severance pay and partial retirement in 2019.

Personnel cuts (FTEs).	2013	2014	2015	2016	2017	2018	2019
Early retirement (civil servants)	1 618	927	1 219	3 849	27	1 711	1 242
Early retirement (non-civil servants)	27	27	29	47	61	63	71
Severance payments	1 316	826	1 448	726	1 081	972	763
Partial retirement (start of passive phase)	711	332	1 345	1 393	1 687	1 890	1692
Other socially responsible tools	241	471	11	<6	15	-	-
Transfers to public authorities (final) [b]			711	418	417	326	321

[a] Permanent transfers; civil servants are not entitled to return to the Deutsche Telekom Group – established as a cluster in 2015.

You can find further information in the HR Factbook.

Reporting against standards

This data is relevant for criteria 6 (Rules and Processes) and 14 (Employment Rights) of the German Sustainability Code.

FLUCTUATION RATE

The fluctuation rate in Germany increased slightly compared to 2018 and was 2.23%. Internationally, however, it has fallen compared with 2018. At Group level, it also increased slightly due to the increase in Germany and stood at 5.32% in 2019.

in %	2016	2017	2018	2019
Germany	1.37	1.70	1.94	2.28
International [a]	8.14	9.22	9.78	9.55
Group (total) [a]	4.01	4.68	5.12	5.32

[a] excluding USA

Reporting against standards

This data is relevant for criteria 6 (Rules and Processes) and 14 (Employment Rights) of the German Sustainability Code.

PROPORTION OF CIVIL SERVANTS IN GROUP WORKFORCE

The proportion of civil servants employed in the company fell once again in 2019. The reason for this is that Deutsche Telekom has not recruited any new civil servant staff since the company was privatized. In addition to civil servants leaving the company when they reach retirement age, others also took advantage of early retirement or moved to other agencies. This led to a continuous drop in the number of civil servants in our workforce.

	2012	2013	2014	2015	2016	2017	2018	2019
Active civil servants	21 958	20 523	19 881	18 483	15 999	15 482	13 507	12 153
Civil servants on temporary leave from civil servant status [a]	1 430	1 412	1 340	1 220	889	731	657	553
Civil servants at affiliated companies	14 836	14 179	13 260	12 292	10 827	10 486	9 785	8 720
Civil servants (total)	38 224	36 114	34 482	31 995	27 716	26 699	23 950	21 426
Number of non-civil servants in Germany	80 616	80 529	80 267	78 360	76 946	75 202	74 143	72 685
Total number of employees in Germany	118 840	116 643	114 749	110 354	104 662	101 901	98 092	94 111
Percentage of civil servants in Germany (in %)	32.2	30.96	30.05	28.99	26.48	26.20	24.42	22.77

[a] Civil servants whose status as such is currently suspended. They have temporarily switched to an employee relationship not covered by collective agreements.

Reporting against standards

In combination with additional headcount data, the data on the percentage of civil servants in the workforce fully covers the GRI 401-1 (New employee hires and employee turnover) GRI indicator.

IDEAS MANAGEMENT

## VALUABLE IDEAS IN GROUP-WIDE IDEA GENERATION MANAGEMENT

In 2019, the "Idea Generation Management" program further intensified the promotion of valuable ideas. 6,007 ideas were submitted, generating a value of €81 million. This represented an increase in idea submission and their value.

"Idea Generation Management" has entered into new in-house partnerships, among others with the "Green Pioneers",
in order to bundle ideas on ways of supporting the company's focus on sustainability. In addition, we further expanded existing cooperation, for example, with the "Telekom Ideenschmiede" (think tank) and various innovation areas at the Group.

Deutsche Telekom was awarded 1st place for Best Idea in Production and Technology 2019 by the Deutsches Institut für Ideen- und Innovationsmanagement. With Michael Kasprzyk's idea, the Group was able to win out against the competition in the market as a Group and generate profits of €7.2 million. The idea has led to a significant process improvement in the conversion to the latest all-IP technology, and made implemented automation possible.

PORTFOLIO OF INTELLECTUAL PROPERTY RIGHTS

By the end of 2019, we owned around 8,000 intellectual property rights (IPRs). We take a targeted approach to managing these IPRs in consideration of cost-benefit aspects. We regularly take stock of our IPRs and eliminate those that are no longer relevant.
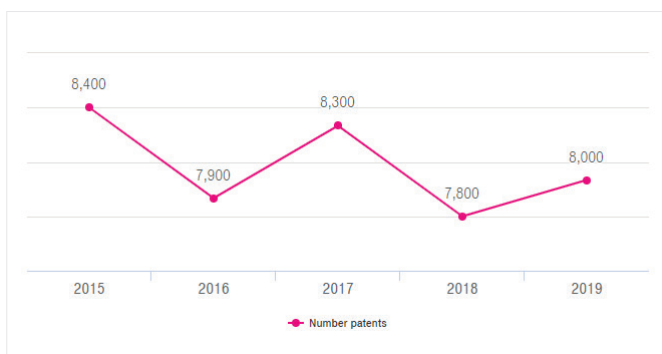
Patents are gaining more and more significance in the telecommunications industry. Market players and their areas of activity are changing, with a knock-on effect on our IPR (intellectual property rights) agenda. On the one hand, our Group's scope for action must be maintained. On the other hand and alongside our own research and development activities, we want to pave the way to open innovation through collaboration projects and partnerships. National and international IPRs are vital for these types of activity. We are strongly dedicated to generating our own property rights. Industrial property rights include inventions, patent applications, patents, utility models and design patents.

Thanks to our intense efforts to develop and structure our IPR portfolio, the rights we hold are highly valuable and firmly in line with our Group's strategic objectives. We have put in place a professional patent law management process to keep our IPR assets safe. Additionally, we are represented on various standardization bodies in our industry. We manage our IPRs on the basis of cost/benefit aspects, filing only selected applications and de-registering patents systematically.

Reporting against standards
This data partially covers the V04-05 (Number of patents registered within last 12 months) and V04-06 (Percentage of patents registered within last 12 months in relation to total number of patents) EFFAS indicators.