CORPORATE RESPONSIBILITY REPORT 2016

LIFE IS FOR SHARING.

CONTENTS

5 ABOUT THIS REPORT
7 AWARDS
11 THE GERMAN SUSTAINABILITY CODE
12 INDEPENDENT ASSURANCE REPORT

14 STRATEGY & MANAGEMENT
15 STATEMENT BY THE CHAIRMAN OF THE BOARD OF MANAGEMENT
16 VALUES AND GUIDING PRINCIPLES
18 CR STRATEGY
24 CR program
34 ESG key performance indicators
36 SUSTAINABLE FINANCE
38 SUPPLY CHAIN AND MATERIALITY
43 STAKEHOLDER MANAGEMENT
46 Stakeholder engagement
47 Representing political interests
49 COMPLIANCE
52 HUMAN RIGHTS
53 RISK AND OPPORTUNITY MANAGEMENT
55 DATA PRIVACY
57 CR-RATINGS

59 CUSTOMERS & PRODUCTS
60 SERVICE QUALITY
64 INFRASTRUCTURE EXPANSION
67 SUSTAINABLE PRODUCTS & SERVICES
76 CONSUMER PROTECTION AND SECURITY
77 Consumer and youth protection
80 Cyber security
81 Mobile communications and health (EMF)

83 SOCIETY
84 A RELIABLE PARTNER IN THE DIGITAL WORLD
86 Raising awareness
87 Building skills
92 Encouraging implementation
95 ENGAGEMENT@TELEKOM
98 CULTURAL & SPORTS SPONSORSHIP

101 EMPLOYEES
102 WORKING IN THE DIGITAL AGE
104 RESPONSIBLE AND AGILE EMPLOYER
109 OCCUPATIONAL HEALTH AND SAFETY
112 TRAINING AND DEVELOPMENT
117 DIVERSITY AND EQUAL OPPORTUNITIES

119 SUPPLIERS
120 SUSTAINABLE PROCUREMENT STRATEGY
122 SUPPLY CHAIN MANAGEMENT
125 2016 audit results
127 RESOURCE SCARCITY AND RAW MATERIALS SOURCING

128 CLIMATE & ENVIRONMENT
129 CLIMATE STRATEGY
131 CO_2 emissions
136 Energy efficiency
140 Renewable energy
141 Sustainable products
142 CIRCULAR ECONOMY
144 OTHER ENVIRONMENTAL TOPICS

146 FACTS & FIGURES
147 ECONOMIC INDICATORS
147 Socially responsible investment
150 Suppliers
152 Sustainable products
153 Data security and protection
154 Financial performance indicators
156 Financial personnel indicators
160 ENVIRONMENTAL INDICATORS
160 Energy
167 CO_2 emissions
173 Enablement Factor
175 Mobility
177 Used cell-phone collection and waste volume
179 Other environmental data
181 SOCIAL INDICATORS
181 Social involvement
184 Employee satisfaction
186 Diversity
188 Human Rights
189 Demography and company pension scheme
192 Training and development
195 Employee health
196 Headcount and part-time work
199 Fluctuation
200 Staff reconstructing
203 Ideas management

205 IMPRINT
206 DISCLAIMER

ABOUT THIS REPORT

"Act responsibly. Enable sustainability." is the title of our latest CR report. We chose this title to emphasize our commitment to sustainable activity along the entire value chain and to highlight the potential that our products and services hold when it comes to addressing environmental, economic and social challenges.

Deutsche Telekom has been involved in CR reporting for more than 20 years. The CR report is a central communication tool for keeping our internal and external stakeholders informed of the challenges we face and the progress we have made as a responsible company committed to sustainability. The latest report focuses on the key activities and developments in 2016.

REPORTING PERIOD, SCOPE OF APPLICATION AND TARGET GROUPS

All quantative data and figures as well as all relevant results and activities pertain to 2016. Any deviations are marked accordingly. The 2016 CR Report is a Group report that includes many national companies in which Deutsche Telekom holds a majority stake. This report ties in with the 2015 CR Report.

The current report specifically addresses Deutsche Telekom's stakeholders. These include analysts and investors, CR ranking and rating agencies and NGOs as well as customers, employees, business partners and representatives from the worlds of business, science, research, education and politics.

LOOKING BACK ON DEUTSCHE TELEKOM'S CR REPORTING

Deutsche Telekom has been reporting on its sustainability activities in various publications since 1996. From 2003 through 2006 we published a combined annual HR and Sustainability Report. An interim report issued in 2007 formed the transition to our current CR reporting. Since 2008 the Telekom Group has been publishing a comprehensive CR Report each year.

OUR ONLINE REPORT: FOCAL POINTS AND CONTEXT

We have been publishing our CR Report exclusively online since the 2010/2011 reporting year to meet the requirements and user preferences of our stakeholders. The online 2016 CR Report has been available since April 20, 2017 in German and English. Interest in our CR report is high. This is reflected in the fact that more than 2,600 visitors were still accessing our 2015 CR Report in February 2017.

The initial pages of each section start with an introduction and an overview of relevant events and developments on that topic. The subsequent pages are structured as follows:

- Sustainability relevance: This explains what makes the topic significant to sustainable development and to Deutsche Telekom's long-term business success.
- Management approach: This section starts with an overview of the key goals, measures and monitoring activities summarized in a table. It then goes on to explain how Deutsche Telekom approaches key sustainability topics, what its goals are and how it intends to achieve them. The management tools, policies and guidelines used to this end are presented, internal and external standards listed and the latest organizational developments explained.
- Progress: Examples demonstrate how Deutsche Telekom has contributed to positive development in the the reporting period and worked to prevent or reduce negative impacts.

The report also includes information on CR facts as well as special pages for investors and rating agencies. These provide background information on a variety of topics that can be accessed directly from the text via links. Readers can also access the "CR facts" section at any time by clicking in the footer. A download area, search and dialog functions and an interactive benchmarking tool make it even easier to navigate the report. What's more, the info cart lets readers select different content and create a customized PDF file.

This year we will again be publishing a CR brochure on selected areas in which we made progress during the reporting period. We have been using the We Care app magazine to get a broad target group interested in corporate responsibility and motivate them to participate.

SELECTION OF KEY TOPICS FOR THE 2016 CR REPORT

We conducted an extensive materiality process to help us identify material issues to be addressed in the report. The process is a regular component of our annual CR reporting activities that helps us identify the topics with maximum relevance for us and our stakeholders.

STRUCTURE OF THE CURRENT REPORT

The online 2016 CR Report has been structured as a progress report. It focuses on the essential developments during the reporting period, which are discussed in five central reporting sections.

- Customers and products
- Society
- Employees
- Suppliers
- Climate and environment

These are complemented by three additional sections:

- The Strategy and management section describes the management of CR processes and the Group-wide integration of Deutsche Telekom's CR strategy.
- The majority of our national companies whose CR activities are described in this report have their own profile page. The profile pages can be found under the "National companies" menu option.
- In the Indicators section, consolidated and commented indicators provide information about our progress in the past few years.

ADDITIONAL SOURCES FOR CR-RELEVANT CONTENT

In addition to the 2016 CR Report we also use our Annual Report and our Data Privacy and Data Security Report to provide information on our corporate responsibility. We also report on Deutsche Telekom's current CR activities on the Group's website under the heading Responsibility. The national companies provide information about their CR commitment on their Internet portals and in their own publications.

We have added links to other internal and external websites in order to minimize the complexity of our report and give readers access to background information and details. Readers will find information provided by our national companies on their profile pages in the 2016 CR Report, for example.

ASSURANCE ENGAGEMENT

Selected indicators in the 2016 CR Report from Germany as well as from our national companies T-HT Hrvatski Telekom (Croatia), Slovak Telekom (Slovakia), OTE and Cosmote (Greece) and T-Mobile US were the subject of an assurance engagement by auditing firm PricewaterhouseCoopers (PwC).

Based on the guidelines of the internationally recognized GRI-G4 (core) standards published by the Global Reporting Initiative, all of the indicators marked in the GRI content index have been reviewed by an independent auditing firm. The independent assurance report can be found under the assurance report menu item. All reviewed content of this report is marked with the symbol „" and will remain effective until the next CR report is published.

IMPLEMENTATION OF HIGH INTERNATIONAL REPORTING STANDARDS

Deutsche Telekom's 2016 CR Report complies with the guidelines (G4 core) of the Global Reporting Initiative (GRI). It also serves as a Communication on Progress (CoP) from Deutsche Telekom as part of the United Nations Global Compact. The Global Compact CoP provides an overview of specific measures used to put the Global Compact principles into practice. Deutsche Telekom also prepares an extensive Declaration of Conformity on the German Sustainability Code.

AWARDS

We are very pleased about being listed in renowned sustainability rankings and ratings and about the numerous awards and certifications we have received during the reporting period. Our national companies were also recognized for their CR commitment in various areas. You can find an overview of this on the profile pages of the national companies. We discuss our current position in ratings and rankings in the Strategy & management section.

AWARDS AND CERTIFICATES

Strategy and management

Telecoms industry winner in the oekom Corporate Responsibility Review 2016

oekom research

7th place in Good Company Ranking published by consulting firm Kirchhoff Consult AG

GCR

Deutsche Telekom was among the Awardees of the Year at the Econ Awards 2016. Other awards 2016:

- The annual report was awarded the Platinum-Award
- The We Care app magazine received Silver in the Digital Applications category

Econ Award Unternehmens-kommunikation

Deutsche Telekom received the Extel award "Leading Investor Relations Team in Europe" for the third time in a row. Other Extel awards in 2016:

- European ranking for all industries:#1 Overall, #3 CEO, #3 CFO, #3 IR Professional
- European ranking for the telecoms industry:#1 Overall , #3 CEO, #3 CFO, #3 IR Professional
- German ranking for all industries:#1 Overall, #1 CEO, #1 CFO, #1 IR Professional

EXTEL

BEST EUROPEAN IR TEAM FOR 3RD CONSECUTIVE YEAR

CATEGORY EUROPE	CATEGORY GERMANY	CATEGORY TELCO
#1 TEAM	#1 TEAM	#1 TEAM
#3 PROFESSIONAL	#1 PROFESSIONAL	#2 PROFESSIONAL
#3 CEO	#1 CEO	#2 CEO
#3 CFO	#1 CFO	#2 CFO

THANK YOU FOR REWARDING OUR EFFORTS!

German Investor Relations Prize 2016:

- 1st place: IR Activities (DAX30)
- 1st place: IR Professional (DAX30)

IR Magazine Award: No. 1 in the telecoms industry

Customers

TÜV Rheinland: rating of "good" for Deutsche Telekom customer service

Deutschland Test 2016: best online service

Deutschland Test 2016: "Service king"

CHIP hotline test 2017

"Double flat rates" reviewed by Focus Money

European Business Award: National winner in the Customer Focus category

Society

Three Comenius EduMedia Seals presented by the scientific association Gesellschaft für Pädagogik und Information (GPI) for Teachtoday: The entire initiative was recognized in the "Didactic multimedia products" category, the obstacle course in the "Computer games that encourage competence" category, and Scroller magazine in the "General multimedia products" category.

Our media magazine Scroller was also recommended by Stiftung Lesen, the German Reading Foundation, to promote safe, competent media use.

The Teachtoday initiative received four prizes at the Fox Awards: The Fox Award Gold for its communications concept for Teachtoday. The Fox Visuals Gold for the visual implementation of its particularly successful information graphics. SCROLLER, the media magazine for children, also received two silver awards in the Fox Awards and Fox Visuals categories.

Digital Neighborhood recognized as a "landmark" in the Germany – Land of Ideas competition. Digital Neighborhood is a project run by Deutsche Telekom's cooperation partner Deutschland sicher im Netz e.V. (DsiN).

Employees
Trendence Award 2016: Gold for our university marketing program and Employer Branding Innovation of the Year award for our website careers4refugees.de

The Queb (Quality Employer Branding) professional association gave us the Special Award for careers4refugees.de

An employee idea took home third place in the "Best idea for occupational health and safety" category of the 2016 Ideas Management Award presented by Deutsches Institut für Ideen- und Innovationsmanagement.

Third place for Cyber Security Professional training program at the Education Awards presented by the The Association of German Chambers of Commerce and Industry (DIHK) in the "Large enterprise" category.

Our commitment to employees with disabilities received the Rhineland Palatinate award for exemplary employment of people with disabilities.

The DeutscherIdeenPreis 2016 presented by the German Institute for Business Management (dib) went to an employee idea

The MyTurn campaign received the German Stevie Awards 2016 in the following categories:

- WINNER OF THE SILVER STEVIE for Human Resources department of the year
- WINNER OF THE BRONZE STEVIE for communications or PR campaign / PR program of the year - Internal communications

"Year of Advertising" – Econ Forum: Best in the categories Recruiting and Employee Communications (B2B)

Top Employers Polska 2016: Certification of T-Mobile Poland

Potentialpark Ranking OTaC 2016: 1st place for the best career website and 2nd place for our social media presence in the application "Communication with applicants" category

„Asia Best Employer Brand Award 2016" for T-Systems Singapore

HCM Excellence Awards presented by the Brandon Hall Group for our tandem model

Gender Mainstreaming Award 2016: T-Systems South Africa took home the award in the categories "Women on multinational supervisory boards" and "Empowering women in society."

Service Design Award 2016: 1st place for Design Thinking in the "Systematic and cultural transformation in the private sector" category

HR Brilliance Awards 2016: Winner for our tandem model

HUMAN RESOURCES EXCELLENCE AWARDS 2016

Family-friendly Employer – Certification for T-Mobile Austria

HR Awards 2016: Gold for OTE in the Talent Management category

HR Excellence Award 2016: Deutsche Telekom Customer Service won with its Ausbildung@KS program

HUMAN RESOURCES EXCELLENCE AWARDS 2016

Deutscher Personalwirtschaftspreis 2016 HR management award: Silver for the new massive open online course format Magenta MOOC

Deutscher Personalwirtschaftspreis

Suppliers
1st prize at Ethical Corporation Awards for Best Supplier Engagement

Ethical CORPORATION

CDP: Supplier Engagement Leader Board

CDP
DRIVING SUSTAINABLE ECONOMIES

CDP A list in Supplier Program category

CDP
DRIVING SUSTAINABLE ECONOMIES

Klima & Umwelt
CDP A list (climate protection ranking)

CDP A LIST 2016 CLIMATE

German Awards for Excellence 2016 in the Carbon Footprint category

German Awards for Excellence by CFS

Recognized in the "Good practice in corporate climate management along the added-value chain" competition held by WWF and CDP

THE 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 companie's sustainability performance transparent and comparable under a binding framework.Deutsche Telekom's declarations of conformity can be viewed hier.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.

INDEPENDENT ASSURANCE REPORT

INDEPENDENT PRACTITIONER'S LIMITED ASSURANCE REPORT*

To Deutsche Telekom AG, Bonn

We have been engaged to perform a limited assurance engagement on selected sustainability information marked with a symbol ✓ in the Corporate Responsibility Report of Deutsche Telekom AG, Bonn (here after the "Company") for the period from 1 January to 31 December 2016 (hereafter "CR Report").

Management's Responsibility

The Company's management is responsible for the preparation and presentation of the CR Report in accordance with the criteria as set out in the G4 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI) (hereafter the "GRI-Criteria") and for the selection of the information to be assessed.

This responsibility includes the selection and application of appropriate methods to prepare the CR Report as well as the use of assumptions and estimates for individual sustainability disclosures which are reasonable in the circumstances. Furthermore, the responsibility includes designing, implementing and maintaining systems and processes relevant for the preparation of theCR Report, which is free of material misstatements due to intentional or unintentional errors.

Audit Firm's Independence and Quality Control

We have complied with the German professional provisions regarding independence as well as other ethical requirements.

The audit firm applies the national legal requirements and professional standards – in particular the Professional Code for German Public Auditors and German Chartered Auditors ("Berufssatzung für Wirtschaftsprüfer und vereidigte Buchprüfer": "BS WP/vBP") as well as the Institut der Wirtschaftsprüfer ("Institute of Public Auditors in Germany; IDW"): Requirements to quality control for audit firms ("Entwurf eines IdW Qualitätssicherungsstandards 1 „Anforderungen an die Qualitätssicherung in der Wirtschaftsprüferpraxis" (IdW EQS 1)") – and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Practitioner's Responsibility

Our responsibility is to express an opinion on selected sustainability information marked with the symbol ✓ in the CR Report based on our work performed.

Within the scope of our engagement we did not perform an audit on external sources of information or expert opinions, referred to in the CR Report.

We conducted our work in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information" published by IAASB. This Standard requires that we plan and perform the assurance engagement to obtain limited assurance whether any matters have come to our attention that cause us to believe that the sections marked with ✓ in the CR Report has not been prepared, in all material respects, in accordance with the GRI-Criteria.

In a limited assurance engagement the evidence-gathering procedures are more limited than for a reasonable assurance engagement and therefore significantly less assurance is obtained than in a reasonable assurance engagement. The procedures selected depend on the practitioner's judgement. This includes the assessment of the risks of material misstatements in the CR Report with regard to the GRI-Criteria.

Within the scope of our work we performed amongst others the following procedures:

- Obtaining an understanding of the structure of the sustainability organization and of the stakeholder engagement;
- Inquiries of personnel involved in the preparation of the CR Report regarding the preparation process, the underlying internal control system and the selected sustainability information;
- Examination of selected quantitative information for following international group companies:
  - OTE A.E, Greece
  - Cosmote Mobile Telecommunications S.A, Greece
  - Hrvatski Telekom, Croatia
  - Slovak Telekom, Slovakia
  - T-Mobile US, USA
- Analytical procedures on selected information of the CR Report;
- Comparison of selected sustainability information with corresponding data in the consolidated financial statements and in the group management report ;
- Assessment of the presentation of selected sustainability information regarding the sustainability performance;
- Gaining further evidence for selected data of the CR Report due to inspection of internal documents, contracts and invoices/reports from external service providers.

Conclusion
Based on our limited assurance engagement, nothing has come to our attention that causes us to believe that the sustainability information marked with the symbol in the CR Report of the Company for the period from 1 January to 31 December 2016 has not been prepared, in all material respects, in accordance with the GRI-Criteria.

Emphasis of Matter – Recommendations
Without qualifying our conclusion above, we make the following recommendations for the further development of the Companies sustainability management and sustainability reporting:

- Further harmonization and standardization of worldwide reporting processes for sustainability information in particular on the level of decentralized data collection (e.g. in the National Companies).

Restriction on Use and Distribution
We issue this report on the basis of the engagement agreed with Deutsche Telekom AG. The review has been performed for purposes of the Company and is solely intended to inform the Company about the results of the review. The report is not intended for any third parties to base any (financial) decision thereon. We do not assume any responsibility towards third parties.

Munich, April 13, 2017

PricewaterhouseCoopers
Aktiengesellschaft
Wirtschaftsprüfungsgesellschaft

Hendrik Fink
ppa. Dr. Patrick Albrecht

Wirtschaftsprüfer

* Our engagement applied to the German version of the CR Report. This text is a translation of the Independent Assurance Report issued in German - the German text is authoritative.

STRATEGY & MANAGEMENT

We are a company that acts responsibly. Our strategic approach includes clear leadership principles, measurable targets and tried-and-true management tools.

INTERESTING TOPICS AND CONTENTS

Timotheus Höttges, Chairman of the Board of Management of Deutsche Telekom, on sustainability →

Our contributions to the Sustainable Development Goals (SDGs) →

Transparent Company Culture initiative launched →

Participate in the stakeholder survey →

Materiality: our key topics →

Sustainable finance: T-Share - a sustainable investment →

STATEMENT BY THE CHAIRMAN OF THE BOARD OF MANAGEMENT

Dear Readers,

2016 was a successful year for Deutsche Telekom. We continued to invest heavily and, once again, have grown strongly. At the same time, we maintain our ambition to be the leading telecommunications provider in Europe. This also applies to our role as a responsible company.

In geopolitical terms, 2016 was full of turmoil and unrest. A year of isolationism in which all too many emphasized that what separates people from each other and not what unites them. I believe this development is wrong, in principle, given the many global challenges we are all facing: be it climate change, the global prosperity gap, the refugee crisis or cyber security.

I am convinced that these challenges can only be resolved through mutual cooperation. Our corporate actions are also based on this principle: "Life is for Sharing" – this is who we are, and this is what we stand for. We will not stand for hate or isolationism. Instead, our networks create connections between people. They overcome boundaries. They promote sharing. And they contribute to the creation of communities.

In 2016, there were some positive signals for cross-border cooperation: On January 1, 2016, the United Nations' 17 Sustainable Development Goals (SDGs) came into force. In November, the climate conference in Marrakesh ratified the two degree target the international community agreed upon a year earlier in Paris. Just like with many other challenges, it is important that everyone works together to achieve these ambitious goals: politics, civil society and economy.

I firmly believe that digitization provides an effective tool to reach our common goals. It offers new opportunities to shape our coexistence on this planet. After all, digital technologies are based on the idea that boundaries can be overcome. And they are key for sustainable development. They can contribute, for instance, toward reducing greenhouse gases, conserving resources and improving health care. Just one example: Due to improved capacity utilization, our highly secure and energy-efficient data centers require up to 80 percent less energy than would be needed if customers operated this infrastructure individually.

But digitization goes hand in hand with data protection and security. We are especially committed to this area as we are developing solutions for secure e-mail traffic, protection against espionage for smartphones, solutions against cyber attacks or educating about risks and protection options.

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

Already, many of our products, services and activities contribute to greater sustainability. We are accounting for this process with the CR Report at hand. And we demonstrate specific progress made in reaching our sustainability targets.

Our philosophy: As a leading telecommunications provider, we take our social responsibility seriously - today more than ever. With this in mind, I would like to emphasize our commitment to the principles of the United Nations Global Compact and the German Sustainability Code.

Tim Höttges

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, anchoring them in our everyday work. These measures are successful: according to our Pulse Survey in June of 2016, 77 percent of our employees believe that the Guiding Principles are lived out in our everyday work. This is eight percentage points up on the figure for last year (69 percent).

Our Code of Conduct and our Social Charter are other tools that we use to ensure that our Group and our partners show corporate responsibility in their conduct. Our compliance management system, which makes sure that our business activities are in compliance with laws and regulations, is based on these documents.

7TH GUIDING PRINCIPLES DAY: BEST PLACE TO PERFORM AND GROW

On September 29, 2016, we held our seventh Guiding Principles Day across the Group. All of our employees were called upon to think about our Guiding Principles independently and come up with ideas on how to implement them in day-to-day work. Once again this year, many different campaigns and team events were held across the Group such as competitions, workshops, and panel discussions. For example, one group of interns used the day as an opportunity to exchange ideas on both the Guiding Principles and their relationships within the intern group. While previous years each focused on one individual Guiding Principle, in 2016 we focused on all five Guiding Principles under the motto "Managing the Seven-Year Itch." The Guiding Principles were introduced in 2009 – seven years ago – with the objective of defining a common system of values for all Telekom employees worldwide.

At an event at our headquarters, employees in Bonn got to experience the Guiding Principles live: there were a panel discussion, various workshops, and a recognition ceremony for "Guiding Principles Heroes" headed by CHRO Christian Ilek. Employees could nominate colleagues or even whole teams who had shown unique commitment to implementing the Guiding Principles within our company in advance. The event was transmitted digitally, allowing all locations to follow the day. Besides the many different team activities, central international campaigns also took place. For example, in Denmark "Thank you e-cards" were sent to colleagues as symbols of appreciation, while a story competition was held in Slovakia with "success stories" related to implementing the Guiding Principles.

COMMITMENT TO THE GERMAN "CODE OF RESPONSIBLE CONDUCT FOR BUSINESS"

We were among the first to sign the German "Code of Responsible Conduct for Business," which was presented to the public in November2010. All of the members of our Board of Management signed the code, making an express commitment to responsible corporate governance in line with the principles of the social market economy, to fair competition, cooperation with employee representatives, business excellence and sustainability. We have incorporated this commitment into our actions and have assumed a leading role in putting our commitment into practice.

In the spirit of the code, we feel obligated to engage in sustainable business practices and responsible corporate governance for the good of the people. We are continuously working to ensure that these requirements are implemented in our core business and our supply chain. In addition, we take responsibility for our employees and our social environment. We work to guarantee respect for human rights without exception.

We use our products and services to connect people and to increase the productivity of many processes. In this way, we contribute to ensuring that Germany and Europe can continue to make strides in international competition and that our well-being can continue to grow. Our smart, digital solutions create new ways to effectively address social challenges such as climate change. Our goal: to simplify our lives for the long term. Our network helps us implement this broad social mission by acting as a lifeline: fast, reliable, secure, and easily accessible to everyone. Just like all of our activities, these efforts are focused on people. We provide transparent information on our plans and technologies, engage in fair practices and are always open to dialog.

In line with the code, we continue to expand our leading position as a sustainable company as well as our ongoing efforts to optimize our value-added processes. To do so, for instance, we are increasing the energy and resource efficiency of our networks, services, and products. In this way we are reducing the environmental impact and CO_2 emissions produced by our business activities. In 2014 our Board of Management approved a Group-wide climate protection target for 2020. Building on this work, we have been implementing an integrated climate strategy since 2015. We also offer our customers sustainable products and services and encourage our over 30,000 suppliers to do business with an equal focus on sustainability. To assist this process, we engage in various activities such as a systematic supplier development program, and complete audits and training measures. We also train our buyers on sustainability criteria in procurement. In these efforts – just like in everything we do involving our diverse stakeholders – we primarily rely on partnership and dialog.

As a responsible employer we give our employees the opportunity to realize their potential and to contribute their individual strengths and ideas within our Group. In view of the increasing significance of digitization, we promote virtual collaboration and new forms of work. We are increasingly turning to digital learning methods when it comes to training and skills development. In 2016, over 30 percent of all hours of training in our group were digital. The rate was even higher in Germany, at over 35 percent. Modern formats like Massive Open Online Courses (MOOCs), for which over 3,500 employees from more than 32 countries registered by the end of 2016, have increased acceptance for new formats of collaboration and digital learning methods. Our social network "You and Me" (YAM), which has around 115,000 users Group-wide, replaced our previous "Telekom Social Network" and serves as the central, dialog-based communication platform for our company. As part of our Group-wide ideas management, we give our employees the opportunity to contribute their ideas within our Group. In Germany alone, one out of every eight employees submitted a new idea.

Our social commitment, however, is not just to our customers, partners and employees. We feel it is our responsibility to support the development of media skills in our community and help young people become more confident. Our efforts in this area include the "Teachtoday" initiative, which promotes safe media proficiency. For example, around 150 children discussed the topic of data privacy at our 2016 Summit for Kids. We have also been involved in the "Yes, I can!" initiative for several years now. Since 2009 this initiative has given children and young people from disadvantaged backgrounds an opportunity to learn key skills for an independent and confident life through over 1,100 projects.

CR STRATEGY

Deutsche Telekom aims to be the leading telecommunications provider in Europe. This corporate vision is the basis for our approach as a responsible company (CR approach) and our CR mission. Our mission is:

We take responsibility. We enable sustainability...

... in our processes
... with and for our employees
... for our customers
... in society

Our Group CR strategy also provides our national companies with a framework for their sustainability measures. The central components are our three CR action areas:

- **Connected life and work – enabling a sustainable lifestyle**
- **Connecting the unconnected**
- **Low-carbon society**

These form the framework for the focal topics within our sustainability management: data security and data protection, digitization, sustainable supply chains, human rights, circular economy, resource conservation, and a responsible employer approach. Our CR program states which specific goals we wish to achieve with which measures. We monitor our progress using key performance indicators (KPIs).

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.

CURRENT ORGANIZATIONAL STRUCTURE

Our Corporate Responsibility (GCR) unit is a key driver for change within our company. Within the organization, it reports to the Chief Human Resources Officer. The duty of the GCR is to further develop our corporate culture with a focus on sustainable innovation and social responsibility.

Another pillar of our CR governance structure is the HR Leadership Team (HR LT). The team is an advisory and decision-making body for the Human Resources (HR) Board department. It makes decisions on Group-wide policies and guidelines, CR positioning, and the strategic focus of the CR department. Members of the HR LT are managers from the level below the Chief Human Resources Officer.

In addition, the CR Board supports the CR department and the HR LT when it comes to CR management and strategy enhancement.

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

CR POLICY: INTERNATIONAL ROLL-OUT CONTINUES

Our CR Policy provides the mandatory framework for the sustainability management activities at all Group units. After rolling out the policy at Group Headquarters, Telekom Deutschland and T-Systems in 2014, we introduced the policy at other major European national companies in 2015, including OTE in Greece, Magyar Telekom in Hungary, Hrvatski Telekom in Croatia and T-Mobile Poland. Further national companies of T-Systems will follow in 2016.

BE SMARTER! - NEW SUSTAINABILITY STRATEGY 2016 - 2020 FROM MAGYAR TELEKOM

Our company aims to make sustainability an integral part of our business. We therefore developed a new sustainability strategy for the period from 2016 to 2020 that was influenced by the expectations of responsible investors, EU directives, industrial and corporate trends, local conditions, and consumption patterns. Climate protection, education, and digitally enabled sustainability will be the major focus of the strategy until 2020.

Climate protection

Our goal is to help our customers become climate conscious. Our ambitious objective is to generate revenue from our climate protection activities while at the same time reducing our actual CO_2 emissions below 100,000 tons. This enables us to enhance our emission-decreasing activities and specifically build on our “green” services.

Education

Our goal is to directly or indirectly reach 100,000 people in Hungary through our training program by 2020 with the aim of educating the public and our customers. We primarily focus on programs aimed at eliminating the digital gap and expanding the succession pool in industry.

Digitally enabled sustainability

As a sustainable digital company, Magyar Telekom enables its customers to use sustainable digital services. We strive to pursue responsible marketing and activities that enable and inspire others. Awareness of Magyar Telekom as a sustainable company is projected to reach 50%.

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

We want to make sustainability a component of all our business processes and of our employee's everyday lives. Our health, safety and environment (HSE) management system helps us make this possible. The system is based on the international standards OHSAS 18001 for occupational health and safety and ISO 14001 for environmental management.

Through our compliance with legal regulations, we meet the essential requirements for OHSAS18001 certification in Germany. Outside of Germany, 99 percent of our employees work at offices and facilities covered by a certified health, safety and environmental (HSE) management system. Therefore, we have not yet fully reached our goal of having all national companies outside of Germany with more than 50 employees certified. Certifications in China, India, and Italy are planned for 2017 in order to reach the full 100 percent mark. We verify certifications with umbrella certificates and with separate certificates as well. (See graphic.)

SHARE OF EMPLOYEES COVERED BY CERTIFICATES OUTSIDE OF GERMANY

An HSE management system calls for systematic planning, implementation and improvement of operational processes in the areas of health, safety and environment. 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.

CR CONTROLLING HELPS STEER OUR ACTIVITIES

Deutsche Telekom's CR Controlling department plays a key role in controlling our CR activities. Controlling has been supported by an IT-based data collection system for the past seven years. The system makes sure that ESG (environmental, social and governance) data and KPIs are transparently recorded and reported. It supports standardized, mandatory processes at the Group and national level and enables Group-wide benchmarks. This IT support lets us focus on content analysis of ESG data and helps us measure early on in the process to what extent we have reached our CR targets and if we need to make changes.

We especially use ESG data to calculate our ESGKPIs, with which we measure and control our CR performance throughout the Group. CR Controlling is also responsible for recording other performance indicators with sustainability relevance. These are published in the performance indicator section as well as in the CR report's interactive benchmarking tool.

We once again reviewed and added to our ESG KPIs in 2016. We now include two new efficiency KPIs in our report: The Energy Intensity ESG KPIand the Carbon Intensity ESG KPI. We also report the share of renewable energy as anESG KPI for the first time in 2016. This will enable us to better assess our performance and comply with increasing external requirements on transparency in this area.

In this 2016 CR Report, we also cover the Enablement Factor ESG KPI for the first time. The share of revenue with sustainability relevance, which we reported for the first time last year, has also been included under our ESG KPIs in this year's report. The performance indicator section is complemented by an innovative look at total emissions at Deutsche Telekom. An interactive graphic illustrates the source of all Scope 1-3 emissions and shows related data at Group level.

ACHIEVING MORE TOGETHER: INTERNATIONAL COLLABORATION

How can international corporations put sustainability strategies into practice across borders? Deutsche Telekom employs CR managers for the relevant business segments and national companies to reach this goal. Through the CR Manager Network, CR managers have been attending regular face-to-face and online meetings since 2008 to share ideas and promote essential CR topics.

At the 2015 CR Manager Meeting, participants resolved to improve international and virtual collaboration in working groups. We began implementing this goal in 2016: working groups set up regular web meetings to work together on promoting key topics. The 16th CR Manager Meeting took place on April 25 and 26, 2016 at The Hague. Under the motto of "Achieve more together," participants discussed the key issues of "joint crisis management" and "handling environmental impacts," among other issues, in working groups. The second day focused on the Sustainable Development Goals (SDGs) of the United Nations and Deutsche Telekom's contribution to implementing them.

We have offered an e-learning training unit on the issue of data collection since December of 2016. CR Managers from our national companies can use the training unit to gain information on the most frequent challenges they face in data collection and commenting and obtain valuable tips.

OUR CONTRIBUTION TO THE UN'S SUSTAINABLE DEVELOPMENT GOALS

The member states of the United Nations (UN) adopted the 2030 Agenda for Sustainable Development at their General Assembly in September 2015. The aim is to enable economic development and prosperity – in line with social justice and taking account of the ecological limits of global economic growth. The Agenda applies equally to all nations of the world. All emerging and developing economies as well as industrial nations must play their part.

The core of the 2030 Agenda comprises 17 sustainable development goals (SDGs). They officially went into effect in January 2016. The SDGs cover all three dimensions of sustainable development – the social, environmental and economic dimension – for the first time. Implementing the ambitious SDGs will require everyone to work together: policy makers, civil society, and business. As such, companies are also called upon to make concrete contributions.

We are answering this call. Many of our products, services and activities contribute to achieving the SDGs. Our customers can use our smart home solutions, for example, to more effectively monitor, control and reduce their energy consumption (SDG 13). Our broadband expansion gives many people access to digital education media (SDG 4). Our e-health services help improve medical care (SDG 3). And our cloud solutions make it possible to reduce energy consumption and conserve other resources as well (SDG 13). Our 2016 Annual Report describes our commitment to putting the SDGs into practice. Sections in our management report (a component of the annual report) that are relevant to the SDGs are marked with a symbol for ease of reference. These topics are then addressed in greater detail in our Corporate Responsibility Report.

We have identified those SDGs that Deutsche Telekom's stakeholders, e.g., investors, find particularly relevant and those to which we can contribute significantly with our business model. Below you will find an overview of the results of this relevance analysis. In 2017 we are planning to further advance this analysis process, e.g., by placing a stronger focus on essential SDGs in our CR processes and reporting. We we will also use the SDGs to prioritize measures in place at our company. SDGs can also be useful in helping us illustrate the sustainability advantages of our products, services and activities in our dialog with customers and employees

In 2016 we compared our KPIs with the prioritized SDGs as part of our 2016 ESG KPI review in order to enable our progress to be measured. All of these SDGs are already effectively covered by our ESG KPIs or supplemental indicators, and we are planning to align them even more in the future.

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

SDG	Target	Our contribution	Find out more
	Ensure healthy lives and promote well-being for all at all ages	We promote health with our e-health solutions for the improvement of medical care and a number of health measures for our employees.	▪ Connected healthcare solutions ▪ Sustainable product portfolio ▪ Sea Hero Quest dementia study ▪ Occupational health and safety ▪ Mobile communications and health (EMF)
	Ensure inclusive and quality education for all and promote lifelong learning	We invest heavily in the **training and development** of our approx. 225,000 employees. In addition, we promote the development of **media literacy**. The Deutsche Telekom Stiftung foundation supports a large number of **STEM projects**.	▪ Training and development ▪ E-learning offers ▪ Teachtoday ▪ Deutsche Telekom Stiftung foundation ▪ Partnering with "Deutschland sicher im Netz" and "BAGSO" ▪ Integrating refugees into the job market
	Achieving gender equality and empower all women and girls	We are committed to the systematic **promotion of women** in management, supervisory boards and STEM professions. Our employees benefit from a number of different offers we provide to improve their **work-life balance**.	▪ Diversity and equal opportunities ▪ Women's STEM Award ▪ Encouraging diversity in education ▪ Commitment to increasing the number of women in managerial positions
	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	We are committed to **sustainable growth**, provide **excellent working conditions** for our current and future employees and keep working toward a **more sustainable supply chain**.	▪ Sustainable finance ▪ Agile and responsible employer ▪ Protecting human rights ▪ Development programs for suppliers
	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	We keep pushing the **network infrastructure build-out** forward and adding **more innovative, sustainable products** to our portfolio.	▪ Network expansion ▪ Sustainable product portfolio ▪ M2M communication: Opportunities of digitization ▪ Supporting start-ups: creating space for ideas
	Take urgent action to combat climate change and its impacts	We help protect the climate with **measures conducted at the Group** as well as with our **sustainable products and services** based on our integrated climate strategy.	▪ Climate protection strategy ▪ Climate protection measures ▪ Sustainable product portfolio

SDG	Target	Our contribution	Find out more
	Put a stop to poverty everywhere in any form	Among other activities, **we donate** to help fight poverty. By **expanding our networks**, we create the conditions for economic and social participation, among other things providing access to education - the lack of which is one of the main causes of poverty.	▪ Corporate giving ▪ Network expansion
	End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Our efficient **Smart Agriculture** ICT solutions allow for higher harvest yields while reducing the use of resources such as seeds, water, fertilizers and energy.	▪ Connected farming
	Ensure availability and sustainable management of water and sanitation for all	Our efficient **Smart Agriculture** ICT solutions help reduce water consumption and use of fertilizers. Also, our **Smart Metering** solution allows for exact measurement and control of water consumption.	▪ Connected farming ▪ Qivicon - Smart Home
	Ensure access to affordable, reliable, sustainable and modern energy for all	Our integrated climate strategy helps us reduce CO_2 emissions, improve **energy efficiency**, offer more sustainable products (e.g. **QIVICON/Smart Home**) and raise the share of green energy in our electricity consumption.	▪ Energy-efficient network ▪ More green energy at European national companies ▪ Qivicon - Smart Home
	Reduce inequality within and among countries	We employ adequate measures to **connect the unconnected, providing access to the digital world** for all.	▪ Diversity and equal opportunities ▪ Teachtoday ▪ Deutsche Telekom Stiftung foundation ▪ Yes, I can ▪ Barrier-free products and services
	Make cities and human settlements inclusive, safe, resilient and sustainable	Our innovative solutions help shape the transformation of cities into intelligent urban spaces (**smart cities**).	▪ Smart City ▪ Smart Home
	Ensure sustainable consumption and production patterns	We keep developing **more sustainable product solutions** and promote the integration of **more sustainable production patterns** into our supply chain. At the same time we are committed to **avoiding waste and to the recycling of valuable natural resources**.	▪ Sustainable product portfolio ▪ Sustainable supply chain ▪ Responsible resource extraction ▪ Waste reduction and recycling ▪ Used cell-phone collection ▪ Recovering tantalum

SDG	Target	Our contribution	Find out more
	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	We help reduce water consumption through the use of ICT in agriculture.	▪ Connected farming
	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	Our efficient **Smart Agriculture** ICT solutions allow for higher harvest yields while reducing the use of resources such as seeds, water, fertilizers and energy. We also conduct **projects to protect biodiversity**.	▪ Connected farming ▪ Protecting biodiversity
	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	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 also operate a comprehensive **compliance management system**. All our activities are compliant with legal regulations and our Binding Corporate Rules on Privacy.	▪ Compliance
	Strengthen the means of implementation and revitalize the global partnership for sustainable development	We **collaborate with associations, institutions and companies at the national and international level**. One of these is the Global e-Sustainability Initiative img (GeSI img).	▪ Overview of memberships and collaborations

CR PROGRAM

As part of its CR program, Deutsche Telekom specifies targets to be implemented throughout the Group in the relevant processes of its core business.

The CR program defines specific measures and a timeline for implementation. We also provide information on the implementation status in the CR program. Detailed information on the ESG KPIs, which we use to quantify our performance in each area, is provided in the CR Report.

CR PROGRAM 2016

STRATEGY AND MANAGEMENT

Goals	Scheduled completion date	Measures	Status
Advance CR governance	Ongoing	▪ Gradually implement the Group Corporate Responsibility Policy at the national companies ▪ Drive the integration of CR into the Group's central business processes ▪ Integrate CR into the Group strategy	▪ Group Corporate Responsibility Policy implemented at all key national companies (excluding T-Mobile US) ▪ Forecasts regarding the development of three ESG KPIs for 2017 and 2018 submitted for the Annual Report ▪ Two new ESG KPIs established: Energy Intensity ESG KPI and Carbon Intensity ESG KPI. ▪ CR mission, CR approach and CR focus topics drafted and approved
Embrace corporate values, accompany the transformation process	Ongoing	▪ Promote new forms of collaboration at the Group ▪ Participate in dialog on topics relevant to society ▪ Regularly review all KPIs for the benefits they provide, make them mandatory throughout the Group with target values	▪ Group-wide implementation of programs and formats – as virtual or face-to-face events – including Guiding Principles Day. ▪ Dialog on digital responsibility with experts from business, science, politics and society expanded via telekom.com and social media
Promote the Sustainable Development Goals (SDGs)	Ongoing	▪ Expand measures for SDG target achievement ▪ Integrate key SDGs into CR processes and reporting ▪ Use of SDGs for dialog with customers and employees intensified, also in terms of product assignment	▪ Potential contribution to 17 targets identified and published in the Annual Report and CR Report. ▪ Coverage of prioritized SDGs by ESG KPIs reviewed. Findings: Prioritized SDGs effectively covered by ESG KPIs or supplementary indicators.

CR PROGRAM 2016

STAKEHOLDER ENGAGEMENT

Goals	Scheduled completion date	Measures	Status
Systematic stakeholder engagement	Ongoing	▪ Stakeholder engagement strategy based on the principles of the Global Reporting Initiative (GRI G4).	▪ Stakeholders involved using a variety of formats including dialog on digital responsibility with experts from business, science, politics and society via Deutsche Telekom's own platform, Joint Audit Corporation (JAC) international sustainability dialog, Magenta Security Congress, Cyber Security Summit, and SRI roadshows
Establish a materiality process	Ongoing	▪ Conduct annual materiality analysis (materiality processes)	▪ Materiality analysis conducted for 2016 ▪ Materiality process further developed pursuant to the Global e-Sustainability Initiative (GeSI) methodology. ▪ Performance assessment added to online survey for external stakeholders

CLIMATE PROTECTION

Goals	Scheduled completion date	Measures	Status
Reduce CO2 emissions throughout the Group by 20 percent compared to 2008 (absolute figures)	2020	▪ Roll out climate protection activities internationally ▪ Introduce Group-wide monitoring ▪ New CO2 target for newly acquired cars (average of 95g CO2/km for newly acquired vehicles by 2020) ▪ Migrate network infrastructure to energy-efficient IP technology ▪ Consolidate data centers	▪ Group-wide climate protection target approved by Group Board of Management in 2013 ▪ Annual status report to Board of Management implemented ▪ From 2008 through 2016, we reduced CO2 emissions by 5 percent, primarily due to reductions in number of buildings, business trips and vehicle fleet. ▪ Network emissions in Germany were higher than expected. Impacts and additional measures to help us meet our target are being analyzed. ▪ Around twelve million lines switched over to IP in Germany. ▪ We reduced the number of data centers from 78 to 32 between 2011 and 2016. The Group's PUE factor improved from 1.84 to 1.66 and in Germany from 1.67 to 1.54.

CR PROGRAM 2016

CLIMATE PROTECTION

Goals	Scheduled completion date	Measures	Status
Develop an integrated climate protection strategy and adapt it to climate change developments	2020	▪ Reduction of CO2 emissions ▪ Increased share of renewable energy ▪ Increase energy efficiency and introduce two new KPIs to show the ratio between our energy consumption and carbon footprint to transported data volume ▪ Identify and use business potential from climate-friendly services ("enabling") as well as opportunities in terms of product development and offers (establish sustainable product portfolio)	▪ In 2016, we introduced two new energy efficiency-related KPIs showing the ratio between our energy consumption and carbon footprint to transported data volume. ▪ Magyar Telekom, T-Mobile Netherlands and OTE again took 100 percent of their electricity from renewable energy sources in 2016. ▪ The share of electricity from renewable energy sources came to an average of 10 percent above the relevant country mix throughout the Group in 2016. ▪ We improved the methodology behind our enablement factor and enabled our customers in Germany to generate 40 percent less CO2 than the amount generated by our company (factor: 1.4:1). Throughout Europe (including Germany) our customers were able to reduce their CO2 emissions by an amount equivalent to the CO2 emissions generated by us (factor 1.0:1) ▪ 39 percent of our total revenue was generated with sustainable products in 2015.
Record Scope 3 emissions throughout the Group	2016	▪ Develop methods to measure company and product-related carbon footprint and integrate these into the reporting process	▪ Scope 3 emissions fully recorded and reported for business in Germany and almost all national companies (since 2015)

MANAGEMENT SYSTEMS

Goals	Scheduled completion date	Measures	Status
Implement an occupational health, safety and environmental management system in compliance with ISO 14001 and OHSAS 18001 at all national companies with more than 50 employees.	Ongoing	▪ Implement an integrated management system based on both standards and harmonize the different management process levels at the national companies	▪ 99 percent of our employees outside of Germany covered by a certified health, safety and environmental management system; Telekom Deutschland GmbH certified according to ISO 14001 and OHSAS 18001

CR PROGRAM 2016

SUSTAINABLE CONSUMPTION AND LIFESTYLE

Goals	Scheduled completion date	Measures	Status
Evaluate products and solutions regarding their contribution to sustainability	Ongoing	▪ Implement the criteria and indicators developed in collaboration with external and internal stakeholders in company processes ▪ Integrate product-based sustainability controlling in business processes and ensure Group-wide harmonization ▪ Integrate the topic of sustainable products into corporate processes and develop a comprehensive strategy ▪ Analyze products in terms of how they contribute to sustainability and what this can do for our business; include results in customer communication ▪ Participated in industry-wide solutions to evaluate products and solutions in terms of sustainability	▪ Overall, we have carried out in-depth analyses for 17 product groups with regard to their sustainability benefits and the corresponding business potential (as at end of 2016). ▪ According to an analysis conducted in 2016, we generated 39 percent of our total revenue in 2015 with sustainable products (37 percent in 2014); the analysis findings were included in customer communications ▪ Participated in pilot study conducted by industry project SASF to assess the risks and sustainability performance of products and services
Stakeholder engagement and customer information	2020	▪ Conduct regular stakeholder dialog on specific topics ▪ Develop sustainability-related customer orientation policies ▪ Drive international standardization, e.g., via seals of quality or certification in the ICT sector ▪ Get more products certified with the Blue Angel and TÜV Green Certified Product environmental labels	▪ Regular stakeholder dialog on specific topics conducted ▪ All DECT phones from our Sinus series as well as all phones from the Speedphone series bear the Blue Angel environmental label. ▪ In 2016, the Fairphone 2 offered by T-Mobile Austria became the first smartphone in our Austrian offer to bear the Blue Angel label. ▪ Sustainability award for our commitment and role as pioneer and multiplier for climate protection ▪ Additional routers such as Speedport Neo certified as TÜV Certified Green Products
Integration of life cycle assessment and usage behavior (sustainable consumption)	2020	▪ Tap efficiency potential in the product life cycle and enhance products and solutions to include sustainability criteria ▪ Blacklist on environmentally harmful materials (not prohibited by law) contained in our products	▪ Successful advancement of lease model for devices (e.g., Media Receiver) to increase recycling share and length of use ▪ Workshops conducted with suppliers on the voluntary materials blacklist, which was developed in cooperation with the Fraunhofer Institute for Reliability and Microintegration (Fraunhofer IZM)

CR PROGRAM 2016

SUSTAINABLE INNOVATION AND ENTREPRENEURSHIP

Goals	Scheduled completion date	Measures	Status
Develop innovative, sustainable business models	2020	▪ Establish general requirements to promote innovation in the sustainability field and identify and evaluate young companies and start-ups (partnering) ▪ Promote innovative business ideas through hub:raum program	▪ Establish a hub:raum investment fund ▪ Challenge Up! program conducted on Internet of Things Twelve start-ups were supported for more than seven months ▪ The second Cyber Security Bootcamp was held in Berlin in February 2016. Fashion Fusion competition conducted to promote ideas for combining hi-tech and fashion ▪ Corporate Innovation Fund established, selected employee business concepts are receiving financial support; integration of sustainability criteria completed.

SOCIALLY RESPONSIBLE INVESTMENT

Goals	Scheduled completion date	Measures	Status
Anteil nachhaltiger Investoren am frei handelbaren Aktienvermögen steigern	Ongoing	▪ Further enhance rating results ▪ Direct dialog with investors at SRI roadshows and in SRI calls ▪ Improve communication with investors regarding our sustainability efforts	▪ Again included in RobecoSAM World and Europe Index ▪ Share of socially responsible investors in freely tradable stock dropped slightly from 23 percent in 2015 to 21.7 percent in 2016. ▪ SRI webinars conducted with mainstream investors.

CR PROGRAM 2016

SUSTAINABLE SUPPLY CHAIN

Goals	Scheduled completion date	Measures	Status
Increase share of risk-assessed procurement volume (first supplier level) to at least 75 percent	Completed	▪ Pre-qualification ▪ Risk self-assessments ▪ Supplier audits	▪ Target to increase the share of audited suppliers to 80 percent by 2020 already achieved ▪ Introduction of a new KPI is being reviewed
Integrate sustainability into Group-wide procurement processes	Ongoing	▪ Successive integration of sustainability aspects into new vendor management system ▪ Harmonize sustainable procurement management at all national companies via the Sustainable Procurement Working Group (SPWG) ▪ Employee training	▪ Concept to integrate sustainability aspects into vendor management system developed and implementation begun ▪ New buyer handbook on sustainable procurement created ▪ 561 employees trained with the e-learning tool
Improve sustainability in our supply chain	Ongoing	▪ Establish a supplier development program ▪ Anti-corruption training for suppliers in Germany	▪ Supplier development program expanded from 7 to 11 companies

SOCIAL COMMITMENT

Goals	Scheduled completion date	Measures	Status
Integrate people into the knowledge and information society	Ongoing	▪ Expand efforts to promote media literacy and the responsible use of media	Teachtoday flaship project continued. Results: ▪ Teachtoday media obstacle course on tour again in Germany. ▪ "Media sure! But secure" competition presents an award to a cross-border project for the first time. Around 150 children discussed data privacy at the third Summit for Kids. ▪ Further internationalization of the Teachtoday online platform. The platform is currently available in the following languages: German, English, Romanian, Polish and Croatian. Two issues of new "Scroller" magazine for children published in German and English; first interactive issue published in German and Arabic.

CR PROGRAM 2016

SOCIAL COMMITMENT

Goals	Scheduled completion date	Measures	Status
Integrate people into the knowledge and information society	Ongoing	▪ Continue to expand "Yes, I can!" initiative as a flagship project	▪ "Yes, I can!" initiative: more than 1,100 projects sponsored since 2009 with a volume of almost 6 million euros. ▪ Six-month pilot project "Media workshops" launched in Berlin in November 2016. Objective: Training of media educators. ▪ The initiative to be taken on by the Deutsche Telekom Stiftung foundation in January 2017
		▪ Establish and expand aid offers for refugees	Involvement in refugee aid refocused toward integration on the job market: ▪ 100 internship positions and up to 100 openings for apprentices offered to the target group ▪ 19 scholarships awarded to students at Deutsche Telekom's University of Applied Sciences in Leipzig ▪ "Internship PLUS direct entry" initiative launched in collaboration with other companies. Main target group: refugees with professional experience without qualifications that are recognized in Germany; completion of an orientation internship; opportunity to take on a position at the company limited to two years after successfully completing the program. ▪ Ongoing provision of free WiFi to refugee reception centers. ▪ www.refugees.telekom.de online platform further developed and expanded to the new platform www.handbookgermany.de in collaboration with the German Chancellery and Neue Deutsche Medienmacher in time for the launch in February 2017. ▪ Ongoing provision of buildings as refugee accommodation and to as offices for the German Federal Office for Migration and Refugees. ▪ More than 700 civil servants working for the Group temporarily supported the German Federal Office for Migration and Refugees (BAMF). More than 130 civil servants assigned to BAMF at their request. ▪ Deutsche Telekom employee volunteer activities further increased via the engagement@telekom.de platform.

CR PROGRAM 2016

SOCIAL COMMITMENT

Goals	Scheduled completion date	Measures	Status
Integrate people into the knowledge and information society	Ongoing	▪ Ongoing evaluation of engagement@telekom activities	▪ 284 volunteering projects carried out, with 27,693 employees and 45,116 hours worked
		▪ Continue to improve transparency regarding the effectiveness of our social commitment by conducting ongoing effectiveness measurements	▪ Four new KPIs introduced to measure effectiveness: the Social Commitment ESG KPI, Community Investment ESG KPI, Beneficiaries ESG KPI and Media Literacy ESG KPI

NETWORKS

Goals	Scheduled completion date	Measures	Status
Around 80 percent broadband coverage of the German population by 2018.	2018 (target adjusted)	▪ Fiber optics build-out and installation/ upgrading of distribution boxes with vectoring technology	▪ Expansion of vectoring structure continued.
Provide LTE coverage to 95 percent of the population in Germany	2018	▪ Set up additional base stations ▪ Continue LTE 1800 and LTE 800 network build-out	▪ 92 percent LTE coverage achieved in Germany (end of 2016) ▪ Around 75 percent of European transmitter masts equipped with LTE
Complete migration to IP in Germany by the end of 2018	2018	▪ VDSL vectoring build-out ▪ Migration to IP technology	▪ Around 12 million households in Germany switched to IP technology by the end of 2016 ▪ In Croatia, Montenegro, FYRO Macedonia and Slovakia, migration to IP has been completed.

EMPLOYEES

Goals	Scheduled completion date	Measures	Status
Establish human resources policies adjusted to different life phases	Ongoing	▪ Continue to improve work-life balance offer ▪ Promote part-time study programs (Bologna@Telekom)	▪ Family care support expanded by adding counseling and assistance offers; "Family manager" pilot project in Bavaria successfully completed ▪ The number of parent-and-child offices increased from twelve to a total of 20 (at 15 locations) ▪ Flexible working hours models expanded; lifetime work account offer expanded to all employees. 6,000 lifetime work accounts set up by the end of 2016.

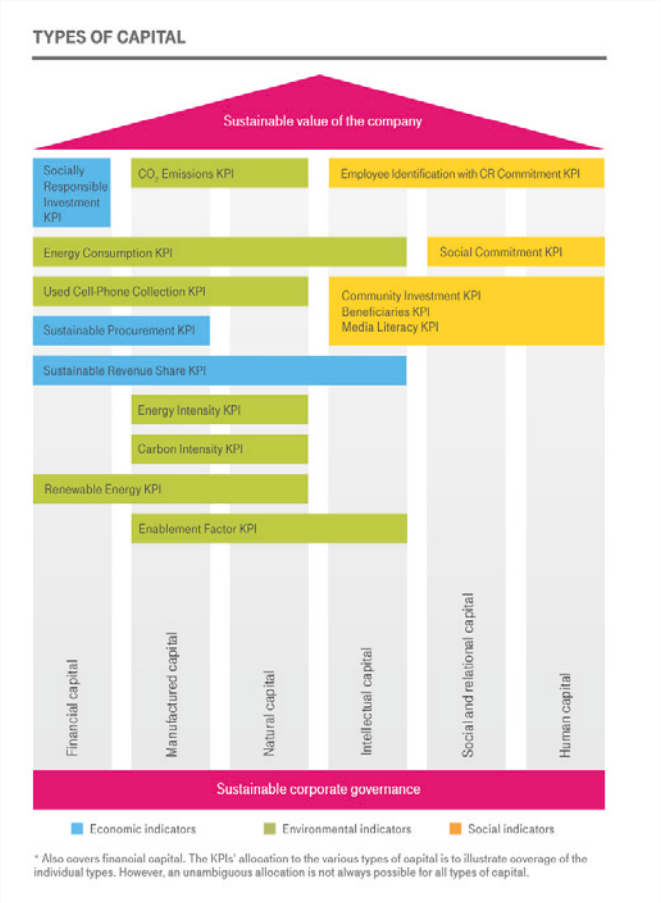
CR PROGRAM 2016

EMPLOYEES

Goals	Scheduled completion date	Measures	Status
First DAX-30 company to achieve a quota of 30 percent for women in middle and upper management	2020	▪ Ensure equal opportunity, freedom from discrimination and competitiveness ▪ Introduce target quotas along the entire talent pipeline ▪ Design and implement Managing Diversity module for manager training ▪ Improve work-life balance	▪ Percentage of women in managerial positions throughout the Group increased from 19 percent (February 2010) to 25.4 percent (December 2016) ▪ Quota development monitored, measures aligned, evaluated and redesigned where necessary ▪ Successful completion of the second round of our mentoring program helping people prepare for a position on a supervisory board in Germany or at international affiliated companies in summer 2016 with a total of 33 participants. Seven male candidates participated for the first time. Eight out of a total of 64 participants received supervisory board positions ▪ Mentoring program for experts and managers during parental leave: successful completion of second round with a total of 31 experts and managers (September 2016)
Room for development and advancement	Ongoing	▪ Introduce new forms of internal and external collaboration, agile work and improved service orientation and encourage entrepreneurial thinking and action ▪ Structured participation in discourse on relevant topics within society	▪ Group-wide Future Work program launched to establish a pioneering concept for a communicative work environment that promotes innovative strength and agility: offices in Bonn, Frankfurt and Hamburg redesigned ▪ Expansion of digital learning formats, e.g., the MagentaONE course: 30 percent of all formal course hours are spent learning digitally. In Germany this rate is over 35 percent. ▪ Introduction of communities of practice as a form of collaboration that spans across functions and hierarchies: 40 communities established at T-Systems to date ▪ Third round of Cyber Security Professional training program started 30 participants are currently taking the course.

ESG KEY PERFORMANCE INDICATORS

The ESG KPIs help us steer our CR activities. They enable us to improve our performance on an ongoing basis. Because they are relevant to our supply chain, we also address them in our Annual Report. For the purpose of integrated financial and sustainability reporting, the KPIs map the six types of capital addressed in these reports and therefore also reflect the essential aspects of the sustainable value of our company (see diagram).



ESG KPIS

We use fifteen Group-wide ESG key performance indicators (KPIs) to steer our CR performance.

- Socially Responsible Investment (SRI) ESG KPI
- Sustainable Procurement ESG KPI
- Sustainable Revenue Share ESG KPI
- Carbon Intensity ESG KPI
- CO_2 Emissions ESG KPI
- Energy Intensity ESG KPI
- Energy Consumption ESG KPI
- Renewable Energy ESG KPI
- Enablement Factor ESG KPI
- Used Cell-Phone Collection ESG KPI
- Community Investment ESG KPI
- Beneficiaries ESG KPI
- Media Literacy ESG KPI
- Social Commitment ESG KPI
- Employee Identification with CR Commitment ESG KPI

All of Deutsche Telekom's national companies that participate in the CR data collection process are under the obligation to record our Group-wide ESG KPIs. These national companies represent 99 percent of the Group's net revenue.

Calculation of the Employee Identification with CR Commitment ESG KPI is based on an employee survey that is conducted every two years. The next survey is scheduled for spring 2017, which is why no values are available for 2016.

All ESG KPIs were systematically reviewed in 2016, just like they were last in 2014. We analyzed any need for adjustment based on changing internal and external general conditions. The internal analysis particularly focuses on three factors: relevance to our core business, contribution to implementation of our strategy and relevance to steering our performance, all questions as to how effective each ESG KPI will be in supporting our key sustainability efforts in the future. In 2016 we also analyzed the extent to which the UN Sustainable Development Goals (SDGs) relevant to our company are already covered by our ESG KPIs. In cases where we found coverage lacking, we looked into defining a new KPI and including it in our external reporting activities.

Based on this review, we decided to include five new ESG KPIs in our external reporting.

- Two new energy efficiency KPIs – the Energy Intensity ESG KPI and the Carbon Intensity ESG KPI – now supplement our Energy Consumption ESG KPIand will fully replace it in the medium-term. The two new ESG KPIs look at data volume instead of revenue. Using data volume as a reference parameter makes it possible to create a direct link to the performance of our networks,

- In our 2016 CR Report we also report for the first time on the Renewable Energy ESG KPI, the Enablement Factor ESG KPI and the Sustainable Products and Services ESG KPI.

We are also planning to expand our Sustainable Procurement ESG KPIin the medium-term since we already achieved and even exceeded the target associated with this KPI as planned for 2015.

ESG KPI REPORTING IN THE ANNUAL REPORT

We also report on selected ESG KPIs in the Deutsche Telekom Annual Report. Forecasts on the further development of three ESG KPIs (Energy Consumption, CO_2 Emissions and Sustainable Procurement) according to German accounting standard DRS 20 are also included in the report. We reviewed the forecasts made in the 2015 Annual Report for our 2016 Annual Report.

The Energy Consumption ESG KPIis calculated by setting electricity consumption in relation to revenue. The trend for this KPI was positive in 2016. It decreased year-on-year as expected. Despite increasing revenue, energy consumption decreased throughout the Group in the reporting period. Given the unabated rapid growth in data traffic and ongoing network build-out, this result was achieved only through further gains in energy efficiency. We anticipate a positive development in our Energy Consumption ESG KPI for the years 2017 and 2018, with a declining trend in 2017 and a further slight decrease in 2018. This development is the result of slight savings in electricity consumption coupled with a slight increase in revenue. We expect to achieve further reductions in electricity consumption above all as we migrate our networks in Germany to IP technology and merge T-Systems data centers in various regions. Most of these savings are likely to be counterbalanced by the expansion of T-Mobile US and the accompanying rise in electricity consumption.

We had assumed there would be a slight decline in the CO_2 Emissions ESG KPIfor 2016, i.e., a slight overall improvement. In fact, CO_2 emissions sank by 5percent in the reporting period. This positive trend is mainly attributable to falling emissions from electricity consumption and from fuel consumption for our vehicle fleet. Our electricity consumption is the main driver of our CO_2 emissions. We therefore also expect a slight downward trend in our CO_2 Emissions ESG KPI in the years 2017 and 2018. One of the goals we have set ourselves as part of our integrated climate strategy for the year 2020 is to reduce CO_2 emissions throughout the Group (excluding T-Mobile US) to 20 percent below the figure for the base year 2008. Shutting down outdated PSTN technology will be a major contribution in these efforts. We will be able to shut this technology down as soon as migration to IP has been completed.

In the case of the Sustainable Procurement ESG KPI, we exceeded the prior-year figure by an even greater margin than forecast. The share of the procurement volume that has been risk-assessed already amounts to 83 percent. Over the next two years, we expect our Sustainable Procurement ESG KPI to remain stable at a high level.

We measure the impact of our social commitment with a set of three ESG KPIs. The Community Investment ESG KPImaps our social commitment in terms of financial, human, and material resources. The Beneficiaries ESG KPI measures the huge number of active contributors as well as the broad target group they reach. The Media Literacy ESG KPI highlights the high percentage of projects and activities promoting the competent handling of media. It is highly relevance to us in controlling terms as it correlates closely with our core business.

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-MobileUS), which we conduct every two to three years; the next is scheduled for spring 2017. This ESG KPI will therefore not be reported until the next financial year. The figure for both aspects was 78 percent in 2015.

We use the Socially Responsible Investment ESG KPI to determine how the finance markets rate our sustainability activities. This indicator measures the proportion of T-Shares held by investors whose investment strategy is based not only on economic but also on the ecological and social aspects of corporate governance. In spring and fall 2016 we held a number of Socially Responsible Investment (SRI) roadshows, at which we offered to answer critical questions from our investors. In addition, we attended SRI conferences, organized conference calls and web conferences, and answered numerous direct queries from rating agencies, analysts and investors.

Our efforts to achieve greater sustainability are also paying off with investors. At the end of 2016, around 20 percent of T-Shares were owned by investors who take SRI criteria at least partly into account in their investment decisions. Almost2 percent of T-Shares were held by investors who give priority to SRI aspects when managing their funds.

SUSTAINABLE FINANCE

Companies that rely on sustainable business practices are more competitive in the long term. Analysts from Deutsche Asset & Wealth Management and researchers at the University of Hamburg collaborated to analyze more than 2 000 studies on the topic. Their conclusion: The "business case" for sustainability has a sound empirical basis and the vast majority of the studies analyzed pointed to a positive relationship between sustainability and financial performance. This is why investors who are interested in sustainability tend to focus on long-term yields instead of short-term profit. Socially responsible investment (SRI img) can be an important component when it comes to securing capital for Deutsche Telekom AG in the long term.

SRI investment products consist of securities from companies that have passed an audit conducted in accordance with environmental, social, and governance (ESG img) criteria. This is why the development of demand for T-Shares from socially responsible investors serves as an indicator for assessing our sustainability performance. With our Socially Responsible Investment ESG KPI we measure how the financial markets perceive our CR activities. Investors concerned with sustainability often refer to ratings published by specialized SRI analysts. For this reason the rating given to our company by SRI analysts has an impact on our ability to win over and retain socially responsible investors and achieve our goal of keeping our company's medium and long-term cost of capital at a low level.

An increasing number of investors are responding favorably to the concept behind the UN's Sustainable Development Goals (SDGs). The future-oriented SDGs are particularly interesting for investors who are planning for the long term and require greater transparency at companies in terms of their strategic approach and prioritization. We are also seeing a trend toward impact measurement, i.e., assessing and, in some cases, quantifying the impact that a company has on the environment and on society. Taking a look at a company's contribution to the SDGs can be valuable in this assessment. To us, this trend is both a challenge and a chance to make the positive impact of our products and services more transparent both internally at the company and to our customers.

We use different formats – both in our reporting as well as in direct dialog – to inform SRI analysts and investors of our CR activities. More and more investors and rating agencies are interested in receiving information on our CR activities. Investors not classified as SRI investors, like JP Morgan, Société Générale and HSBC are beginning to organize SRI conferences as well. Deutsche Telekom is regularly invited to present our CR strategy and commitment as best practice at these conferences.

SOCIALLY RESPONSIBLE INVESTMENT (SRI) ESG KPI

At the end of 2016 around 20 percent of T-Shares were owned by investors who consider SRI criteria in their investment decisions at least to some extent. Two percent of T-Shares were held by investors who give priority to SRI aspects when managing their funds.

Investor communication expanded

We have been publishing relevant Deutsche Telekom ESG KPIs in our Annual Report for several years now, also providing forecasts regarding their future development. Financial market players interested in sustainability can also review ESG information in the Socially Responsible Investment (SRI) section on our investor relations portal. Interested parties can find additional information on these topics in the SRI facts info box provided as a supplement to this CR report.

In addition to our reporting activities, we also engage in targeted dialog with investors. Our CR and Investor Relations (IR) departments conducted two joint SRI roadshows in 2016, for example, one of which took place in the U.S. for the first time. We also held conference calls to keep interested investors informed and responded to numerous direct requests for information. We covered the entire spectrum of ESG criteria, from governance structure, corporate responsibility controlling and a sustainable supply chain to climate protection and our refugee aid efforts.

CURRENT POSITION IN RANKINGS AND RATINGS

Deutsche Telekom's ESG (environmental, social and governance) performance is assessed within the scope of CR ratings, which provide investors with valuable information for their investment decisions. As in previous years, the T-Share was again listed on leading sustainability indexes such as the DJSI World and the DJSI Europe Index from RobecoSAM in 2016. In addition, rating agency oekom singled us out as the world's best telecommunications company in terms of ecological and social performance. We qualified for the A list of internationally leading companies in the CDP climate protection ranking (previously Carbon Disclosure Project) for the first time in 2016. CDP commends companies that report their CO_2 emissions extremely transparently and in detail. In addition to making it onto the A list, we were also included in the STOXX Global Climate Change Leaders Index. The STOXX Global ESG Leaders Index listed Deutsche Telekom for the sixth year in a row. Once again, our share was listed on the FTSE4Good index and the UN Global Compact 100 index in the reporting year.

INTEGRATED REPORTING

More and more people are recognizing the significance of CR for a company's success. This can also be seen in the international trend toward tighter integration of financial and non-financial reporting. Sustainability aspects that are very important to corporate added value, such as environmental protection, employee needs and sustainable products, are being included in traditional management reporting.

We have been working on integration in the Deutsche Telekom annual report for several years now. These efforts can be seen in the increasing inclusion of CR topics in central business processes such as procurement, product development and innovation. Integrating these topics into our annual report also promotes a harmonized format for reporting on our company's financial and non-financial performance. This addresses the requirements of our SRI investors.

In various sections of our annual report, we show how sustainability contributes to value creation in our corporate processes. We have also been reporting on our ESG KPIs since 2011. For our Energy Consumption, CO_2 Emissions and Sustainable Procurement ESG KPIs we have been including additional qualitative trend forecasts for the following two financial years since 2013. In the 2016 Annual Report and this CR report, we once again compared our forecasts with the actual KPI trends. Find out more in the ESG KPI section.

To facilitate the integration process, we outlined Deutsche Telekom's contribution to the Sustainable Development Goals (SDGs) for the first time in our 2016 Annual Report. Many of our products, services and activities contribute to the SDGs. In order to make this more transparent for our readers, we have marked the relevant sections with the appropriate SDG symbol.

TAX POLICY GUIDELINES

The Group Tax department is responsible for ensuring that the Deutsche Telekom AG Group pays taxes and duties at national and international level in accordance with the applicable statutory provisions. This involves utilizing the scope available for optimizing taxes on the one hand, and living up to the social responsibility of a multinational company on the other.

Group Tax makes sure that the Deutsche Telekom Group complies with all its tax obligations in Germany and abroad, in particular that it pays the 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 VAT and income tax on salaries payable within the context of customer transactions and for Group employees. Group Tax also ensures that the corporation has an efficient tax structure within the framework of German and foreign tax law 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, something in which transparent, reliable cooperation with local tax authorities is deemed to be indispensable.

In addition, Group Tax also has the ambition to contribute as much as 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, the department is particularly focused on immediately clarifying any unresolved tax law-related issues as well as providing practical solutions to meeting all applicable tax requirements.

SOCIALLY RESPONSIBLE INVESTMENT STRATEGY FOR DEUTSCHE TELEKOM PENSION FUNDS

We take a holistic approach to the topic of socially responsible investments. This includes investments in the capital market for company pension schemes and similar obligations in Germany, which are also based on our sustainability principles. These principles were incorporated into our socially responsible investment strategy for pension funds in 2013 in the form of exclusion criteria. These criteria prohibit investment in companies that produce or trade in ABC weapons, anti-personnel mines or cluster bombs. Also prohibited are investments in companies that have repeatedly violated the principles of the UN Global Compact img. Deutsche Telekom pension funds are also prohibited from purchasing government securities from governments that are subject to sanctions in accordance with public international law. The pension funds agreed to comply with our socially responsible investment strategy in 2013.

We are convinced that putting this investment strategy into practice will help improve our financial risk indicators. 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. This approach meets the requirements of business customers and support our responsibility as a trustee when it comes to investing our employees' capital. Last but not least, it also supports our reputation as a leading DAX company among NGOs and in the media.

SUPPLY CHAIN AND MATERIALITY

Which sustainability topics are relevant for our revenue development, capacity for innovation and reputation? Which topics matter to our stakeholders, e.g., our shareholders, customers and employees, as well as the public? In what areas and in what ways do our business operations impact society and the environment? We need to know the answers to these questions if we want to be successful in financial and ecological terms as well as in the eyes of society, which is why our materiality process is not solely based on our own perspective but also takes into account the needs and interests of our stakeholders.

OUR BUSINESS OPERATIONS AND ADDED VALUE

More than 165 million mobile communications customers, 29 million fixed-line customers and roughly 19 million broadband connections make us one of the world's leading ICT companies. We offer consumers a wide range of products and services in the areas of fixed-line/broadband, mobile communications, Internet and IPTV. corporate and business customers also rely on our ICT services. Deutsche Telekom operates in more than 50 countries. With a staff of some 218,300 employees throughout the world, we generated revenue of 73.1 billion euros in the 2016 financial year, around 66 percent of which was generated outside Germany (December31, 2016).

So that we can continue to be successful, we are already evolving from a traditional telephone company into an entirely new kind of service company. Our core business, i.e., the operation and sale of networks and connections, remains the basis. But at the same time we are proactively committing to business areas that open up new growth opportunities for us. Because increasingly larger amounts of data need to be transported at ever faster speeds, we offer our customers fixed-line, mobile communications and IPTV from one source. This also calls for ever more efficient networks, which is why we invest in network expansion more than any other provider in Germany – more than 34 billion euros in total from 2010 through 2016.

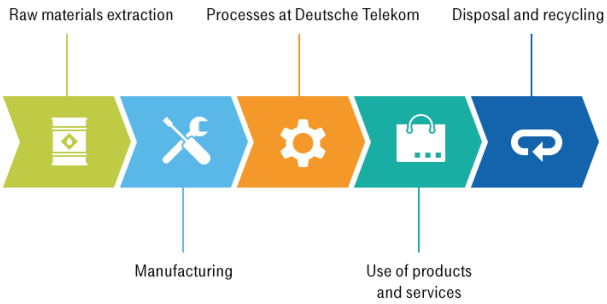
Our subsidiary T-Systems offers integrated solutions for business customers, including secure operation of their systems, traditional ICT services and cloud solutions as well as new business models and innovation projects in forward-thinking fields such as data analysis, the Internet of Things and machine-to-machine communication (M2M) and Industry 4.0.

As illustrated in the diagram, our Group consists of four operating segments. The 2016 Annual Report provides more in-depth data regarding our business development.

THE ORGANIZATIONAL STRUCTURE AT A GLANCE

We strive to make an effective contribution to sustainable development along all parts of our supply chain.

SIMPLIFIED ILLUSTRATION OF DEUTSCHE TELEKOM'S SUPPLY CHAIN



CONSISTENT MATERIALITY PROCESS

Every year we identify which topics are of particular relevance 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. We use previous year results as the basis and assess these in the light of recent developments.

This materiality process has been in place at our company since 2015 in compliance with the methodology of the Global e-Sustainability Initiative (GeSI). This methodology covers 55 topics that are material to the ICT industry. These can be placed in nine categories: digital inclusion, employee relationships, climate change, circular economy, sourcing and manufacturing, customer relationships, privacy and freedom of expression, governance, and local community and environment impacts. The advantage of using the GeSI methodology is that it allows us to focus on our core business as an ICT service provider. In addition, the materiality topics have been developed to pertain to a variety of companies and are therefore recognized in the industry.

Material topics from our stakeholders perspective
Our online survey is always available for our stakeholders to weight topics based on their importance as well as, since 2016, our performance in the different areas. In the survey, stakeholders are asked to rate the topics that have been identified through our internal materiality process. This ongoing, logical process makes it possible to achieve comparable results. To help us identify which aspects are most material for our stakeholders, we assessed the results of the survey for the period from January 1, 2016, through December 31, 2016. You can find the online survey here. The assessment was based on evaluations submitted by 143 people:

- 53 customers
- 41 employees and potential employees or employee representatives
- 9 analysts and investors
- 10 participants from the worlds of science, research and education
- 12 NGO representatives
- 4 suppliers
- 3 representatives from regulatory authorities and political decision-makers
- 11 employees who associated themselves with none of the groups mentioned

In addition to giving stakeholders a chance to rate the importance of topics and assess our performance, the survey also includes questions open to comment. You can find our stakeholder feedback from the reporting period here.

Stakeholders also have the opportunity to assess our performance in different areas. Our stakeholders rate our performance high in the key areas of privacy, data security and cyber safety. However, they do see potential for improvement in the areas of sustainable product design and the socially relevant application of ICT products and services.

Material topics from the company perspective
We continue to reevaluate the importance of topics every year, conducting internal workshops to assist us in this process as needed. Most recently in November 2015, numerous experts from different departments, including Human Resources, Innovation and Communications, participated in one of these workshops. They went through the 55 GeSI topics and identified those that had the most impact on five key value drivers behind our business success from a corporate perspective (see below). These value drivers are also based on the GeSI methodology:

- **Technology and innovation**: Our customers increasing demand for secure, encrypted services has made topics like data privacy and cyber security two of the most significant drivers of innovation at our company.
- **Revenue growth**: We are able to tap new markets and reach out to new customers through network expansion. High service quality is decisive when it comes to customer satisfaction and therefore has a direct impact on winning over customers and customer loyalty. Customer inquiries on sustainable products are still limited in number but continue to grow, which is why this topic has been identified as an important driver.
- **Business operations**: Which topics have a positive impact on business processes or help reduce costs? Extensive employee involvement and fundamental basics like data privacy, service quality, stakeholder involvement and compliance are particularly important.
- **Employee relations:** Talent acquisition, retention, development and staff reduction, employee involvement, employee health, safety and wellness and employee diversity and anti-discrimination all have a tremendous impact on employee satisfaction and productivity. Maintaining a service-oriented corporate culture (service quality), ethical business practices and transparency also have a positive impact on employee relations.
- **Reputation:** A high degree of transparency and extensive reporting create lasting trust in Deutsche Telekom. Topics such as business practices, service quality, privacy and supply chain labor standards, on the other hand, can pose risks to our reputation. If the media negatively reports on our brands, products or services in connection with these topics, this can damage our reputation.

RESULTS OF THE MATERIALITY ANALYSIS

In our stakeholder survey and at our internal workshop, participants can rate topics as "very relevant," "relevant," "less relevant" and "not relevant." We translate their weighting results onto a 100-point scale. Here are the results of the analysis.

The 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

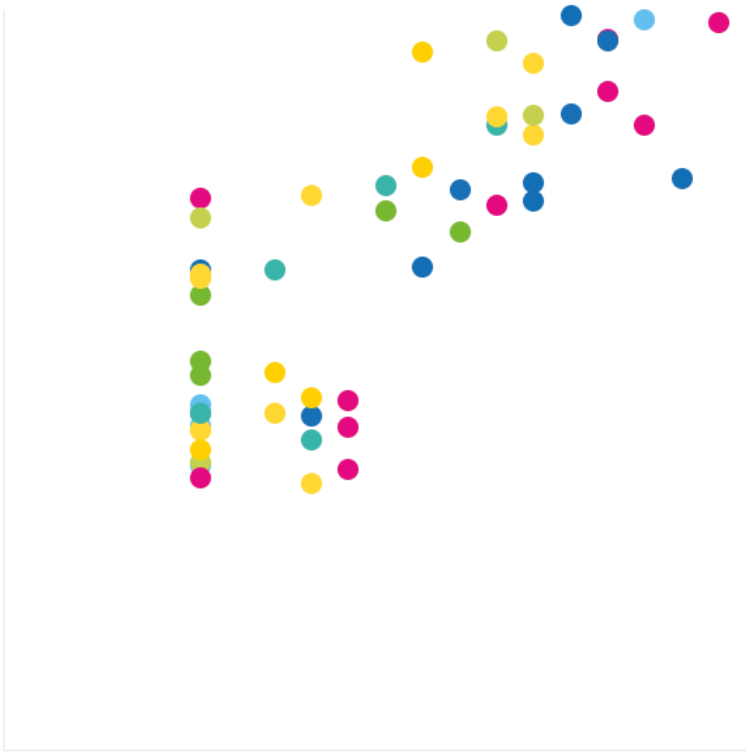
All Subjects for 2016

Category:

- Customer relationships
- Employee relationships
- Privacy and freedom of expression
- Climate change
- Governance
- Digital inclusion
- Sourcing and manufacturing
- Local community and environment impacts
- Circular economy

Subjects:

- Waste and emissions management in the supply chain
- Adjusting to the impact of climate change
- Supply chain labor standards
- Mitigating climate change
- User access control and content standards/safety
- Disaster preparedness and response
- Relations with law enforcement authorities
- Cyber safety
- Privacy
- Data security
- Disruptive product innovation
- Stakeholder engagement
- Local community impact
- Environment impact
- Electronic waste
- EMF
- Energy consumption in the supply chain and transportation
- Ethical business practices and compliance
- Land use
- Research and development, local innovation
- Freedom of expression
- Hazardous or harmful materials



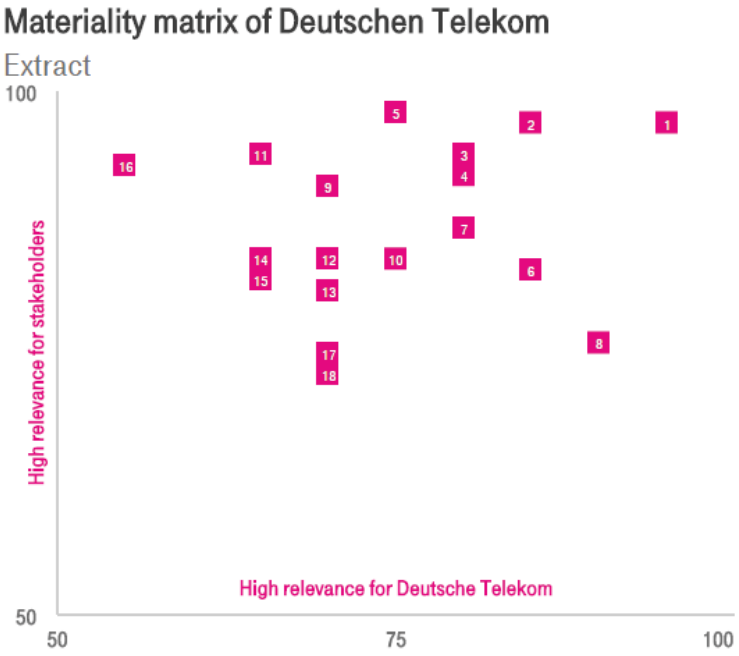
Key aspects for Deutsche Telekom's sustainable business development

All topics that earned more than 70 points on an average in the materiality process are considered to be key aspects. They are presented on a scale of 50 to 100 below.

Materiality Matrix

Top-Subjects for 2016

1 Data Security
2 Privacy
3 Cyber Safety
4 ICT Solutions for a Low-Carbon Economy
5 Employee Involvement
6 Service Quality
7 ICT and Child Safety
8 Talent Acquisition, Retention, Development and Reduction
9 Transparency and Reporting
10 Migrating climate change
11 Social Application of ICT Products and Services
12 Vectoring Rollout
13 Ethical Business Practices and Compliance
14 Stakeholder Engagement
15 Supply Chain Labor Standards
16 Sustainable product design
17 Employee Health, Safety, and Wellness
18 Employee Diversity and Anti-Discrimination



MATERIAL ASPECTS MATCHED WITH GRI ASPECTS

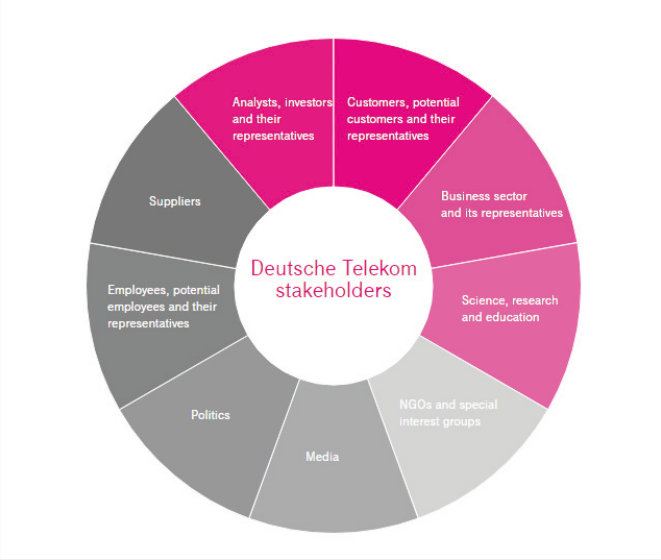
The following overview indicates which GRI aspects can be matched with the material areas of the stakeholder survey.

#	Material aspects	GRI aspects	Management approach
1	Data security	• Customer privacy • Customer health and safety	Protecting consumers and young people
2	Privacy		Protecting our infrastructure
3	Cyber safety		Laying the foundation for effective data privacy
4	ICT [1] solutions for a low-carbon economy	• Products and services	Developing sustainable products and services
5	Employee involvement	• Labor/management relations • freedom of association and collective bargaining	Shaping employee relations as a responsible employer
6	ICT and child safety	• Customer health and safety	Protecting consumers and young people
7	Service quality	• Product and service labeling	Ensuring excellent service quality
8	Talent acquisition, retention, development and staff reduction	• Employment, training and education	Investing in training and development
9	Transparency and reporting	• (no matching GRI aspect available)	
10	Climate change mitigation	• Emissions • energy	Protecting the climate Operating energy-efficient networks
11	Socially relevant application of ICT products and services	• (no matching GRI aspect available, see Sustainable products)	
12	Network expansion	• Indirect economic impacts	Expanding our infrastructure
13	Ethical business practices and compliance	• Compliance • anti-corruption	Ensuring integrity and compliance
14	Stakeholder engagement	• Stakeholder engagement	Ensuring integrity and compliance
15	Supply chain labor standards	• Supplier assessment for labor practices • supplier human rights assessment	Ensuring integrity and compliance Improving sustainability in the supply chain
16	Sustainable product design	• (no matching GRI aspect available, see Sustainable products)	
17	Employee health, safety and wellness	• Occupational health and safety	Promoting the health of our workforce
18	Employee diversity and anti-discrimination	• Non-discrimination • equal remuneration for women and men • diversity and equal opportunity	Protecting human rights

STAKEHOLDER MANAGEMENT

As a company, we are constantly balancing the expectations of a variety of stakeholders when managing our business. That is why our success depends on recognizing the interests and demands of our stakeholders and meeting and addressing these whenever possible and reasonable. Stakeholders img also expect to be kept informed of how companies are responding to their requirements. We go even further by actively surveying our stakeholders and involving them in our management processes.

Engaging in dialog with our stakeholders helps us identify trends early on, which fosters our innovation processes (click here for current examples). At the same time, this strengthens existing alliances and creates new opportunities for partnerships. This is particularly important in terms of our sustainability targets, which we can only achieve in collaboration with partners from the worlds of politics (political advocacy), society, science and research, and industry.



Customers, potential customers and their representatives
- 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
- DAX-listed companies
- Other large corporations
- Small and medium-sized enterprises
- Trade and industry associations
- Cooperation partners
- Competitors

Science, research and education
- 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
- 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
- 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
- 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
- Employees
- Managers
- Board of Management
- Applicants and prospective employees
- Trade unions and works councils
- Employees and students
- Endowed chairs
- Apprentices/trainees

Suppliers
- Auditors and certification bodies
- Sub-suppliers
- Consultants
- First-tier suppliers

Analysts, investors and their representatives
- Private investors
- Funds, asset managers and analysts
- (SRI) rating agencies
- Analyst organizations and associations
- Institutional investors

FOSTERING STAKEHOLDER ENGAGEMENT

We systematically encourage stakeholder engagement in our corporate activities. In 2011 we developed a strategy for stakeholder engagement in order to manage our various activities throughout the Group. The strategy is based on the three AA1000 principles developed by the NGO AccountAbility: materiality, inclusivity, and responsiveness. We reviewed compliance with these principles in 2013.

We distinguish between three types of stakeholder engagement: information, dialog and participation. Our activities are based on six principles for stakeholder management.

In order to ensure that our CR activities are designed effectively, we regularly assess how our stakeholders perceive and rate these activities. For this purpose, we particularly rely on our materiality process and CR topic monitoring.

FEEDBACK FROM THE STAKEHOLDER SURVEY

Our ongoing stakeholder survey (To the survey) includes weighting topics (2016 results) and rating our sustainability performance as well as open questions. Below is a summary of feedback results for the period from January 2016 to December 2016 which we use to advance our CR activities.

Recommendations on how Deutsche Telekom can further improve its corporate responsibility:

- Stronger customer focus and improved customer service
- Providing transparent information to customers (e.g., on pricing) and increased focus on consumers
- Reduction of mobility-related emissions (pertaining to CO_2 emissions, fine dust particles and NO_2 emissions)
- Stronger focus of our CR activities in line with our core business
- More intensive involvement of our employees
- More activities focused on media literacy
- Expanding our sustainable product portfolio and increased communication efforts

Requirements concerning the sustainability of Deutsche Telekom products:

- Durability
- Option to recycle at the end of the product life cycle
- Guaranteeing data privacy and security
- Transparent product information

Requirements on network expansion:

- Improving network quality
- More affordable access for all market participants

Expectations on sustainability rating in the supply chain

- Placing more importance on sustainability criteria in procurement

Suggestions for strengthening commitment to sustainability among employees and in the corporate culture:

- Increasing trust in secure workstations
- Promoting equal opportunity (e.g., of women in technical professions)
- Good working conditions throughout the Group

Requests and suggestions for improved reporting:

- More active marketing of the CR report (e.g., via social networks)
- Shortening the CR report (e.g., focusing more intensively on material aspects)
- Creating a newsletter for people interested in sustainability

FOCUS ON DIALOG: GROUP WEBSITE AND CR REPORT

In 2016, we placed even greater emphasis on dialog with our stakeholders in our CR report and on our company website at www.telekom.com.

With our 2016 online CR report, we are making it even easier for our readers to get in touch with us and provide us with direct feedback on our sustainability performance: Selected articles include a comment function. You can give us feedback or ask questions, which will be answered by Deutsche Telekom experts. An overview of all comments arranged by topic is available under the sub-section "Expert forum".

With the relaunch of our www.telekom.com corporate website, we revamped our online presence in 2016. The website features a new design, new functions and advanced dialog and service offerings. The heart of the new design is the feed, which consolidates all the latest news from the Group, turning our corporate website into a digital hub. The feed content includes articles from the website, along with posts

from Deutsche Telekom's various social media channels. All information about our company and the dialog options on offer are now presented in real time, directly on our home page. Visitors are encouraged to comment and discuss a variety of topics. A dynamic question-and-answer module (FAQs) helps interested visitors quickly find answers to their questions. Questions can also be sent directly to the website's editorial staff.

Both the CR report and website are fully responsive, enabling convenient use on any device – smartphones, tablets, laptops or desktop computers.

STAKEHOLDER ENGAGEMENT

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

OVERVIEW OF MEMBERSHIPS AND COLLABORATIONS

Business and industry associations

- American Chamber of Commerce in Germany
- Bundesvereinigung der Deutschen Arbeitgeberverbände (BDA, the Confederation of German Employers' Associations)
- BITKOM industry association
- 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

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

Civic and aid organizations

- Bündnis für Verbraucherbildung
- Deutschland sicher im Netz (DSiN)
- London Benchmark Group
- Help e.V.
- Bundesnetzwerk Bürgerschaftliches Engagement (National Network for Civil Society)
- CCCD – WIE
- Aktion Deutschland Hilft e.V. (Germany's Relief Coalition)
- Deutsche 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 foundation
- Deutschlandstiftung Integration (German Foundation for Integration)
- Bundesarbeitsgemeinschaft der Senioren-Organisationen (BAGSO – German Association of Senior Citizens' Organizations)
- Friedrich-Ebert-Gymnasium Bonn
- Code of Responsible Conduct for Business
- GIZ Private Sector Advisory Board

REPRESENTING POLITICAL INTERESTS

The political sector and regulatory authorities influence the development and availability of the network infrastructure, technologies and services. This directly impacts the competitiveness of telecommunications companies as well as business in general, which relies on having a fast network infrastructure as well as state-of-the-art telecommunications services. Networks and services are also of considerable importance for maintaining a sense of community in society, which is why we engage in active, ongoing dialog with all interested stakeholders from the spheres of politics and society.

LOBBYING INSTRUMENTS

Our partners from parliaments, governments, and non-profit organizations need to uphold their independence and integrity. This principle is codified in Deutsche Telekomâ€™s Guiding Principles. 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.

INVESTMENT INCENTIVE NEEDED FOR BROADBAND NETWORKS

Having a high-performing, 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 investing extensively in infrastructure for fixed-line and mobile Internet for years, making a considerable contribution and showing more commitment than any other company to providing full-area coverage, particularly in rural areas.

In view of the ambitious broadband goals at both the national and European level, the main purpose of telecommunications and regulatory policies needs to be improving planning security and, in particular, the financial power of companies willing to invest in the market. This is the only way to fully tap private network build-out potential using all available technologies. In areas where broadband roll-out is not economically feasible, it is up to the public sector to develop technology and provider-independent incentive programs to help finance these efforts. Forward-thinking regulatory policies need to actively support investment in modern broadband networks and prevent unnecessary financial burdens and red tape for the network operators investing in networks.

Regulatory intervention needs to be restricted to proven market failure to keep it from unnecessarily limiting innovation. Open access must be embraced as a basic principle so that competition and free choice for consumers are guaranteed in connection with all network build-out projects.

In view of the fact that the Internet and telecommunications market are converging rapidly and in light of the growing market power of a few global Internet players, sector-specific regulation of telecommunications 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 build-out.

PROTECTING THE OPEN INTERNET

As part of the EU telecoms package, regulations on network neutrality were adopted at EU level and went into effect on April 30, 2016. The new regulations particularly address permitted traffic management, once again raise 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, meaning they will be available to the extent permitted by the available resources. Deutsche Telekom will continue to expand and optimize its infrastructure so that we are able to cope with rapidly increasing amounts of data traffic and constantly upgrade our network. This is the only way for us to meet our customers increasing demands and live up to the requirements of online content and application providers who also want to provide their services in high quality in the future. However, telecommunication networks cannot be operated without an effective network management system.

That is why Deutsche Telekom is developing business models based on the "best effort" Internet principle that online businesses can use to offer innovative services that pose specific demands on transmission quality and quality of service. This will include managing the rapidly growing volumes of different types of data streams in the net. Content will in no way be controlled. Deutsche Telekom supports the freedom of the Internet and does not influence user or provider content in any way. Deutsche Telekom will continue to take a non-discriminatory approach to marketing services with different quality-of-service levels in competition with other network operators. This gives consumers greater choice and guarantees a high quality level.

CONSUMER DIALOG

One of Deutsche Telekom's aims is to become the most highly regarded service company in the industry. That is why we again gave high priority to consumer-related topics in 2016.

Main topics included:

- Maintaining consumer data privacy, for example in the online advertising business,
- 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., when switching providers for fixed-line and mobile connections, and
- our efforts to provide better transparency for our customers.

Deutsche Telekom once again made progress in 2016 in regard to switching fixed-network providers - both internally as well as in collaboration with other telecommunications providers in Germany. The goal is to make it easier for both fixed-network and mobile consumers to switch providers without any service interruptions. In all these areas, Deutsche Telekom stands for a constructive and solution-oriented approach that is geared to both the consumers interests and the interests of our company.

COMPLIANCE

At Deutsche Telekom AG we feel it is highly important that all of our employees and governance bodies comply with our values, rules of conduct and applicable laws at all times. Deutsche Telekom's central compliance organization (Group Compliance) plays a key role in establishing corporate governance structures and a corporate culture that are based on integrity. It promotes a culture and a set of values characterized by compliance at the company and encourages managers and employees to fill these values with life. As a result, Deutsche Telekom's understanding of what compliance means far exceeds pure legal compliance in business activity, i.e., compliance with laws and internal regulations, and focuses on the integrity of employees and governance bodies.

GOALS	MEASURES	MONITORING
› Ensuring integrity and compliance throughout the Group and with business partners	› Compliance-Organisation › Compliance Risk Assessment › Code of Conduct › Policies › Consulting › Training › Communication campaigns › Business partner audits	› "Tell me!" whistleblower portal › Compliance audits › Case investigations › Punishing misconduct › Reporting

ENSURING INTEGRITY AND COMPLIANCE

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 introduced a comprehensive compliance management system: this is a way to combat risks effectively and make sure conduct throughout the Group is based on integrity and complies with our principles and regulations. All activities related to compliance management fulfill legal regulations and our Binding Corporate Rules on Privacy. This policy regulates how personal data is handled at Deutsche Telekom. Responsibility for the compliance management system lies with the top management level at Deutsche Telekom in the Board department for Data Privacy, Legal Affairs and Compliance. In addition, there is a member in each company of Deutsche Telekom on the Management or Board level who is responsible for compliance. The Chief Compliance Officer of Deutsche Telekom AG is responsible for the Group-wide structure, advancement and implementation of the compliance management system. This individual also heads up the Group Compliance unit. We also have compliance officers at each of our operating segments and national companies These individuals are responsible for ensuring that the compliance management system and our compliant goals are implemented on site.

Goals of the compliance management system (CMS)

At Deutsche Telekom, compliance refers to following the rules and doing the "right thing," which means compliance requires all employees to act with integrity. Within the meaning of our five Guiding Principles and Code of Conduct, integrity, and therefore 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.

The goals of our compliance activities are based on these principles, the relevant regulations and legal standards as well as on our strategic objective of becoming the leading European telecommunications provider. Concretely, the purpose is to avoid compliance violations and business decisions that are not made with integrity. In addition, compliance should be integrated early on and permanently into business processes. This reduces liability risks for the company. Furthermore, compliance contributes to ensuring that our customers perceive us as a reliable partner. We ensure implementation of our overarching compliance goals in business activities by systematically applying the compliance management system in the areas of prevention, identification and response.

Focus on prevention

Each year, we carry out a Group-wide Compliance Risk Assessment. This helps us identify and assess our compliance risks and define focal points for conducting effective preventative measures, which are compiled in our compliance program.

The goal is to make sure that the conduct of our employees is ethical and compliant at all times, which is why we have set forth clear expectations on employee conduct in our Code of Conduct. We have introduced compliance-related Group policies for this purpose, such as regulations on anti-corruption measures, gifts, invitations, and events, as well as on handling consultants and agents. A policy database makes it easy for our employees to access and follow our policies (Group-wide implementation of the Code of Conduct).

Besides regular compliance training sessions, we also carry out comprehensive anti-corruption training. We specifically address managers to act as multipliers to further raise awareness of compliance. Their feedback is analyzed carefully and used to initiate additional training sessions or other measures if necessary.

Employees can also visit the "Ask me!" portal to have their compliance questions answered and find reliable information on laws, internal policies and codes of conduct relevant to their daily activities.

Finally, we established a variety of communication measures to promote a "compliance culture" in the company.

Identification and monitoring
Despite the best preventative measures, we are not always able to prevent breaches of law or serious violations of internal regulations at the company. We have created the Tell me! whistleblower portal to uncover non-compliant conduct. Our employees as well as external parties, e.g., business partners or customers, can use the portal to report misconduct (Protecting whistleblowers). Deutsche Telekom thoroughly investigates all reports within the limits of the legal framework and punishes such activity appropriately. We have introduced a Group-wide reporting process to control and monitor these activities, including regular internal and external audits of our compliance management activities.

Compliant interaction with business partners and suppliers
Our Code of Conduct specifies proper conduct for all of our employees. With our Social Charter img we make a commitment to protecting and promoting human rights including compliance and other issues with the ILO's core labor standards. Our suppliers are expected to comply with the obligations, principles and values set forth therein and we do our part to place our suppliers under the obligation to do so. We also expect our suppliers to require the same of their sub-suppliers. Our General Terms and Conditions for Purchasing include a corporate social responsibility and anti-corruption clause that places suppliers under the obligation to take all steps necessary to prevent and punish active and passive forms of corruption. We have been offering regular e-learning and face-to-face compliance training to our suppliers since 2014 and provide them with a compliance guideline as well (see GRI index).

We select our business partners based on compliance criteria and conduct risk-oriented compliance business assessments. This applies to customers and suppliers as well as consultants (Consultant Policy), sales agents, development partners, and joint venture partners.

RENEWED COMPLIANCE MANAGEMENT CERTIFICATION

In 2016, we once again had our compliance management system certified with a focus on anti-corruption measures. This enables us to ensure we can confront risks consistently and that we have established effective processes in the company. Ten companies in Germany were under review; 13 companies in other countries will follow in 2017.

The certification focused on processes in procurement, sales, HR, and mergers & acquisitions, as well as the topics of events, donations, and sponsorships. The potential danger of corruption is greatest in these areas. Auditors completed their audit of the effectiveness of our compliance management system (CMS) and the system passed with flying colors. We document details regarding audit content and corporate departments that have undergone anti-corruption audits in our audit report.

Certificates and audit assessments play an ever growing role, for instance, in bidding processes and decisions to award bids, offering a clear advantage whenever we are in competition with other companies. External auditors have previously certified our compliance management system (CMS) with a focus on anti-corruption measures and anti-trust law in 2010 and 2013.

STRENGTHENING OUR CORPORATE CULTURE, ENCOURAGING A SPEAK-UP CULTURE

A compliance management system (CMS) is only effective if it is lived out in practice in everyday work. This is why we started the "Transparent company culture initiative" in 2016 with the intention of encouraging integrity and a speak-up culture within our company. The project consists of two central pillars: we will begin by completing a scientific study to analyze the existing corporate culture at Telekom. Our research partners are ESMT Berlin and the Hertie School of Governance. As part of this study project, in spring of 2017 we will invite employees from 25 national and international companies to take part in an online survey for the purpose of examining our current compliance culture. The second pillar of the initiative is founding an independent panel of experts to monitor the study intensively. The expert panel will consist of company representatives as well as external experts from NGOs, economics, science, and society. After completing the online survey, the panel of experts will assess the results and develop suggestions for strengthening our corporate culture. These will be submitted to the Board of Management as a basis for decision-making on future measures.

In addition, we started the "Speak-Up Culture" initiative in 2016 to encourage objection within the company where this is necessary. Employees are to be empowered to report misconduct or take action early on. Besides a variety of communication measures, the initiative includes completing a survey that allows our employees to state their views on the speak-up culture at Telekom and find out how they fit in with this culture. The results of the survey show that there is already a speak-up culture within the company, although it does need to be strengthened further. Managers, in particular, need to be willing to accept dissent, and doubters must be encouraged to express their opinions more often. Experience reports by former whistleblowers will supplement these various measures.

INTERNATIONAL COLLABORATION ON COMPLIANCE

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

In line with the Group's international structure, we discuss strategic issues with an international compliance advisory team twice a year and define a shared compliance approach. The team is a trend-setter of sorts, as it provides an impetus for designing and implementing balanced compliance structures at Deutsche Telekom. We have also been promoting Group-wide compliance collaboration for years through meetings of the representatives of all compliance organizations from our international subsidiaries. Our International Compliance Days took place for thetwelfth time in 2016: around 140 compliance officers from 31countries met on April 13 and 14 at the Telekom Forum in Bonn. They discussed compliance strategies and trends under the motto of "Teamwork, Excellence and Integrity". In addition, they launched the "Speak-up Culture" campaign, with which we want to encourage employees to report misconduct or take action promptly.

PREVENTING AND FIGHTING CORRUPTION

All Group units regularly audited for risk of corruption

We conduct a wide spectrum of internal measures to prevent and fight corruption. The compliance risk assessment forms the foundation of our compliance management system. It helps us identify and evaluate compliance risks and develop appropriate prevention measures. We have established an annual process for this purpose Group-wide: it identifies responsible officers and defines clear assessment criteria that are documented in a traceable manner. The companies that will take part in the compliance risk assessment are selected using a model centered on how developed and complete their compliance programs are. 79 companies participated in the assessment process in 2016.

Our Group risk map is a key component of the compliance risk assessment that we use to assess risks that are particularly significant to our company. The risk map enables Deutsche Telekom's globally active 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 violations of the Group Code of Conduct. Each subsidiary can add additional categories specific to their business needs. This involves defining which specific threat each risk poses to the subsidiary 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. Responsibility for the compliance risk assessment lies with the respective Group company. Our central compliance organization provides support and advice in these matters.

The subsidiaries managing boards are informed of the results of the compliance risk assessment. Subsequently the compliance program for the following year is defined, including specific measures and responsibilities. The managing board passes a formal resolution to approve the program. The compliance program measures are monitored closely.

Investigation based on clear criteria

Deutsche Telekom has specified clear criteria for investigating suspected cases of corruption. We only start investigations if a violation of legal or internal regulations is reported with a sufficient degree of detail. Any tips that meet this requirement are investigated thoroughly. 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.

"TELL ME!" PORTAL: 121 REPORTS RECEIVED

In 2016, 121 compliance-related reports were made to Deutsche Telekom via the "Tell me!" portal (120 reports were made in the previous year). 14 of those are still being reviewed for plausibility and investigations are being made into 60 plausible reports (as at: January 2017). 20 of these were confirmed as actual misconduct and were punished accordingly. 26 cases are still in the investigation phase. 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. Overall, most reports made in 2016 related to potential cases of embezzlement, theft, and fraud, commission fraud, and manipulation of targets.

ENGAGEMENT IN ANTI-CORRUPTION INITIATIVES

Deutsche Telekom AG regularly joins forces with national and international organizations that deal specifically with compliance-related issues including combating corruption. As a member of associations and organizations such as the Compliance & Integrity forum of ZfW (Center for Business Ethics), DICO (German Institute for Compliance e.V.), Bitkom (Federal Association for Information Technology, Telecommunications and New Media), Deutsche Telekom makes use of the opportunity to exchange ideas and experiences related to compliance. Thanks to this collaborative approach and exchange of experiences, Deutsche Telekom AG not only makes a valuable contribution to anti-corruption within the Group, but also to initiatives in this field worldwide. Deutsche Telekom AG uses the findings to work on continually improving its compliance management system.

MAJOR ONGOING LEGAL PROCEEDINGS

Deutsche Telekom is party to several proceedings both in and out of court with government agencies, competitors, and other parties. The proceedings mentioned in the 2016 Annual Report are of particular importance from Deutsche Telekom's point of view.

HUMAN RIGHTS

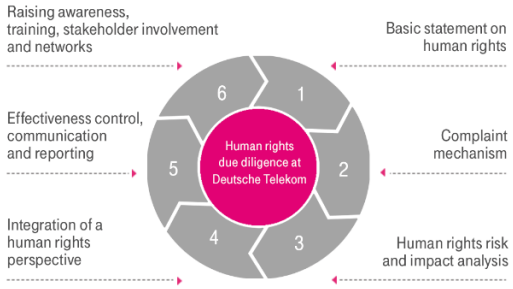
As an international player, the Deutsche Telekom Group assigns high priority to human rights compliance, especially since the ICT img sector is frequently criticized for deficiencies in its supply chain. That is why we have established comprehensive social standards at Deutsche Telekom and implement these using appropriate methods. We attach particular importance within our company to granting the right to collective bargaining and supporting diversity and equal opportunities. We expressly require our suppliers to assume responsibility as a way of making sure human rights are also protected outside of our Group.

GOALS	MEASURES	MONITORING
› Ensuring protection of human rights within the Group	› Human rights due diligence program	› Contact point for human rights › Social Performance Report › Effectiveness analyses

HOW WE PROTECT 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



The obligation to respect human rights is anchored in the basic policies of Telekom, the Guiding Principles, the Code of Conduct, and the Social Charter. The Employee Relations Policy and the Diversity Policy of Telekom are also important in this context.

Tools for assessing potential impact on human rights

We use two tools to assess compliance with our Social Charter img: first, each year we prepare a central Social Performance Report, in which 104 fully-consolidated companies of Telekom participate. This report did not record any violations of our Social Charter during the period from October 2014 to September 2016. We have also been offering a central Contact Point for Human Rights since 2013. This contact point can be reached via various channels, for example the public e-mail address humanrights@telekom.de. Others use our anonymous whistleblower system, which allows them to submit their information anonymously. All contact options are listed on our Tell me! whistleblower portal, the purpose of which is to resolve violations of legal regulations and internal policies. 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 2016 here.

We also continued the process launched in 2013 to integrate human rights issues into the due diligence activities conducted in the context of mergers and acquisitions. In addition, we introduced special evaluation processes to assess employer-employee relations as part of implementing our Employee Relations Policy.

REPORTS AND INQUIRIES TO THE CONTACT POINT FOR HUMAN RIGHTS

We established a contact point for human rights at Deutsche Telekom in 2013. Between January 1, 2016 and December 31, 2016, the contact point received ten reports related to human rights, submitted either directly to the e-mail address of the contact point or through the (anonymous) whistleblower portal. Not all of these tip-offs were deemed plausible. Most of the reports related to the issues of "freedom of opinion" and "code of conduct." One inquiry was related to the topic of "implementing human rights issues at Deutsche Telekom." The inquiry specifically concerned our activities and conflict management. One inquiry dealt with the issue of "social responsibility." Of course, all reports were treated as confidential.

RISK AND OPPORTUNITY MANAGEMENT

For us, comprehensive risk and opportunities management also means considering the opportunities and risks arising from ecological or social aspects or from the management of our Company. To this end, we actively and systematically involve all relevant stakeholders in the process of identifying current and potential risks and opportunities. We also participate in a number of working groups and committees. In parallel with our ongoing monitoring of ecological, social and governance issues, we systematically determine our stakeholders' positions on these issues. The key tools we use here are: our year-round open online materiality survey for all stakeholders our bi-monthly NGO report, which systematically analyzes press publications of the NGOs relevant for us; our involvement in working groups and committees, countless national and international business associations and social organizations, e.g., GeSI img, Bitkom, Econsense, and BAGSO; stakeholder dialog formats organized by us, such as the CR Forum and Dialog Days on sustainability in procurement; and our various publications, such as the press review and newsletter. We have identified the following as our main sustainability management issues.

REPUTATION

How we deal with sustainability issues also entails both opportunities and risks for our reputation. A high level of service quality is one of the most important factors for improving customer perception. Customer satisfaction has been embedded in our Group management as a non-financial performance indicator to underline the importance of this issue. Transparency and reporting help to promote the trust of other external stakeholders in our Group. Our annual and CR reports also serve this purpose. However, issues such as business practices, data protection, or work standards in the supply chain also entail reputational risks: If our brands, products, or services are connected with such issues in negative media reports, this can cause substantial damage to our reputation. As part of our sustainability management activities, we continuously review such potential risks and take measures to minimize them.

CLIMATE PROTECTION

We pursue an integrated climate strategy, which means focusing not only on the risks that climate change poses for us and our stakeholders, but also on the opportunities it presents. ICT products and services offer the potential to save up to ten times as much in CO_2 emissions in other industries as the ICT sector itself generates (according to the GeSI SMARTer2030 study). This creates an opportunity to save 20 percent of global CO_2 emissions in 2030, and to maintain worldwide emissions at the level of 2015 with simultaneous economic growth. The additional revenue potential here amounts to USD 6.5 trillion, USD 2.0 trillion of which is for the ICT industry alone. Further, ICT solutions can save a total of USD 4.9 trillion in costs. To give a specific example: The broadband roll-out in Germany has the potential to save an aggregate amount of 19 million metric tons of CO_2 between 2012 and 2020. What is more, the economic momentum triggered by rolling out broadband can create an aggregate number of 162,000 new jobs and increase GDP by EUR 47 billion between 2015 and 2020. We are supporting this trend by evaluating our product portfolio to identify sustainability benefits.

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, andemployees. We can take preventive action in this area by reducing our own CO_2 emissions, which is one of the reasons we set ourselves the goal of achieving a 20-percent reduction in our Group-wide emissions – leaving aside our United States operating segment – by 2020 (baseline: 2008). Climate protection also carries financial risks, whether from the introduction of a levy on CO_2 emissions or an increase in energy costs. The measures we are taking to counter these risks include measuring our own energy efficiency and finding ways to improve it. Beyond that, in 2015 three of our subsidiaries (Magyar Telekom in Hungary, OTE S. A. in Greece, and T-Mobile Netherlands) covered 100percent of their electricity requirements with renewables, thus actively reducing climate risks.

SUPPLIERS

We see more sustainability in our supply chain as an opportunity – for our reputation and our business success. Thus through a development program, we help strategic suppliers to introduce business practices that are socially and ecologically acceptable and economically efficient. The program showed measurable successes again in the reportingyear. Better working conditions at our suppliers reduce the number of work-related accidents and the turnover rate. This increases productivity, while at the same time lowering costs for recruitment and training. Thus not only do we strengthen CR performance at our suppliers, we also significantly reduce identified risks. As part of our global procurement activities, we can be exposed to country- and supplier-specific risks. These include, for example, the use of child labor, the conscious acceptance of environmental damage or inadequate local working and safety conditions. However, the reporting of NGOs or media can give rise to risks to the Company's reputation, but also to supply risks. We reduce these risks by systematically reviewing our suppliers. In the renowned RobecoSAM sustainability rating we scored 98 out of 100 points for our supply chain management in the reportingyear, fivepoints higher than in the prioryear. Our partnerships with suppliers that comply with international sustainability standards ensure a high level of product quality and reliable procurement.

HEALTH AND ENVIRONMENT

Mobile communications, or the electromagnetic fields used in mobile communications, regularly give rise to concerns among the general population about potential health risks. This issue continues to be the subject of public, political, and scientific debate. Acceptance problems among the general public concern both mobile communications networks and the use of mobile handsets. In mobile communications, this affects projects like the build-out of the mobile communications infrastructure and the use of mobile handsets. In the fixed network, it affects sales of traditional DECT (digital cordless) phones and devices that use Wi-Fi technology. There is a risk of regulatory interventions, such as reduced thresholds for electromagnetic fields or the implementation of precautionary measures in mobile communications, e.g., amendments to building law or labeling requirements for handsets.

Over the past few years, recognized expert organizations such as the World Health Organization (WHO) and the International Commission on Non-Ionizing Radiation Protection (ICNIRP) have repeatedly reviewed the current thresholds for mobile communications and confirmed that – if these values are complied with – the use of mobile technology is safe based on current scientific knowledge. The expert organizations, currently the ICNIRP, regularly review the recommended thresholds on the basis of the latest scientific findings.

We are convinced that mobile communications technology is safe if specific threshold values are complied with. We are supported in this conviction by the assessment of the recognized bodies. Our responsible approach to this issue finds expression in our Group-wide EMF Policy, with which we commit ourselves to more transparency, information, participation, and financial support of independent mobile communications research, far beyond that which is stipulated by legal requirements. We aim to overcome uncertainty among the general public by pursuing an objective, scientifically well-founded, and transparent information policy. We thus continue to see it as our duty to maintain our close and successful dialog with local authorities, over and above the statutory requirements. This also applies since our longstanding collaboration with municipalities to build out the mobile network was enshrined in law in2013; previously, this collaboration was based on voluntary self-commitments by the network operators.

DATA PRIVACY

Almost half of the German population (48 percent) has been victim to Internet crime - for example through viruses, Trojans or computer worms. These were the findings of a survey conducted by TNS Emnid on behalf of Deutsche Telekom in February 2016. Few users – whether they are using the Internet for private or professional purposes – are aware that every click leaves behind data traces online that can potentially be traced. Hackers can take advantage of this to collect specific data and identify vulnerabilities in hardware and software. Our customers' trust is the basis for our business as an ICT img company, which is why data privacy and data security are of utmost importance to us.

GOALS	MEASURES	MONITORING
› Guarantee effective data privacy and create trust	› Board department and Group unit for Data Privacy › Independent Data Privacy Advisory Council › Privacy and security by design through our Privacy and Security Assessment procedure › Transparent communication and annual reporting › Employee training courses	› Annual Group data privacy audit to measure the standard of data privacy within the Group › Risk-based annual audit program and ad-hoc controls › Certifications

LAYING THE FOUNDATION FOR EFFECTIVE DATA PRIVACY

In 2008 we created a Board of Management department for Data Privacy, Legal Affairs and Compliance as well as the Group Privacy unit. This has given us the necessary capacities for effective data protection. The responsible Board member is advised by the independent Data Privacy Advisory Council, which comprises renowned experts from politics, science, business and independent organizations. The Council was founded in February 2009.

In 2016, we established our new unit, Telekom Security, which began operations on January 1, 2017. Telekom Security brings together all of Deutsche Telekom's security departments under one roof. This gives us the capacities necessary not only to identify cyber attacks in plenty of time but also to respond quickly with countermeasures.

We are also committed to improving the political framework conditions to ensure comprehensive data privacy. At the 2015 national IT summit we signed the "Charter for the Promotion of Trustworthy Communications" together with the German Federal Minister of the Interior and other organizations. Its main purpose is to make sure that the encryption of private communications becomes standard.

Consistent transparency toward the public

In 2008 we were the first DAX-30 company to publish an annual data privacy report, which documents all relevant processes at the Group. We have been publishing an integrated report on data privacy and data security since 2011. Download the Data Privacy and Data Security Report.

Since 2014, we have also been publishing an annual transparency report. In the report we disclose our obligations to cooperate with German and international security agencies.

Further details and current information regarding data security can be found under http://www.telekom.com/dataprotection. The status report, for example, includes all processes relevant to data privacy at Deutsche Telekom. We present our latest measures to improve data privacy as well as tips for keeping personal information safe.

The section on consumer and youth protection elaborates on how we ensure the safety of our products and services.

Regular employee training courses

Telecommunications companies are obliged to provide new employees with information on data privacy regulations. Deutsche Telekom goes above and beyond this legal requirement: every two years, we train all of our employees in Germany and commit them to data privacy and telecommunications secrecy. Corresponding requirements for national companies are in place. We have also introduced specific trainings in the customer and human resources departments where the risk of data abuse is higher. These trainings include online courses for independent learning, presentations on data privacy and face-to-face courses on specific topics such as "Data privacy at call centers." This helps us make sure that all employees have in-depth understanding of the relevant data privacy policies.

Annual review of measures through audits and certifications

We conduct an annual Group data privacy audit to measure and improve the general data privacy standards at Deutsche Telekom in Germany and at 34 international affiliated companies. 30 percent of Group employees, who are randomly selected, are asked to participate in an online survey. The basic data privacy audit is supplemented by self-assessments completed by the data privacy officers at the national companies on implementation of the requirements defined in our "Binding Corporate Rules on Privacy."

Based on the results, the Group Privacy department identifies need for action at the respective departments and requires them to implement improvement measures. 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 Group Privacy department supports implementation of the improvement measures by providing information and advice and conducts a follow-up evaluation. Unusual audit results are taken into consideration when planning the follow-up audit.

We also have our processes and management systems as well as products and services certified by external, independent organizations such as TÜV, DEKRA and auditing firms. The technical services company TÜV NORD confirmed once again this year that Telekom's IT systems are secure.

EU GENERAL DATA PROTECTION REGULATION: SUPPORTING THE IMPLEMENTATION

In May 2016, the EU passed the General Data Protection Regulation, which will take effect in 2018. Laws must always be interpreted to determine how they can be implemented in everyday life. Group Privacy has now drawn up a set of standardized rules for the Group: as a whole: the Binding Interpretations. They were put together in collaboration with data privacy experts in the national companies. The Binding Interpretations include specific recommendations and best practice examples to implement the EU regulation. For example, they explain what a customer consent must entail, or how customer data has to be deleted, if this is requested by the customer. Over the next few years, we will be collecting further practical experience and further developing these interpretations. Our data privacy training will also be adapted to include the new content.

PUBLICATION OF INTERNATIONAL TRANSPARENCY REPORT

Telecommunications companies are legally obligated to cooperate with security agencies: this includes surveillance measures to record telecommunications connections or disclosure of customer information. Deutsche Telekom has been publishing an annual transparency report for Germany since 2014, which covers the types and amount of information we disclose to security agencies. In January 2016 we also published our first international transparency report for all of Deutsche Telekom's national companies.

International legal framework conditions differ considerably. In some countries it is illegal to disclose security measures, in others surveillance is directly conducted by the authorities without the involvement of telecommunications companies. You can find more information on the local situations in the various country reports at http://www.telekom.com/transparency-report.

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 our requests are met, we strive to provide the necessary transparency within the legal possibilities.

CR-RATINGS

RESPONSIBILITIES FOR SUPPLY CHAIN MANAGEMENT

At the highest level, Deutsche Telekom's Chief Human Resources Officer is responsible for supply chain management and implementation of the Global Compact principles for human rights and labor standards.

CONTACT FOR SUPPLIERS

If employees along our supply chain have any issues, they can report these via our Tell Me! whistleblower portal. The channel is publicly accessible via our corporate online portal.

SUPPLIER AUDITS

We conducted a total of 73 audits (on-site evaluations and visits) in 2016. The audits include employee interviews. They are "semi-announced," which means that we notify the suppliers of the approximate time of the audits in advance. That is absolutely necessary to make sure that relevant representatives and employees in key functions are present for the audit.

Within the context of JAC we also launched a pilot project headed by Vodafone in 2016 in order to test a complementary, optional type of on-site evaluation. The surveys, which are conducted via cell-phone calls, are primarily aimed at addressing needs, concerns and issues of employees at production facilities. They can be carried out anonymously and outside of the facilities. If the pilot phase is successful, JAC and Deutsche Telekom as an active member of the initiative will consider introducing these surveys as a complementary tool to physical audits for evaluating conditions of production.

CALL CENTER OUTSOURCING

Our labor standards, as laid down in our Employee Relations Policy, Code of Conduct and Social Charter as well as our anti-corruption and bribery policy, are applicable throughout the Group. They also form an integral part of agreements entered into with our business partners and suppliers, which is why they are also applicable for outsourced call centers.

SUPPLIER LABOR STANDARDS

The JAC Supply Chain Sustainability Guidelines [link to PDF] require suppliers to grant their employees the freedom of association and the right to collective bargaining as well as a healthy and safe working environment. The following minimum requirements are applicable regarding working hours: a maximum of 48 working hours per week, a maximum of twelve hours of overtime each week and one day off after six consecutive days of work. Compliance with these requirements is reviewed during our on-site audits.

SUPPLIER ENVIRONMENTAL REQUIREMENTS

Our CR clause, which we include in every agreement, requires suppliers to make their goods and services more environmentally friendly and energy-efficient as well as to provide information on the ingredients and materials used.

We have set limits for devices provided by our suppliers with regard to hazardous substances such as phthalates, antimony, beryllium and arsenic, and we request analytical findings as proof that these limits are being met. We also exclusively purchase halogen-free devices pursuant to the Restriction of Hazardous Substances Directive.

Our suppliers are required to provide self-assessments and we also conduct supplier audits. In the scope of the audits, we check whether our suppliers use an environmental management system and how they manage their energy and water consumption, as well as other factors. We also explicitly ask them about their waste management system. We also intend to increase our requirements towards suppliers by introducing our own environmental guideline.

SUPPLIER SOCIAL STANDARDS

We do not require our suppliers to obtain external environmental or social certificates. Based on our audits, however, the majority of our relevant manufacturing suppliers have an external "Social Accountability" certificate. The assessment of material social aspects as part of our audits is also carried out pursuant to international criteria and standards such as the ILO core labor standards and SA8000 certification.

SUPPLIER STANDARD OF LIVING

The JAC Supply Chain Sustainability Guidelines require fair pay that enables an adequate standard of living. The audit questionnaire also includes questions on features and quality of working, sleeping and canteen areas.

SUSTAINABLE PROCUREMENT ESG KPIS

In addition to the target that we introduced in 2012 to increase the share of self-assessments and/or audits in our procurement volume, we have now defined two additional ESG KPIs. Firstly, we hope to increase the order volume covered by the CDP Supply Chain Program. Secondly, we plan to increase the share of CR-qualified suppliers among our top 200. Qualification includes self-assessments, audits, sustainability workshops for suppliers and supplier development programs.

CONFLICT RESOURCES

Although we do not purchase resources ourselves, we do expect that our manufacturing suppliers abstain from using ores sourced from conflict zones and similar resources in our products. Our requirements are

expressly and comprehensively set out in our Coltan Statement and Statement on Extractives. These requirements are an integral part of our contracts with manufacturing suppliers. As a member of GeSI, we actively support the Conflict-Free Smelters Initiative and strongly encourage our direct and indirect suppliers to use the CFSI tools to ensure responsible procurement of resources.

HANDLING CUSTOMER COMPLAINTS

At Deutsche Telekom, we aim to handle complaints immediately, effectively and efficiently. Our compensation policy is concerned with regaining customer satisfaction and loyalty and is used as an internal guideline. We have corporate guidelines in place on how to deal with credit notes (goodwill and refunds) that our employees follow.

ISO 14001 COVERAGE

In Germany, 100% of relevant employees are covered by ISO 14001 certification. A total of 93% of our employees worldwide are covered by ISO 14001 certification, 77% of which by our central umbrella certification.

ADDRESSING CLIMATE RISKS

We pursue an integrated climate strategy, which means focusing not only on the risks that climate change poses for us and our stakeholders, but also on the opportunities it presents. We can take preventive action (mitigation) in this area by reducing our own CO_2 emissions. Our climate protection target plays a key role in these activities.

Among the risks that climate change harbors, meteorological extremes are one we are already experiencing. Impacts on climate are influencing the continuity of our business processes. Our internal Group Policy on Continuity and Situation Management specifies responsibilities, processes and measures for protection from the impact of damaging events and disruptions. It also outlines how to handle emergency and crisis situations like floods. Possible consequences of climate change are also taken into account when planning our future business activities, by making sure, for instance, that our network infrastructure is set up to be protected from storm conditions, changes in temperature and high winds. Climate change also carries financial risks, whether from the introduction of a levy on CO_2 emissions or an increase in energy costs. The measures we are taking to counter these risks include measuring our own energy efficiency and finding ways to improve it.

We report to the Board of Management quarterly on current climate risks within the context of our Group Risk Report. More information on risk management is available in our annual report.

We evaluate our product portfolio in terms of sustainability advantages. That allows us to help customers reduce their carbon footprints with innovative products and services (mitigation) and address the negative impact of climate change more effectively (adaptation). Real-time solutions in agriculture can help optimize the use of fertilizer, seed and machinery. We also contributed to decarbonization and adaptation with innovative projects in the field of smart cities, for example in the mobility sector.

CUSTOMERS & PRODUCTS

We are building the network for the gigabit society. Digitization means making our lives more efficient, comfortable and sustainable. Our aim is to offer these advantages to as many people as possible, while keeping them safe from the dangers of the Internet.

INTERESTING TOPICS AND CONTENTS

400,000 kilometers of optical fibers in place →

A simple data privacy statement for everyone →

Smart street lamps save energy →

Pan-Net launched →

More awards for Telekom Servicet →

Expert forum organized at Woche der Umwelt trade fair →

SERVICE QUALITY

As a service-oriented, responsible company, we feel obliged to respond to our customers' needs and expectations. That's why we have set up a comprehensive customer relationship management system. We encourage dialog with our customers by giving them opportunities to quickly and easily contact us at any time via the communication channel of their choice: e.g., online, via app, phone or e-mail or at a Telekom shop.

GOALS	MEASURES	MONITORING
› Improving customer satisfaction and loyalty › Expanding and improving digital services	› "C1 – customers first" program › eCompany Service	› TRI*M method › Telekom Digital Share

How we guarantee excellent service quality

"Customer delight and simplicity drive our action" – this is an ambition we have anchored in our Guiding Principles as a fixed component. In the competition for customer interest, network quality, an extensive product portfolio, and above all service quality play an ever growing role. We record customer satisfaction and loyalty regularly through a variety of instruments. Some of these results are tied to our managers' variable salary components and thus play a role in their performance assessments

We are continuously developing our customer service. We differentiate between online services (such as online forms on our website), personal service (such as in our shops and on the phone) and anticipatory service such as informing customers proactively regarding foreseeable disruptions. We have combined our measures into the two programs "C1 – customers first" and "eCompany Service".

All of our fixed-line and mobile communications customers in Germany have been able to contact us by phone around the clock at no charge since 2013. This applies to all of our service numbers and for questions regarding Internet and TV services. Our online channels are becoming more and more important. More than 40 percent of all service inquiries at Telekom Deutschland are solved by support provided by our cross-area online platforms. We systematically evaluate our customers' inquiries and complaints to identify the root of the problem and make improvements.

Indicator shows customer retention progress

We use the TRI*M img index to gauge customer retention and regularly participate in benchmarkings. In the 2016 reporting year, the Group-wide TRI*M was 70.2 points, in comparison to the previous year's value of 68.3. The value for Germany was 60 points (previous year: 58).

This means we have achieved our Group target stipulating a slight increase for both the Group as a whole and for Germany. By 2020, we want to achieve an annual increase of 2 points in Germany.

BEST CUSTOMER EXPERIENCE WITH "C1 - CUSTOMERS FIRST"

The "C1 – customers first" program plays an important part in implementing our Guiding Principle "Customer delight and simplicity drive our action." The program ran from 2012 to 2016 and was designed to increase customer satisfaction, reinforce customer loyalty to Deutsche Telekom, create positive customer experiences, and spark enthusiasm. We implemented the following measures in 2016:

Personalized service

- Fixed-line customers switching to Deutsche Telekom from another provider have benefited from a personal advisor for their switch since May 2016. The advisor is available to the customer during the transition period. The service was tested in advance through a pilot project and received a very positive evaluation from customers.
- With the program "Mobile communications complaints 2.0," we introduced a new concept for processing complex complaints from mobile communications consumers in 2016. Our goal is to process these complaints in a quicker and more targeted manner.
- With our new personal call-back service, the customer is connected once again with the same customer care agent they spoke to previously. This means the customer does not need to explain their concern a second time. Under the service, we send a text message offering a call back from a customer care agent. This service can be used within 48 hours after the initial contact.

Anticipatory service

- For network and service disruptions planned to last at least five hours, we inform our customers early on via text message or e-mail.
- Especially in the summer months, there are occasional weather-related disruptions caused by lightning strikes. In regions with storms, we warn customers of the storm in advance via text message. In it, we give tips for how they can protect their electronic devices. Furthermore, we explain what they can do themselves if they experience problems after the storm. As soon as possible after a lightning strike, our Technical Service assigns the regional field staff so that they can repair the faults quickly and give affected customers concrete instructions for what to do.

Successful customer program: C1 takes stock
The C1 program was ended successfully at the end of 2016 after five years. Since the start of the program, our customers' willingness to recommend us has seen a positive development, with a total index process tracking of 7.36 points in 2016 in comparison to 7.16 points in 2012. Key factors in the positive development were, first and foremost, programs like the welcome sent after a move, the personal switch advisor, and the continual improvement and automation of internal processes. We were able to achieve a slight improvement of 0.01 points in comparison to the previous year.

Furthermore, we consistently increased our TRI*M index values measured for customer loyalty. Consumer loyalty in 2016 reached a record 59 points (up from 52 points in 2012). We also achieved the best result to date for the overall TRI*M index for Germany of 60 points in 2016. This is an increase of 4 points in comparison to the annual value from 2012 (56).

Ongoing measures in our C1 program will be transferred to existing service structures or other projects in 2017.

ECOMPANY SERVICE PROGRAM: NEW DIGITAL SERVICE OFFERS

We want our customers to always receive the best service from us – no matter whether they contact us personally, by telephone, or online. The eCompany Service program expands our online service and improves our existing offerings. Online services are established as an additional channel of contact. To achieve this goal, we developed a variety of measures during the reporting period.

- Besides classic telephone service, we now also offer text and video chat. The chat feature can be used both on desktop PCs and on mobile devices.
- We use the video ID process to check our customer's identity via video call. This allows the customer to identify themselves online via their mobile device. The process is also used by banks.
- These and many other online services can be used via the MagentaSERVICE app, which we have consistently enhanced over the past few months. The MagentaSERVICE app combines all of our services offered to mobile and fixed-network customers in a single app. Our customers can use the app to view their data usage and manage their contracts. We updated the app in 2016 and added new functions to it. For example, users can now change their bank details themselves without having to get in contact with customer service for this purpose. In addition, they can submit a query as to whether there is a disruption in their exchange area. We can also inform them of the projected duration of the disruption.
- The new "digital fault assistant" offers our customers fast, direct help. This is a so-called chat bot – software that can hold text-based dialog with humans. The assistant can automatically answer simple and moderately difficult questions related to wiring, installation, and faults. Besides step-by-step solutions, it also provides recommendations and aid in the form of instructions, images, and videos. This service allows our customers to solve some concerns on their own.

RESPONSIBLE INTERNET AND SMARTPHONE USE

As T-Mobile Netherlands, we believe it is our responsibility to provide information about the possibilities and threats entailed by smartphone use. We are therefore carrying out the following projects:

Debt prevention and debt-solving activities
We launched a variety of projects to help prevent customers from getting into debt owing to the fact that many households in the Netherlands are struggling financially. There are many different reasons why they are having difficulties paying their monthly bills.

- **Guest lectures on debt prevention in schools during National Money Week:** This nationwide project week organized by the Ministry of Finance particularly targets primary schools. Since 90 % of children get their first mobile phone when they are 11 or 12 years old, T-Mobile Netherlands has been providing guest lectures to teach children how to prevent high costs resulting from mobile use and showing them how to use their connection in a responsible way. In 2016, 150 colleagues were involved and the guest lectures reached over 4,500 children. The company's employees held the guest lectures with materials provided by the company.
- **Financial Cafes:** We work together with the NGO Humanitas and other companies such as insurance companies to help people directly with their financial problems. Volunteers of Humanitas can call a direct telephone number of one of our employees, so debt problems can be solved immediately. Hundreds of people in need visit these cafes and there are plans to roll them out across the Netherlands.
- **Poverty Coalition:** This partnership between corporate banks, insurance companies, energy companies, bailiffs, money-collecting companies, universities and tax authorities is working to alleviate poverty among Dutch households in the Netherlands. In 2016, we had several meetings in which we shared our thoughts and approaches. One outcome wasa television program about people in poverty.
- **Outbound calling team:** T-Mobile brought together a team of engaging colleagues as a special outbound calling team that calls customers involved in the debt-collection process. Instead of asking them to pay, the message is “How are you? We appreciate you very much as a loyal costumer. Can we help you?” This is being undertaken with the understanding that essentially every customer is willing to pay and that an appropriate solution can always be found for customers in financial trouble. In 2016, the team built on its success and was extended by 8 people so we can help more people in this customer-friendly way.
- **Financial debt prevention through product design:** We are very much aware of our responsibility to protect customers against fraud, unexpected costs, bill shocks, taking out subscriptions they cannot afford and problematic telecom debts. We introduced new services (Stel Samen Stel Bij) that enable customers to adjust their usage in real time. The T-Mobile App gives customers real-time insights into their costs and usage. We also prevent bill shocks by contacting customers in real time if usage is high. And if a specific customer cannot be reached, the services are put on a temporary stop.

Traffic safety

In September 2014, the Dutch Transport Ministry and Safe Traffic Netherlands launched a campaign about the safe use of mobile phones in road vehicles: "Keep Your Eyes on the Road". T-Mobile Netherlands was the first company from the telecom sector to adopt the campaign. A similar campaign was launched to encourage safe cycling since 20% of all cycling accidents in the Netherlands are caused by social media use in traffic. The fietsmodus-app activates a traffic mode that works in similar fashion to flight mode. In 2016, we gave away 3 bicycles to school kids who used the app the most. We equipped these bikes with special bells, which we developed together with a start-up. This bicycle bell automatically turns your smartphone into flight mode to prevent kids being disturbed by incoming calls or apps.

Boefproof campaign

We joined forces with the Ministry of Justice, smartphone manufacturers and other telco's to support a national campaign informing people about how to make their smartphone unattractive for thieves. This campaign ran on television, radio, billboards and online for a total of three weeks.

In 2016, we were very active in raising awareness about smartphone use. The year was launched with an extensive Q+A section on our corporate homepage featuring tips and tricks. An e-learning platform is being developed on financial aspects, fraud and the use of social media for teachers. The aim is to educate school children with this platform. Our quiz on online safety was our contribution to the national “week of the knowledge about media” and the “alert online” campaign. Our “T-Mobile Helpt” program teaches elderly people to use their smartphone properly.

AWARDS FOR OUR SERVICE

TÜV Rheinland: rating of "good" for Telekom Service

In 2016, TÜV Rheinland once again investigated how satisfied our customers are with our service. During the study, a representative random sample of 2,550 customers from Germany were asked how satisfied they were with our service hotline, Telekom shops, and our Technical Service. We received the TÜV seal for the fourth time in a row with an overall rating of "good" based on their positive feedback.

Deutschland TEST 2016: best online service

Deutsche Telekom has the best online customer service in Germany. That was the finding of a study by "Deutschland Test" (a brand of the magazine Focus Money) and "Statista." The study evaluated the online customer service of 40 companies from the telecommunications, insurance, banking, and transportation industries. Service chats and communities were evaluated in the assessment, as was the quality of dialog through social networks like Facebook and Twitter.

Deutschland TEST 2016: „Service-König“

Deutschland Test investigated customer service quality across Germany in 34 different industries for the second time. Deutsche Telekom is the winner in the Telecommunications category. Customers in the 40 largest German cities were surveyed for the test. This means a total of over 300,000 votes were recorded and evaluated.

CHIP hotline test 2017

In collaboration with Statista, one of the largest market research companies, CHIP completed a major hotline test in 2017. Over a period of 8 weeks, they tested the service hotlines of a total of 150 companies from 12 industries with over 9,000 test calls, then summarized their findings in rankings. The testing focused particularly on the topics of customer service, wait time, availability, and transparency. Deutsche Telekom was rated as "excellent" overall for its mobile communications hotline, and was the test winner in the Customer Service category. The fixed-network hotline was also rated as "excellent" in the overall assessment.

"Double flat rates" reviewed by Focus Money

The comparison site Check24.de completed a comprehensive test in April 2016 for FOCUS-MONEY to investigate the price-performance ratio of double flat rates for fixed-line telephony and Internet service from a total of ten telecommunications and cable providers. The providers' price, service, and rate conditions were reviewed. According to the study, customers received the "best service" from Deutsche Telekom.

Customer service wins European Business Award

Telekom Deutschland's customer service was honored in the final round of the European Business Award (EBA). It is one of the ten best companies in the Customer Focus category. Over 32,000 companies from 33 countries across Europe applied for the award. Our customer service previously won the title of National Champion in the same category and qualified for the final Europe-wide elimination round for the EBA.

Honored with the International Business Excellence Award

International Business
EXCELLENCE AWARDS **2016**

In 2016, we won the International Business Excellence Award in the "Customer service and customer perception" category. We were honored for the program "Voice of the customer," our international customer contact analysis. We use the program to collect customer feedback across all channels of contact. In this way, we obtain over five million pieces of feedback each year. The system is already in use in twelve European countries.

INFRASTRUCTURE EXPANSION

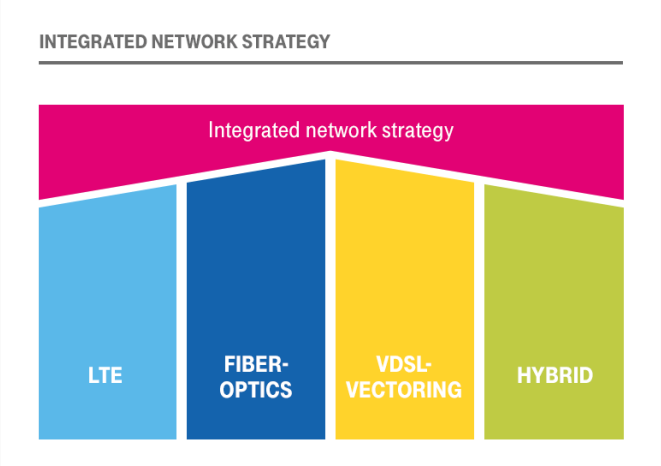
Our network infrastructure enables economic performance and participation in the knowledge and information society. As a result, demand for faster, full-coverage data services is immense. That is why we continue to rapidly expand our infrastructure and improve transmission speeds with new, secure technology.

GOALS	MEASURES	MONITORING
› 95 percent LTE coverage by 2018 › 80 percent VDSL vectoring coverage by 2018	› Integrated network strategy › Migration to IP	› Network coverage status

EXPANDING OUR INFRASTRUCTURE

The data volume generated globally will increase tenfold by 2020 compared to 2013, according to a study conducted by US-based IT company EMC. That would mean 44 trillion gigabytes in the networks a year instead of 4.4 trillion. The amount of digital data being produced in Germany alone is expected to grow from a current 230 billion gigabytes to 1,100 billion. Networks need to be continually expanded to be able to handle this volume.

We have been the largest investor in this area in Germany for years now and will continue to drive network expansion. The main objectives of our pan-European integrated network strategy (INS) form the basis for these activities: 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. Our integrated network strategy is in line with the network expansion goals specified by the EU Commission and the German federal government (digital agenda and broadband strategy).



Upgrading our network architecture

We intend to make our networks faster and more efficient. To do this, we are going to deactivate all analog PSTN (public switched telephone network) platforms that we no longer need and switch our entire telephone network to IP-based lines by 2018. Thanks to this switch and other measures to improve efficiency, Deutsche Telekom will reduce the carbon footprint of its fixed and mobile networks in Germany by around 40 percent by 2020 compared to 2008. The switch to IP img technology, which requires considerably less energy compared to earlier network technologies, will contribute significantly to the overall reduction of CO_2 emissions.

We will also rely on fiber optics when updating our network architecture in order to meet our customers' demands for fast network connections. Using the fiber optic-based VDSL vectoring technology speeds up download data transmission rates to up to 100 Mbit/s and even up to 40 Mbit/s when it comes to upload transmission rates. But vectoring requires more energy. We are working on control solutions for energy-efficient operation of our facilities in order to decrease the amount of energy required. The combination of IP technology and VDSL vectoring is already considerably more energy-efficient than conventional PSTN technology.

NEW MOBILE COMMUNICATIONS STANDARD: NETWORK REVOLUTION, INSTEAD OF EVOLUTION

The current LTE mobile communications standard is a fourth generation standard (4G). The possibilities of this standard certainly have not yet been fully exploited. LTE is continually developing and can fully meet the requirements of consumers for ever greater bandwidth. However, the successor to the LTE standard, 5G, is already taking shape. Industry experts are intensively discussing which elements will be included in this new standard. The goal is to agree on a uniform global definition of 5G. Many companies share our belief that 4th generation LTE technology will most likely remain as part of a future 5G standard. 4G will, in a way, form the foundation of 5G performance. This will allow us to meet the growing requirements of consumers in the future as well.

However, 5G will be able to do much more: the new functions will be interesting first and foremost for industry. They will facilitate new business models that aren't even conceivable based on current standards. This includes innovative solutions for the health or automotive industry. All in all, this next generation will provide 1,000 times higher capacity depending on the application, 10 times better speed, ten times faster response time (latency) and 1.5 times better mobility in comparison with conventional technologies.

At the Mobile World Congress in Barcelona in spring 2016 and at other venues, we presented development steps on the road to 5G: the first fully functional end-to-end 5G network worldwide. In addition to high transmission rates, the model achieved minimized latencies of less than one millisecond. In comparison: top latencies achieved with LTE are currently 40 milliseconds.

CONTINUING EXPANSION OF THE FIBER-OPTIC NETWORK

Telekom already operates the largest fiber-optic network in Europe with more than 400,000 kilometers. However, demand for higher bandwidths is constantly increasing. In view of this trend, we continue to expand our fiber-optic network in order to secure our business success in the long term. Our goal is to provide 80 percent of Germany's population with a minimum of 50 Mbit/s by 2018 – subject to regulatory changes.

To reach this goal, we are using FTTC (fiber to the curb) technology and are expanding FTTH as well. With FTTC, fiber optics are laid to the gray cable distribution boxes on the curb. From there we can supply our customers with large bandwidths via existing lines by means of VDSL vectoring. With FTTH, or fiber to the home, the fiber-optic cables are taken into the home.

	DSL 16000	FTTC with VDSL vectoring	FTTH
Download	up to 16 Mbit/s	up to 100 Mbit/s	up to 200 Mbit/s
Upload	up to 2.4 Mbit/s	up to 40 Mbit/s	up to 100 Mbit/s

CONTINUING BUILDOUT OF THE LTE MOBILE NETWORK

We continued to expand our use of LTE mobile network technology in the Deutsche Telekom network in 2016. In late 2016, average network coverage was at 84 percent of the population, putting our European national companies in line with their target coverage. Network coverage at the end of 2016 was just below 92 percent of the German population. Our goal is to achieve 95 percent by the end of 2018. Around 75 percent of European transmitter masts are currently equipped with LTE. Two or more frequency bands are active in almost every fourth LTE location, ensuring more extensive reach and higher speed.

Speed breakthrough of one gigabit per second

Together with device manufacturer Huawei, we broke through the speed barrier of one gigabit for mobile data transfer in the LTE network in 2016 for the first time. Using Deutsche Telekom's mobile network, we achieved the breakthrough with a transmission rate of 1.22 gigabit in a live demonstration in Berlin. The latest LTE Advanced Pro technology was used for the test. The technology combines at least three frequency bands to achieve high speeds.

FAST INTERNET ACCESS ON BOARD

Deutsche Telekom and Inmarsat are planning to provide airline passengers in Europe with even better Internet access on airline flights. The companies are currently establishing the European Aviation Network (EAN) within the scope of a strategic partnership.

We installed the first LTE sites in England in 2016. A total of around 300 new LTE base stations will be set up in Europe for the EAN.

The first successful test flight took place in the UK in November 2016. The connections were stable during numerous transitions between mobile base stations. This result exceeded expectations and provided the development team with valuable data.

After the current test flight program has been finalized, the EAN will be available by mid-2017.

PAN-EUROPEAN NETWORK (PAN-NET) IS TAKING SHAPE

To date, our European national companies operate their own infrastructures and develop their services independently. The switch to IP technology - to be completed by 2018 - however, will make it possible to develop new services together and share them across borders. We hope to tap into this potential by creating a pan-European network.

Individual services such as text messages, voicemails and e-mails will be made available to all countries in the pan-European network as "product building blocks." Our Pan-Net cloud will serve as the basis. Every national company can then use the building blocks to create an offer that suits their local market and customer requirements. We can also use this technology to offer new solutions throughout Europe within just a few days.

In 2016 we opened our first "production site" for Pan-Net services in Hungary. The site is now the first cornerstone of our pan-European network. We founded a new company for management and control of the new infrastructure in 2015: Deutsche Telekom Pan-Net in Slovakia. We plan to add two further sites in Poland and Greece in 2017.

SWITCH TO IP TECHNOLOGY ADVANCES

We are working on switching our telephone network to IP-based lines by 2018. Thanks to IP technology phone calls are no longer transmitted via analog channels or using ISDN technology but in the form of data packets, a method that has been the standard in online and mobile communications services for some time now. Energy use with IP technology is considerably lower than with the network technology previously used. The switch therefore also helps us decrease our CO_2 emissions.

We reached a key milestone at the end of 2016 when we finished switching half of our lines – around twelve million – to IP. After placing our focus on switching private customer lines for some time, we began increasingly focusing on business customers in 2016. Of 3.5 million business customer lines in Germany, more than one million had been switched to IP by the end of the year.

In the other EU countries we also increased the number of IP lines. In Croatia, Montenegro, Macedonia and Slovakia, all lines have already been switched to IP. Hungary will follow in mid-2017. The plan is to complete the switch in Greece, Romania and Germany by 2018.

AWARD FOR MOBILE NETWORK IN GERMANY

Connect fixed-line test (08/2016): Test winner
We were the only Germany-wide provider to receive the overall rating of "excellent" in August 2016 in the fixed-line test carried out by German trade magazine Connect. Whether it be telephone services, Internet or online television, we beat out the competition.

CHIP mobile network test (1/2017): First place
In the mobile network test carried out by trade magazine Chip, we not only won in the "Overall network quality" category but also in the "LTE network quality" category. Testers were particularly impressed by our network availability of 95 percent. Our network was not available in only 5 percent of cases..

Connect mobile network test (1/2017): Again first place
We won the mobile network test carried out by trade magazine Connect for the sixth time in a row. The test focuses on the categories voice and data. We were the only company to be rated "excellent".

SUSTAINABLE PRODUCTS & SERVICES

Information and communications technology (ICT img) allows industries, service providers and consumers to be more sustainable. It also offers great market potential. An example: According to the SMARTer2030 study, 20 percent of greenhouse emissions could be saved reduced by 2030 through targeted use of ICT. Sustainability not only involves protecting the environment but also has further relevance when it comes to ICT. Technology can contribute to reduced resource consumption, stabilizing power supply networks, simplifying work processes and continuing to improve medical care.

As a modern technology corporation, we want to help shape this trend. That is why we continuously expand our offer of sustainable products and innovative ICT solutions for private and business customers.

We have been offering service to dematerialize business processes such as online billing , digitizing workflows and cloud computing for several years now. At the same time we want to give as many people as possible the chance to participate in the information society and to use the opportunities it offers. For example, we make it easier for people with age-related or physical limitations to use modern means of communication. We develop products and services that meet their needs and continue to work on improving user friendliness. Throughout the Group, Deutsche Telekom also offers various subsidized rates to provide low-income customers and people with disabilities with an opportunity to place calls and surf the Internet at low cost.

In addition to developing innovative solutions, we also invest in extensive research, e.g. in the field of M2M. The responsibility lies with our central research facility, Telekom Innovation Laboratories (T-Labs img). We invested a total of 84.1 million euros in research and development throughout the Group in 2016. We also finance professorships, collaborate with universities and encourage innovative business concepts with our start-up incubator, hub:raum.

GOALS	MEASURES	MONITORING
› Increasing share of sustainable products and services	› Creating a sustainable product portfolio › Product certification (e.g., Blue Angel) › Promoting innovation	› Increasing the share of sustainable products in total sales › Used Cell-Phone Collection ESG KPI

DEVELOPING SUSTAINABLE PRODUCTS AND SERVICES

We wish to systematically use the sustainability potential of ICT. That is why we continue to expand our range of products that contribute to sustainable development. Our primary focus in these efforts is on machine2machine communication, smart home technology and e-health. Sustainable products are an important pillar of our integrated climate strategy.

Managing the issue of sustainable products calls for systematic measures to be implemented throughout the supply chain. As we do not produce our products ourselves but receive them from suppliers, our measures already start with procurement. This is how we make sure that sustainability criteria are complied with along our supply chain. We aim to have our products certified by recognized environmental labels 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. At the end of a product's life cycle, we contribute to its recycling or proper disposal. For example, we regularly carry out used cell-phone collection campaigns.

When developing new, sustainable ICT solutions, we cooperate with various partners and exchange ideas with our stakeholders.

Making progress measurable

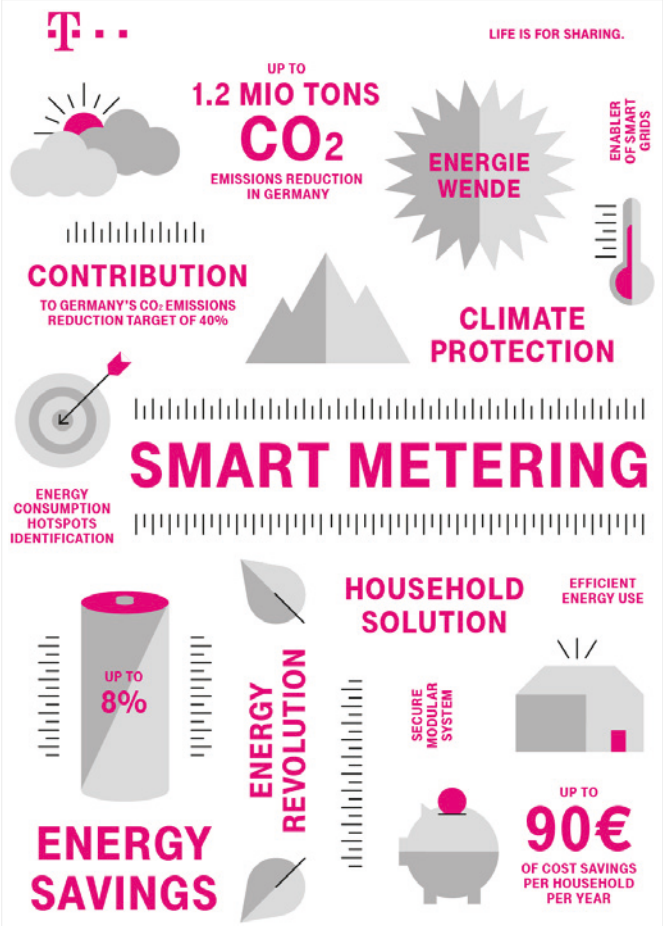
We measure our progress by means of various indicators. In 2014 we started measuring the share in sales of products and services that are classified as sustainable based on a risk-benefit analysis. 39 percent of our overall sales was generated with such products in 2015. We have defined performance goals, e.g., sales goals, as internal monitoring tools in certain fields such as e-health and Smart Home. We measure the impact of our collection campaigns with our Used Cell-Phone Collection ESG KPI.

CONTINUED ANALYSIS OF THE SUSTAINABILITY BENEFITS OF OUR PRODUCTS

One building block of our integrated climate strategy is to analyze the sustainability benefits of our product portfolio. In 2014 we began analyzing our portfolio together with external experts based on sustainability criteria [see analysis]. The current analysis for 2016 shows that the share of products and services with sustainability benefits is growing. The share was already at 39 percent in 2015, up from 37 percent in 2014 (excluding T-Mobile US).

Examples of sustainability benefits include reduced CO_2 emissions thanks to virtual meetings instead of business trips, improved medical care by means of e-health solutions and conserving resources by replacing devices with digital solutions (e.g. phoning via a laptop instead of a fixed-line phone).

Overall, we have carried out in-depth analyses for 17 product groups with regard to their sustainability benefits and the corresponding business potential (as at end of 2016). We have illustrated the benefits of some selected products based on all three pillars of sustainability (ecological, social and economic).



SUSTAINABILITY BENEFITS OF BROADBAND EXPANSION IN GERMANY

ENVIRONMENTAL BENEFITS

CO_2 emissions reduction
19.15 Mio tons
of CO_2 emissions could be saved in total through broadband in Germany between 2012-2020, from which 4.53 Mio tons of CO_2 emissions savings are attributed to broadband expansion only

YEARLY ADDITIONAL EFFECT OF 0.12 MIO TONS VIA BROADBAND EXPANSION

2012	2013	2014	2015	2016	2017	2018	2019	2020
1.62*	1.75	1.87	2.00	2.12	2.25	2.38	2.50	2.63

by enabling additional employees to work from home by telecommuting

by enabling small and medium enterprises to switch on-site software to cloud

by enabling additional students to use distance e-learning

*expected annual savings with current broadband access, based on the performance achieved in 2012

ECONOMIC BENEFITS

GDP growth
€ 47 Billion
could be realized by external economic impulses of broadband expansion**

Employment opportunities
162,000 people
could be additionally employed by external economic impulses of broadband expansion**

Increased tax revenue
€ 10.6 Million
could be additionally collected via different types of taxes through broadband expansion**

**cumulative additional effect through broadband expansion 2015–2020 in Germany

SOCIAL BENEFITS

Education
556,400 students
could graduate in total via distance e-learning in Germany between 2012-2020, from which 75,400 graduates are attributed to broadband expansion only

Health improvement
3.8 Mio sickness days
on national economy level, between 2015-2020, through broadband expansion due to:

less people unemployed

less stress related illness days caused by commuting

less illness days caused by non fatal road accidents

Benefits were calculated for selected enabled services assuming that DTAG's share of all households' and SMEs' broadband access is on average 50% in a timeframe from 2012–2020, with 2012 as base year. Detailed list of underpinning assumptions is available from Deutsche Telekom Broadband Internet.

SUSTAINABILITY BENEFITS OF B2B CLOUD SOLUTIONS IN GERMANY

FOR SMALL AND MEDIUM-SIZED ENTERPRISES (SMEs)

ENVIRONMENTAL

CO_2 emissions reduction
21 tons
of CO_2 emissions

EQUIVALENT TO

1%
of the company's
total CO_2 emissions could be saved per year*

ECONOMIC

Cost savings
€ 7,000
of electricity costs

EQUIVALENT TO

-9%

9%
of the company's
total electricity costs could be saved per year*

*calculated benefits for SMEs with 100 employees

FOR SOCIETY

ENVIRONMENTAL

CO_2 emissions reduction
300,000 tons
of CO_2 could be saved per year between 2015-2020

due to broadband internet enablement of B2B cloud solutions for all SMEs in Germany

Benefits calculated for Germany based on SMEs with 100 employees, using on-site mail, CRM and groupware, and switching all three services to cloud. Detailed list of underpinning assumptions is available from Deutsche Telekom B2B Cloud Solutions Unit.

SUSTAINABILITY BENEFITS OF VIRTUALIZED TV STB IN GERMANY

FOR TV USERS

ENVIRONMENTAL
CO_2 emissions reduction
20.44 kg
of CO_2 could be saved per year due to reduced and more energy efficient end consumer hardware*

ENVIRONMENTAL
Reduced material consumption
1.8 kg
of material from STB devices could be saved when adopting Virtualized TV STB*

ECONOMIC
Cost savings
€ 63
of costs could be saved per year due to elimination of STB rental costs and energy savings*

*calculated average benefits per TV user

FOR SOCIETY

Society can benefit from a complete replacement of classic TV STBs with Virtualized TV STB, thereby achieving:

ENVIRONMENTAL
CO_2 emissions reduction
47,000 tons
of CO_2 could be saved in total per year

ECONOMIC
Cost savings
€ 146 Mio
of aggregated costs for all TV users could be saved per year

ENVIRONMENTAL
Reduced material consumption
4,200 tons
of materials from STB devices could be saved in total

Benefits calculated for Germany considering the replacement of classic TV STBs with Smart TVs, TV-Sticks or Mini-STBs. Detailed list of underpinning assumptions is available from Deutsche Telekom Virtualized TV STB.

We use the results of these analyses to advance our sustainable product portfolio. Future plans also include keeping our customers better informed of these sustainability benefits, thereby sharpening our competitive edge.

PILOT PROJECT FOR ANALYZING THE SUSTAINABILITY OF OUR PRODUCTS

Studies such as GeSI SMARTer2030 show that information and communications technology solutions (ICT) can make an important contribution to sustainable development. Many of our products offer economic as well as social and ecological benefits.

Quantifying and measuring this added value certainly constitutes a challenge, but we are tackling this challenge and testing various approaches. In addition to establishing a sustainable product portfolio, we participate in the industry-wide Sustainability Assessment Framework (SASF) pilot project conducted by the Global e-Sustainability Initiative (GeSI). The goal of this pilot project is to develop a tool that can be used to measure a large variety of ICT products based on sustainability. The results will also help determine risks along the value-added chain. The SASF evaluation criteria are not limited to environmental aspects but also include social criteria such as compliance with human rights and customer requirements such as cost transparency and data protection. With this comprehensive approach, SASF is setting new standards for product evaluation in the ICT sector.

We have been contributing to the development of SASF since 2015 and took part in the pilot study – an initial hands-on test – in 2016. We evaluated one selected product in terms of its sustainability for the test. During the pilot phase, the focus was on sharing information with other participating companies. The goal was to find out whether other companies were facing similar challenges when evaluating product sustainability.

We will evaluate further products in 2017. We will then decide whether SASF can be integrated into our processes as a measurement tool.

M2M COMMUNICATION: OPPORTUNITIES OF DIGITIZATION

Machines and products are becoming increasingly intelligent. Cars can communicate with repair shops, containers with cargo ships. The technology that makes this possible is called machine-to-machine communication, or M2M. By 2020 the number of M2M connections around the world is expected to increase to 2.5 billion. Machine-to-machine communication is an important area of growth for us.

M2M
can help ideally coordinate the processes of various devices, vehicles and entire industrial facilities. This helps increase industrial productivity, ensure efficient logistics, recude energy consumption and conserve resources.

We support the German federal government's Industry 4.0 initiative through our involvement in machine-to-machine (M2M) communication. The initiative's objective is to maintain Germany's competitive edge in the technology sector.

New wireless technology allows for innovative applications

Our networks are the basis for a number of M2M applications, as mobile network technology is the key transmission channel of every M2M connection. In this respect, the Narrowband Internet of Things (NB-IoT) is gaining significance. As opposed to broadband applications, which enable transmission of large amounts of data, narrowband technology is specifically designed to reliably transfer very small data packages. Benefits of NB-IoT include its low energy requirements, extensive reach and low-cost device networking. NB-IoT is particularly suitable for use in logistics. When tracing transport containers, all that is needed is for the current position to be transferred about once an hour. Only very small amounts of data need to be transferred in small data packages – and not necessarily in real time. NB-IoT is based on existing standards and can therefore be operated in existing networks. The technology was approved in spring 2016. We played a leading role in the development of a standardized NB-IoT standard.

Example: The port of tomorrow

During the reporting period we continued our smartPORT logistics (SPL) pilot project for the port of Hamburg. The goal of the project is to improve HDV traffic flows at the port of Hamburg and in its vicinity. All relevant traffic and infrastructure data is collected and analyzed in real time for this purpose. Results can be used to inform users about waiting times, alternative routes or parking. The project is increasingly being integrated into commercial operation.

Guiding principles for more data protection

In 2016 we introduced data privacy guidelines for the data collected in M2M communication. Among other things, the six rules define how Deutsche Telekom deals with personal data.

SMART CITIES: INNOVATIVE SOLUTIONS FOR SMART URBAN SPACES

Cities account for a large share of global CO_2 emissions. At the same time they can also be the driving force behind and the origin of sustainable solutions. Deutsche Telekom is dedicated to innovative solutions that help reshape cities into smart urban spaces. We are involved in several smart city projects throughout the world:

mySmartLife in Hamburg
The City of Hamburg was awarded the mySmartLife project. For a period of five years starting in December 2016, various large and small projects are being realized to start transforming Hamburg into a smart city – for example in terms of renewable energy and environmentally and climate-friendly mobility. Smart technical solutions are being used. All projects involve active citizen participation. The project was backed by a total of 14 partners including Deutsche Telekom, HafenCity University, the Hamburg University of Applied Sciences, electricity grid operator Stromnetz Hamburg and public transport operator Verkehrsbetriebe Hamburg-Holstein. The project is subsidized as part of the European Union's Horizon2020 research and innovation program. In addition to Hamburg, Nantes and Helsinki have also been chosen as future smart cities.

Smart street lamps save energy
In 2016, the City of Monheim am Rhein installed new street lamps as part of a pilot project. The new lamps require less energy, are dimmable and can be remote-controlled. The pilot project was realized in cooperation with Deutsche Telekom and the municipal utility company MEGA (Monheimer Elektrizitäts- und Gasversorgung GmbH).

The lights' lampheads were replaced with state-of-the-art, energy-saving LED systems. While the new lamps look just like the old lights they are replacing in the Old Town section, they use only 22 watts of power per hour, for savings of nearly 70 percent (the old lights used 70 watts). What's more, the city is enjoying additional energy savings during late-night hours when traffic has quieted down. This is because the lights are remotely dimmable, thanks to the light-management system Deutsche Telekom has provided. The smart lamps also simplify maintenance for MEGA: Thanks to networking, they can report technical failures themselves.

Kick-off: Croatia's largest Smart City pilot project
In March 2016, Hrvatski Telekom (HT) kicked off Croatia's largest Smart City pilot project in Dubrovnik worth more than EUR 200,000. The city has officially become the first Smart City center of HT for innovation, testing, development, and sales.

The installation of magnetic parking sensors at 30 parking spaces will enable us to provide drivers with real-time information on vacant parking spaces. City safety will be improved with multisensor video surveillance that records traffic violations, speeding, overtaking and unauthorized use of the left-hand lane. It also monitors illegal parking. We provide high speed WiFi, free of charge and citywide. Our smart streetlight solution regulates the light intensity and consumption based on pedestrian movement and vehicle traffic, allowing significant energy savings to be achieved. Sensors enable us to monitor air quality and other parameters impacting on the environment.

HT introduced a smart record system for waste collection in Koprivnica. It comprises waste containers with installed chips that transfer information about the amount of waste present in the container in real time. The system then independently plans and provides the most appropriate waste collection schedule.

Telekom Romania announces its first Smart City project in Romania
In 2016, Telekom Romania successfully rolled out the first integrated Smart City project in Romania. We combine four technologies at the Tineretuliu Park in Bucharest: smart parking, WiFi connectivity, city safety and smart lighting. They are all integrated through an internet of things platform. This project ensures a better and safer experience for the users of the park.

The "Tap&Park" app enables car drivers to easily identify whether a parking space is available near the park. The local authorities can also use the data to output reports on parking space occupancy and traffic levels in the area. More areas of Bucharest will be included in the app and notifications will be provided on when parking times expire.

The WiFi solution enables visitors at the park to enjoy internet access free of charge in a designated area. This can be extended to include data analytics features providing local authorities with a monitoring tool for traffic showing peaks and troughs. The tool allows security services in the area to be managed more efficiently. Other public facilities can also be introduced or rearranged to better serve the needs of the citizens.

The City Safety solution incorporates a video surveillance system and an application that permits identification of specific predefined scenarios that trigger intervention by the authorities. The solution provides alerts for cases of vandalism or trespassing in restricted areas. It also gives an alert if a person is in a situation requiring immediate help.

The Smart Lighting solution was deployed on eight columns equipped with LED lights and controllers with motion sensors and responses to ambient light intensity. They can be controlled remotely or automatically to increase the light intensity whenever an individual is close to them. Implementation of this solution results in a decrease in energy costs by as much as 60% yielding a significant benefit to local authorities.

Award winning Smart City project in Skopje
At the beginning of 2016,Makedonski Telekom launched the first smart city project in Skopje, the capital of Macedonia. Our goal is to put smart technology at the center of the modern city. We want to use smart solutions to contribute to improving the quality of life and the safety of citizens. An additional objective is for smart technology to promote economic development. Our first step was to install an advanced integrated automatic vehicle location system and a system of electronic ticketing in public city transport. This has a unique central database which enables real-time monitoring of the traffic network and the movement of passengers. The database also helps to control and regulate the transport service.

The smart technology encourages more widespread use of public transport, allows demand to be managed, and reduces traffic jams and air pollution. The system also facilitates fast, transparent, and easy collection of fares, and has significantly improved the customer experience for residents and tourists. It also marks the launch of the era of the Internet of Things in Macedonia. In October the project received an award in the category Sustainable Growth Solution by the World Information Technology and Services Alliance.

Smart metering for water conservation
T-System South Africa's products also help to preserve natural resources. In 2016 we launched a Smart Metering Solution that encourages better management of water and resource consumption as well as waste elimination by promoting awareness of water usage efficiency among industrial companies and private households. The solution measures how much raw water is taken from a source, how much water leaves the water treatment plant, how the water is then distributed within the water distribution system and how it is delivered to the individual consumers. The consumption data are saved on a Cloud where they are accessible from anywhere. As a result, we are able to monitor water consumption in real time.

This enables the meter reading company to provide more regular water readings, determine potential water leaks and to make consumption information available to the consumer.

CONNECTED FARMING

Roughly two billion metric tons of CO_2 emissions can be reduced and 250 billion liters of water saved annually in agriculture alone by the year 2030 through the use of ICT. The SMARTer2030 study published by the Global e-Sustainability Initiative (GeSI) confirms these numbers. These amounts are equivalent to around 2.2 times Germany's carbon footprint and the water consumption of around 180 million people. The reduction could be made possible by pushing the digitization of farming, for example. Real-time solutions are already making their way into agriculture. Farming machines send their data to the cloud via satellite; the data is analyzed immediately and important information is sent to the farmer via text message. This lets the farmer optimize their use of fertilizer, seed and machines, save time, reduce costs and conserve resources.

Deutsche Telekom is working hard to encourage digitization in farming. Our goal in particular is to use smart technologies to help farmers become more sustainable and master the varied challenges they face every day.

Service platform for connected farming
We have been involved in the Smart Farming World project since March 2016. The goal of the project is to develop a platform that enables manufacturer-independent networking of farming machinery. Today, smart harvesting machines already provide useful information regarding soil and crop yield quality. Profitable use of data collected, however, remains a challenge. In farming there are many different parties using machinery made by a variety of different manufacturers. The goal is for the service platform to be able to connect all participants throughout the farming process. For this purpose, agricultural land and machines are connected and data sources such as weather and geographical data are integrated. The platform collects and analyzes incoming data, creating a basis for new services such as fertilizing and harvesting strategies. These strategies will contribute to increasing productivity and conserving resources at the same time. Project partners with scientific and industrial backgrounds are involved in the project. Smart Farming World is scheduled to last three years and is being subsidized by the German Federal Ministry for Economic Affairs and Energy.

LIVING WITH TELEMEDICINE 4.0

Networking health services has many advantages. Telemedicine assistance systems can help patients and their families in everyday life and make work easier for medical personnel. In addition, they help lower costs. We are helping shape digital healthcare through numerous pilot projects, such as the antibiotics network and register with the St. Georg Hospital in Leipzig. The primary goal is to enable the fast, secure exchange of information between doctors, patients and health insurers.

Pioneering project "Living with telemedicine 4.0" in Halle
The project "Living with telemedicine 4.0," which is carried out in Halle in the state of Saxony-Anhalt, was presented in November of 2016. The model project is intended to provide new impetus for telemedicine. Deutsche Telekom provides the technical infrastructure. During the project, a residential complex for seniors will be equipped with many different telemedicine applications in 2017. This will spare the residents frequent visits to the doctor: they can independently measure data like their blood pressure, blood glucose, pulse, or weight. If necessary, they receive support from a medical professional. The measurement equipment sends vital signs to a smartphone or tablet via Bluetooth. Then the data is transmitted to the doctor through a secure mobile connection. The doctor can call up this data and take it into account in their treatment. If necessary, the doctor can contact the patient by telephone or video. The patient is invited for treatment to the doctor's office when required, or a home visit is scheduled.

Reiner Haselhoff, the Prime Minister of Saxony-Anhalt, took over sponsorship of the project. Numerous other partners are involved in the project: from the housing industry, science, technology, hospitals, healthcare service providers, attorneys, financial service providers, the Association of Statutory Health Insurance Physicians, and health insurance companies are on board.

National Telemedicine Network on the Aegean islands
On 2016, the OTE Group completed the National Telemedicine Network on behalf of the 2nd Regional Healthcare Administration of Piraeus & the Aegean. This network offers health services to the residents of some of the most remote islands in the Aegean and the tourists visiting these islands. The Network comprises of43 telemedicine unitswhich interconnect health centers on the Aegean islands with central hospitals in Piraeus and the region. It also offerstele-learningservices to facilitate training for medical, nursing, and administrative personnel in real time.

Each telemedicine unit consists of a specially designed booth equipped with a high-definition camera, screen and special medical instruments streaming live images of examinations. Doctors and patients can communicate in real time with consultants based at hospitals in Piraeus with actual size visualization. This means that distance from central hospitals is eliminated as a factor, and air and land transport can be reduced.

PILOT PROJECT ON DIGITALIZATION IN MEDICAL INSTITUTIONS

Hrvatski Telekom collaborated with the IN2 Group to start a pilot project at Zagreb Children's Hospital and Zabok General Hospital. The objective was to reduce the work load and increase the efficiency of nurses on wards. The "mNurse application" enables ward nurses to enter their observations and designated information in the hospital system while carrying out regular checks on patients. Relevant patient information is

available immediately to everyone who needs it. The graphical display of data in the application also ensures better visibility for patient data, and the data records are adjusted to the working process of the ward nurses.

We installed the necessary WiFi infrastructure in the hospitals and provided tablets for the ward nurses. These comply with the technical and safety standards for secure exchange of sensitive personal data about patients.

QIVICON – OUR SMART HOME PLATFORM

A smart home can simplify life for its residents in many ways. It allows them to control and monitor various household and security devices as well as consumer electronics. The challenge: If customers buy a smart-home solution offered by one particular provider, they can only use those functions and devices and not those offered by other providers. That is why we have set up the open, manufacturer-independent smart home platform QIVICON together with leading companies. Companies of various industries can offer their own solutions on this platform. This platform gives consumers the option to customize their own combination of offers. More than 40 partner companies and brands currently offer their solutions on the platform.

During the reporting period, Smappee, Plugwise, E WIE EINFACH, Stadtwerke Bonn, KPN and Slovak Telekom joined the platform. Energy provider E WIE EINFACH's smart home offer has been available on the platform for end customers since November 2016. Users can use the platform to optimize their energy costs with solutions like smart heating thermostats.

End-to-end solution for companies

Businesses in Germany and abroad can use the QIVICON smart home platform and Deutsche Telekom's white label app as an end-to-end solution, making ti possible for them to offer the app under their own brand and modify it to fit the needs of their company. E WIE EINFACH, KPN and Slovak Telekom all use Deutsche Telekom's end-to-end white label solution, selling the products via their own sales channels. Slovak Telekom is the third company after Austrian company eww and Dutch company KPN to market its international smart home offer on the basis of the QIVICON platform.

Security and data privacy at QIVICON

All communication via the QIVICON Home Base, which is connected to the Internet via servers, is encrypted. Any user data related to QIVICON is stored exclusively on Deutsche Telekom servers in Germany. All devices made by brands managed via QIVICON employ wireless technology based on state-of-the art security functions. AV-TEST GmbH, an independent institute for IT security, has confirmed that QIVICON provides excellent protection. The security test conducted in 2016 again showed that the QIVICON platform is well-protected against third-party manipulation.

Honored as most-innovative smart home solution

International consultancy Frost & Sullivan once again presented QIVICON with the European Connected Home New Product Innovation Award in 2016. According to Frost & Sullivan, the QIVICON smart home platform is currently the leading smart home ecosystem thanks to its open, manufacturer-independent approach.

PROTECTING RESOURCES WITH CLOUD COMPUTING

With cloud computing, our customers no longer need to be bothered with their own servers and storage media. In most cases, cloud computing is more resource and energy-efficient than running your own infrastructure outside of the cloud. Our data centers require up to 80 percent less energy thanks to more effective capacity utilization and less hardware. We also continue to work on further improving the efficiency of our data centers.

First steps into the cloud

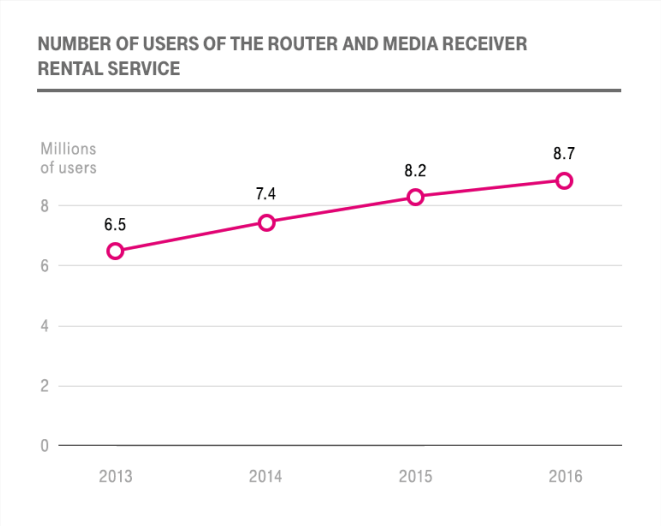
We have been offering our The Cloudifier program to companies looking to switch to cloud solutions since 2016. We analyze the customer's IT landscape and identify which applications can be transferred to the cloud. We also offer the T-Systems integration platform, Data Orchestration as a Service, to help integrate the new cloud services into the company's IT infrastructure as seamlessly as possible. The service enables a seamless interplay between information in the cloud and traditional on-site systems at customer offices, giving our customers faster access to new, optimized cloud services.

Secure access control

We offer customers secure infrastructure solutions (Infrastructure-as-a-Service – IaaS) with our Open Telekom Cloud. This gives them access to our servers and storage, where they can manage their data. The OneLogin identity management solution has been available on the Open Telekom Cloud since 2016. The service guarantees secure, convenient access to cloud applications. Users who have been assigned access rights can sign up with multiple services all at once using their preferred device. The solution manages user profiles centrally across all applications and guarantees the highest security standards.

DON'T BUY, RENT

We want to make sure that used routers and media receivers don't just end up in the trash. That is why we promote the "Don't buy, rent" approach. Our rental services conserve resources, reduce electronic waste and prevent CO_2 emissions. Customers return the devices if they cancel their contract. The devices are then either refurbished and rented out again or properly recycled. We have simplified the return process by introducing a returns portal. The online returns portal enables customers to manage their own returns. A twelve-month minimum contract term extends the devices' average usage space while also reducing returns before the minimum rental period is over. We actively and effectively promote the rental service in many ways including at Telekom Shops, online, via customer service and in product flyers. The offer has been well received by our customers; the number of people using the rental service increased to around 8.7 million by the end of 2016.



PRODUCT CERTIFICATION: BLUE ANGEL FOR SPEEDPHONES

Sustainable products are a key factor in competition at our company. We keep our customers informed regarding environmental aspects and manufacturer specifications and give tips on how to use their devices in a way that is secure, energy-efficient and appropriate. We also tell them about ways to dispose of their devices that help conserve resources. We use well-known environmental labels when communicating with our customers.

Blue Angel for Deutsche Telekom products

95 percent of Telekom Deutschland's fixed-network devices are certified with the renowned Blue Angel environmental label. All of our DECT phones in our Sinus series and all phones in our Speedphone series bear this familiar symbol. Our speedphones are particularly energy-efficient, low-radiation and come with replaceable batteries. A new feature lets users configure the transmission power individually and thereby save energy. Updates can directly be transferred to the Speedphone, making the devices easy to update, extending their useful lives and reducing their carbon footprint.

In 2016, our Fairphone 2 became the first smartphone in our offer in Austria to bear the Blue Angel label. It is available at T-Mobile Austria.

TÜV Certified Green Products

In addition to the Blue Angel we are increasingly focusing on the TÜV Certified Green Product environmental label. This label exceeds the Blue Angel criteria in ways such as requiring inspections of working conditions at production sites. A number of our routers, including the Speedport Neo, have already been certified by this environmental label.

USED CELL-PHONE COLLECTION

Too many used cell phones and smartphones are stuck in drawers or disposed of illegally with the household waste. Germany's recycling and reuse rate for small electronic appliances is much too low. Used cell phones, smartphones and tablets should be refurbished and reused or properly recycled to help us conserve valuable resources. We have been offering different ways for people to hand in their devices since 2003.

Customers have been able to return their used, high-end cell phones and smartphones to Telekom Shops under a buyback program since 2013. They receive store credit from the Telekom Shop reflecting their old device's current value, which they can use to purchase a new device, or they can choose to have the amount booked to their customer account. In collaboration with Teqcycle Solutions and Deutsche Umwelthilfe (DUH), we also operate the Handysammelcenter (cell-phone collection center) online portal, which was redone in 2016. The new website provides an overview of our partners and collection campaigns. Companies can use the portal to properly and safely dispose of their used cell phones and smartphones free of charge and receive a certificate as confirmation. Authorities, associations and other organizations can use the portal to launch their own collection campaigns.

In 2016, we collected 273 079 used cell phones and smartphones throughout Germany and either reused them or had them properly recycled. The entire cell-phone collection process is DEKRA certified and complies with strict data privacy standards. The joint cell-phone collection system run by Telekom Deutschland and DUH entered its thirteenth year in 2016. More than 2 million used cell phones have been collected so far.

Support for different collection campaigns

As in previous years, we supported the Die Handyaktion campaign conducted by different church-affiliated groups in the state of Baden-Württemberg in 2016. The campiagn is going to be expanded in collaboration with the Baden-Württemberg Ministry of the Environment.

The "Responsibility and sustainability. Join in!" collection campaign in Saarland, which we have been supporting since 2014, was extended due to ongoing interest. The Netzwerk Entwicklungspolitik im Saarland e.V. (NES) network took over the project's office activities in 2016. We are still a cooperation partner to the campaign, which focuses on projects such as providing special course material on the topics of cell-phone collection and resource efficiency. The campaign was acknowledged as a Werkstatt N project by the federal government's Council for Sustainable Development in 2016. That makes it one of Germany's 100 most innovative sustainable projects.

Woche der Umwelt expert forum

In 2016 Telekom Deutschland organized an expert forum in collaboration with DUH at the Woche der Umwelt (Environment Week) trade fair held on the park grounds at Bellevue Palace, the official residence of the president of Germany. Guests had the opportunity to ask questions about cell-phone collection and recycling processes. Woche der Umwelt is a trade fair for innovative environmental protection technologies and products. Around 13,000 people attended the event at the invitation of the German President and the German Federal Environmental Foundation (DBU).

HANDSET RECYCLING AT T-MOBILE USA

T-Mobile USA's device recycling program mobilizes customers to help reduce environmental and human health impacts from improper recycling. The company is also increasing access to quality reusable and refurbished equipment for those who need it, while conserving our limited natural resources.

Any wireless consumer can bring any make, model or carrier phone, battery, accessory, tablet or netbook into any T-Mobile USA location to be recycled for free. Through the JUMP! and Mobilize programs, T-Mobile USA incentivizes its customers to trade in their used devices and accessories for great deals on the latest technology. Those trade-ins are all reused, refurbished or recycled.

T-Mobile USA launched the recycling program for its customers in 2008, resulting in over 13.3 million devices being reused or resold since then. 87% of the devices that are taken back are reused or resold, with the rest being responsibly recycled by providers selected on the basis of their leading industry environmental certification. Since 2013, T-Mobile has sold over 1.4 million cell phones refurbished to its high standards directly to its customers through theCertified Pre-Owned program.

In 2016, T-Mobile USA collected 3,803,691 used cell phones.

ACCESSIBLE PRODUCTS AND SERVICES

Deutsche Telekom wants to make it easier for people with disabilities to have access to the knowledge and information society. Not only do we offer subsidized rates to people from low-income households, we also offer them to people with hearing and vision impairments. We also support them with products and solutions especially designed to meet their needs.

Services for the hearing impaired

We set up a hotline (Deaf Hotline) for deaf and hearing-impaired customers in 2003. Customers can send an e-mail, fax message or letter, or use their video phone to communicate with our specially trained employees for any requests they may have. Up to 50 people currently call the hotline every day to get help with issues involving their DSL routers or find out more about special cell-phone rate plans, for example.

In summer 2016 we equipped Deaf-Hotline employees with what we refer to as LiveBerater workstations, which feature HD cameras and much more. The customer and consultant see each other in a video-based live chat, making it possible to advise the customer in sign language. The LiveBerater solution is easy for customers to use. All they have to do is click on a link and the connection is established after a brief system test. LiveBerater also allows the display, joint editing and sharing of documents. The solution is run at a Deutsche Telekom data center, giving customers end-to-end security.

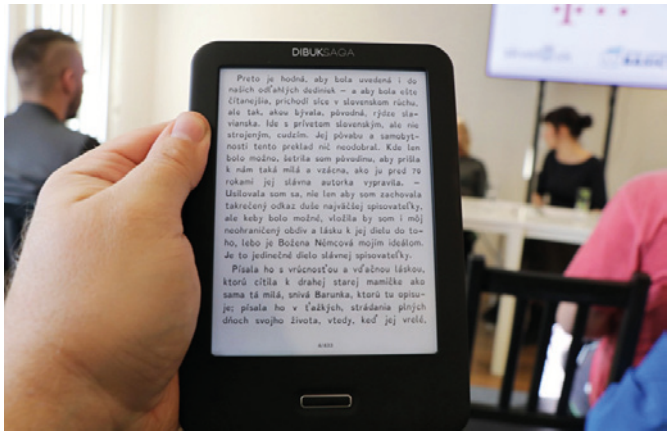
Family Assistant for the elderly and chronically ill

Slovak Telekom worked together with Falck Healthcare to launch an innovative product entitled Family Assistant in 2015. The product helps the elderly and chronically ill by offering continuous remote monitoring, assistance services and special communications equipment with their own SIM card. Two devices are supplied to automatically detect risk situations and call for help fast: the GT300, a small and simplified mobile phone designed for carrying in a pocket or around the neck, and the smart watch Navigil. The devices are connected to a surveillance center with professionally trained personnel provided for Telekom by Falck Healthcare. Since 2016, the Family Assistant has been available as a social service in compliance with the relevant legislation in several cities across Slovakia. This makes it more affordable especially for senior citizens.

The service has received very positive feedback from customers and the media. In February 2016, it was presented at the Mobile World Congress in Barcelona and the service was nominated for the Global Mobile Award in the category “The Connected Life Awards – Best Mobile Innovation for Health”.

E-book reader that helps people with dyslexia

In 2016, Slovak Telekom launched the e-book reader “Dibuk Saga”. It provides significant benefits for dyslexic users in particular. The reader has a special font and enables people with dyslexia to read more easily and with less effort. The dyslexic font optimizes the distance between words and the thickness of specific characters.



SUPPORTING START-UPS: CREATING SPACE FOR IDEAS

The hub:raum start-up incubator

We have been running our own start-up incubator in Berlin, Cracow and Tel Aviv since 2012 under the name hub:raum. The objective of hub:raum is to get direct insight into the innovative ideas that start-ups are working on. In return, we offer start-ups access to our technological expertise and our customers and help them set up their company. Experienced entrepreneurs and Deutsche Telekom experts act as mentors to the start-ups in a variety of programs. hub:raum also provides selected start-ups seed financing of up to 300,000 euros. Interested start-ups can go to the hub:raum website and apply for collaboration or seed financing. We collaborated with around 75 start-ups in 2016 in a variety of programs. We also established the independent hub:raum investment fund, which will make our decisions regarding investments in start-ups more flexible. The first investments made under this investment concept will be announced in 2017.

Start-up programs with external partners

In 2016 we conducted the second round of the Challenge Up! program, this time on the Internet of Things, in collaboration with Intel and Cisco. We collaborated with twelve start-ups and more than 25 mentors for over seven months on a variety of applications including remote maintenance of industrial facilities. We also launched our first joint program with telecommunications companies Telefonica, Orange and SingTel.

Cyber Security Boot Camp
hub:raum introduced a new, topic-based event format referred to as boot camps in 2014. We invite start-ups to present their solutions at the boot camps. With this format we hope to help start-ups advance their ideas and tap business opportunities within the Deutsche Telekom Group. The second Cyber Security Boot Camp was held in Berlin in February 2016. Twelve start-ups participated in the event and presented their most innovative ideas and solutions on cyber security.

Fashion Fusion competition: technology meets fashion
For the first time, Deutsche Telekom has selected the winners of the Fashion Fusion competition as part of the Berlin Fashion Week. We invited creative talents from the fields of fashion and technology to submit their ideas for combining high-tech and couture in our international ideas competition. People who submitted the most promising ideas got the chance to realize them at the Berlin Fashion Fusion Lab where they were supported by experts from industry, fashion and the start-up scene. From among the more than 120 applicants from 25 countries, twelve teams qualified for the final round. The jury presented a total of 35,000 euros in prize money to three winning teams at the awards ceremony in Berlin. First place went to the Trainwear team whose idea was to develop smart athletic wear with an integrated personal trainer.

Support for internal "start-ups"
Since 2011 we have been helping our employees develop their own concepts for new services and business areas at Deutsche Telekom within the context of our UQBATE internal innovation program. Employees can present their ideas to interested colleagues on the UQBATE platform, create teams and then work together to turn their ideas step by step into products that are ready to go to market. The "start-ups" even receive assistance from external trainers if needed.

We focus our sponsorship on promising concepts, whether they involve marketplaces, gaming platforms or e-commerce solutions. We release the project teams from their job responsibilities for three months and give them a budget so that they can effectively implement their ideas. 2016 was another year for exciting ideas. Four teams ultimately qualified for sponsorship.

Take-offs program supports regional start-ups
2016 saw the sixth round of the Take-offs program. The T-Mobile Czech Republic program provides financial support, long-term professional advice, and expertise to regional start-ups. The overall aim is to help potential entrepreneurs, who often belong to vulnerable groups (people in regions of high unemployment, women on maternity leave, senior or handicapped citizens, students without work experience).

Out of the 409registered projects this year, 41regional winners were chosen and announced by an expert jury at 10 regional workshops run for all interested participants free of charge and attended by more than 500 people. The regional winners all receive a helping hand from experts in marketing, communication and finance, as well as tangible, financial support worth EUR 3,700.

Members of the general public are invited to select the overall winner from among 41 regional winners. More than 12,000 people took part in the online voting and selected David Richtr and his project entitled the Mulier porcelánové zásuvky a vypínače (Mulier porcelain sockets and switches) as the overall public winner to receive an award worth EUR 5,500.A professional jury also selected a national winner. This year Václav Staněk and his project called Vasky (manufacture of footwear based on regional tradition and values) was selected as the national winner and received prizes worth EUR 25,900.

The Take-offs again enjoyed significant media coverage. The winners were invited to present their projects on TV and radio, and in various print and online media.

HELLO HOLNAP! – THE SUSTAINABILITY MOBILE APP FROM MAGYAR TELEKOM

Our hello holnap! mobile phone app is part of the hello holnap! sustainability initiative. It has been downloaded 9,300 times from AppleStore, GooglePlay and Windows Store. The app enables users to earn points for performing tasks supporting sustainable development that are organized by the operator and its partners. The points can then be redeemed in Forints and spent on donations. Users can earn points for various tasks including the following:

- Donations to organizations through achievements
- Partnership with enterprises in the sharing economy to collect points (e.g. car-pooling or food from local farmers)
- Donation partnerships with NGOs
- Planting trees in the hello holnap! park that was launched in 2016 and uploading the photo to the online park map. 570 trees have been planted so far.

Points can also be earned by buying a sustainability-related mobile phone from the Magyar Telekom portfolio. Magyar Telekom defines a sustainability-related phone as one that either has an international certificate (e.g. TCO), an environmental sustainability declaration or social attributes (e.g. for elderly people or the disabled).

OTE GROUP PROVIDES FIRE SERVICE

In 2016, the OTE Group implemented an IT project that is expected to make a significant contribution to preventing fires and controlling them at an early stage in a conflagration. This project was carried out in cooperation with Byte and Satways on behalf of the Fire Service. Installation of advanced IT systems at their Operations Center enables firefighting units to be coordinated before and after an incident. Immediate and continuous information is also provided to citizens in emergencies.

The system is designed to collect and analyze geographic data received by the vehicles and the fire command centers, or even drones. This gives units in the Fire Service access at all times to critical data on fires in progress and to the means which could help the work of extinguishing. Information can be viewed on smartphones, tablets PNDs (Personal Navigation Devices).

CONSUMER PROTECTION AND SECURITY

In October 2015, the European Court of Justice determined that the Safe Harbor Agreement was invalid. In accordance with the agreement, U.S. companies were able to self-certify that they met European data privacy regulations. But these principles were not effectively implemented at those companies. Edward Snowden's revelations also demonstrated that U.S. security authorities store all of the personal data transmitted to the United States. The protection of personal data is part of the shared fundamental values in Europe. It is up to the German government, the EU Commission and the United States to create an appropriate basis for secure data exchange between Europe and the United States.

For us at Deutsche Telekom, the decision passed by the Court of Justice of the European Union is a sign that we are on the right path. We called for an "Internet of short distances" at an early stage, ensuring a direct path from the sender to the recipient when transferring data - without any detours through other jurisdictions such as the United States. This has already been implemented in our networks.

European business customers are critical of data storage outside of Europe; demand for secure cloud services "made in Europe" is growing. Our security solutions meet this demand. We guarantee the same high security standards at all of our data centers. We also develop products for consumers, such as products offering end-to-end encryption, and solutions for SMEs to detect and fend off hacker attacks in real time. In addition to data security, we have also introduced measures for consumer and youth protection.

To us, security is more than just protecting data and infrastructure - it also means protecting the public's health. We have established a Group-wide basis for this with our EMF img policy.

CONSUMER AND YOUTH PROTECTION

We stand for the highest possible standards when it comes to consumer and youth protection. One example of how highly secure our products are is De-Mail, our service for the legally secure identification of e-mail senders and recipients. We are also setting a security standard for sending private e-mails with the E-Mail made in Germany industry initiative, which we co-founded.

We want to teach children and young people how to use digital media safely and effectively and protect them from inappropriate content. which is why we work throughout the Group to improve their media skills in a variety of projects. We also work with a variety of initiatives and partners to create a child-friendly Internet. We have reinforced our stance with numerous national and international voluntary commitments and internal codes of conduct. In doing so, we often exceed the standards required by national regulations.

GOALS	MEASURES	MONITORING
> Protecting consumers and young people	> Developing data privacy products > Binding Corporate Rules Privacy > Promoting media skills > Partnerships and alliances	> Annual data privacy report

PROTECTING CONSUMERS AND YOUNG PEOPLE

Data privacy and data security are very important to us. In 2008, we created a special Board of Management department for this topic and introduced the Binding Corporate Rules on Privacy specifying how personal data is to be collected, stored, and processed at the Deutsche Telekom Group. Not only do we provide transparent information on all of our activies and measures in our annual Data Privacy and Data Security Report, we also take stock of the current situation: What has Deutsche Telekom achieved so far? What do politicians consider to be the areas needing the most improvement? And what do experts think about the current state of data privacy and data security?

Our products and services have always provided a high degree of data privacy and data security. Growing volumes of data require special precautions to protect the privacy of citizens, which is why we approved eight mandatory principles for handling big data, or large amounts of personal data, in 2013. In January 2015, we also approved specific measures to protect data and infrastructure in our "Ten-point program for increased cyber security." We also developed new protective products including our Mobile Encryption app designed to ensure end-to-end encryption of mobile communication.

Data privacy and security also play a key role in the development of our other 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. Youth protection aspects are also taken into consideration in our product and service design. In Germany we involve our youth protection officer in all issues regarding planning and designing offers for young people. The youth protection officer can then recommend restrictions or changes. In 2013, we also made it mandatory for every international subsidiary within the EU to designate a child safety officer (CSO) to handle youth-protection related topics. As a result, at least one CSO was appointed in each of our European markets in 2014. The CSO acts as a central contact for members of the community in the respective EU market. They also play a key internal role in coordinating topics revolving around the protection of minors. These measures increase the consistency and transparency of Deutsche Telekom's involvement in protecting minors.

Strategic approach to protecting minors from unsuitable media content

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,
- work to fight child abuse and child pornography and
- 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 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 October 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.

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 "CEO Coalition to make the Internet a better place for kids." We also play a leading role in the ICT img Coalition for the Safer Use of Connected Devices and Online Services by Children and Young People in the EU. In this coalition, we pursue a comprehensive cross-industry approach based on six principles that expressly includes helping young people learn media skills.

In January 2013, as part of both coalitions, Deutsche Telekom announced plans to implement an EU-wide set of measures based on the principles of the ICT Coalition. The ICT Coalition published an annual report in April 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.

PROTECTING PERSONAL DATA

Almost one-third of all Germans are concerned about the misuse of data and insufficient data security. These were the findings of the 2016 Security Report that we commissioned from the Allensbach Institute. Deutsche Telekom is by far the most trusted company in the ICT industry when it comes to handling personal data. And we are proud of it, because protecting our customers' data is one of our top priorities.

We document our wide range of data protection activities in our annual Data Privacy and Data Security Report. The following are just a few examples of our activities during the reporting period.

A simple data privacy statement for everyone

Non-specialists often have a hard time understanding data privacy statements. 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.

Mobile Protect Pro

According to the 2016 Security Report, half of those surveyed consider an attack on their smartphone to be unlikely. But the number of attacks on mobile devices is increasing and these attacks can do just as much damage as an attack on your PC at home. With the Mobile Protect Pro application, we have been offering our business customers end-to-end protection for mobile devices since 2016. The app continuously checks the device for possible threats, similar to a non-stop ECG. It also provides protection for wireless connections like Wi-Fi.

Encrypted e-mails for everyone

Together with the Fraunhofer Institute for Secure Information Technology (Fraunhofer SIT), we launched Volksverschlüsselung in mid-June 2016. It is a simple, free way to encrypt emails. We operate the solution at a high-security data center. The goal is to make state-of-the-art encryption methods accessible to everyone. 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. In the first step, users are identified via the established Deutsche Telekom registration processes or with the aid of an electronic ID card. Other processes for secure identification are planned at a later stage.

The online Deutsche Telekom security guide

Information on cyber criminals, malware and phishing is distributed over thousands of websites on the Net. The www.sicherdigital.de website brings this information together, providing users with easy access to security issues. Young people, adults and businesses can find useful information and specific tips concerning security and data protection.

The "Confidential" issue of our We Care app talks about how dangerous hacker attacks can be and how users can protect themselves.

COLLABORATION FOR THE PROTECTION OF MINORS

We want to create a safe, positive online experience for children and young people. We offer them attractive, exciting content on age-appropriate websites.

Supporting standardized child protection offers

We became a member of the non-profit organization JusProg e.V. in August 2016 in order to expand our involvement in child protection efforts. Child protection programs are traditionally based on different platforms like IOS, Android and Windows. However, we feel the only way to develop a truly effective solution is within the scope of cross-system collaboration. That is why we decided to donate the rights to the program code behind our child protection software (Windows) and our child protection app, Surfgarten, (iPhone/iPad) to JusProg e.V. The organization will further develop and operate both products. They will also incorporate the JusProg filter list. These filters decide whether or not content can be accessed. With these decisions, we hope to help JusProg develop a standardized child protection offer.

Teachtoday in the Aktionsbund Digitale Sicherheit network

In addition to these solutions, we also promote secure and responsible media use among children and young people with our Teachtoday initiative. The initiative supports children and their families with practical and everyday tips and materials. Teachtoday was accepted into Aktionsbund Digitale Sicherheit in May 2016, a network of organizations and associations that are focused on providing people with tangible assistance when it comes to online safety.

FIGHTING CHILD PORNOGRAPHY

We consider it our obligation to take rigorous action against depictions of child abuse on the Internet. We have been involved in an EU-wide fight against the depiction of child abuse since 2007 in the European Framework for Safer Mobile Use by Younger Teenagers and Children. Since 2008 we have been committed to combating the spread of such content together with other mobile providers in a global association.

Since 2013 we have been participating in two cross-industry coalitions committed to fighting child abuse on the Internet, the "CEO Coalition to make the Internet a better place for kids" and the "ICT coalition forthe safer use of connected devices and online services by children and young people in the EU." The ICT Coalition published its first annual report in 2014. The report acknowledges our involvement in this area. We continue to be active in both coalitions and remain fully committed to their principles.

Collaboration with the Center for Child Protection on the Internet

We continued our collaboration with the Center for Child Protection on the Internet (I-KiZ) in 2016. I-KIZ is a project of the German Federal Ministry for Family Affairs, Senior Citizens, Women and Youth. The aim of the network, which is under the patronage of Manuela Schwesig, Federal Minister of Family Affairs, Senior Citizens, Women and Youth, is to effectively fight the online depiction of children and young people in sexual poses and ban it internationally. The network was once again expanded in 2016, including expansion of the jugend.support advice and support system. It now encompasses a total of 16 advice centers that teenagers can contact with their problems. During the reporting period we also participated in the conference held by I-KIZ under the title "The latest in media protection of minors" where we discussed the latest developments on the topic with members of the network.

DIGITAL INCLUSION OF SENIOR CITIZENS AND SCHOOL CHILDREN

The new Školák (“Schoolchild”) package is a special offer for parents of schoolchildren. Independently of the child’s mobile credit, parents can purchase the package to keep an eye on their children’s movements, protect them against inappropriate content on the internet and keep track of their mobile credit. The package is linked to the “Surfie” application. This app is provided free of charge and makes it possible to track the location of children and restrict viewing of internet content.

The app is in the Czech language, works with the iOS and Android operating systems, and includes three licenses. These can be used to protect three children or they can be installed on three different devices. The app requires internet access and the bundle therefore contains a 10 MB data allowance per month for the child. After the data allowance has been completely used up, the internet access speed slows down, i.e. children will still be able to use the app.

Also, we held two seminars for senior citizens on “How to use mobile phones” and “Internet and apps” with 25 participants in total.

SERVICES TO PROTECT CHILDREN IN THE DIGITAL WORLD

T-Mobile USA has about four million customers using a free service that blocks their children from viewing sexual content, graphic violence and crude humor. It also has 375,000 customers who pay USD 4.99 a month for something called Family Allowances, which lets parents block their children from texting and calling certain phone numbers, shut down their phones during school and homework hours, and monitor how much they are texting. T-Mobile has about 100,000 subscribers who pay USD 9.99 a month for another service, FamilyWhere, which lets families keep track of the location of all phones on their accounts.

CYBER SECURITY

Cybercrime has established itself as a business model. Private individuals as well as public organizations, companies and the military are all at risk. Weaknesses in computer systems are often taken advantage of within hours of their discovery, with attacks being run fully automatically.

As a responsible ICT img provider, we are fighting this trend. Our business model includes guaranteeing our customers a high degree of security and effectively protecting the data and infrastructure of the people and companies who use our services from unauthorized access.

GOALS	MEASURES	MONITORING
› Protecting infrastructure from attacks › Guaranteeing data security	› Setting up the Cyber Defense Center › Analyzing attacks › Developing defense strategies › Entering into collaborations	› Annual data privacy report

PROTECTING OUR INFRASTRUCTURE

In 2016, we established our new unit, Telekom Security, which began operations on January 1, 2017. Telekom Security brings together all of Deutsche Telekom's security departments under one roof. This gives us the capacities necessary not only to identify cyber attacks in plenty of time but also to respond quickly with countermeasures. Telekom Security focuses on internal security issues and also develops security solutions for consumers as well as business customers. With this approach we can provide our customers with the perfect security solutions along the entire value-added chain, from product development and secure, high-performing networks to high-security data centers, applications and individual consulting.

We are always working to develop new ways to defend against attacks. To help us do this, we opened our own Cyber Defense Center where we analyze online behavior patterns and develop defense strategies.

Cooperating in the name of security

Cyber security is a shared responsibility. In order to improve collaboration in the area of digital defense, we regularly host the Cyber Security Summit, in collaboration with the Munich Security Conference. The last summit was held in September 2016.

In 2016 we also held the first Magenta Security Congress. The event focused on new IT security trends and solutions. At the event we also presented our latest Magenta security portfolio, which offers companies an extensive selection of security services.

We also 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 publish our versatile data security activities in our annual data privacy report.

CYBER SECURITY SUMMIT

We held the fourth Cyber Security Summit (CSS) in collaboration with the Munich Security Conference on September 19 - 20, 2016.

The 2016 summit was held in Silicon Valley. Around 100 high-ranking representatives from the worlds of science, politics, business and the military met there to discuss digital defense in an increasingly connected world. Topics under discussion at the summit included cyber defense, the future of warfare, developing standards and regulations for cyberspace, combating cyber-terrorism and the economic ramifications of cyber security.

SUMMIT FOR THE SECURITY SECTOR: MAGENTA SECURITY

More than 500 participants met in Frankfurt on November 29 and 30, 2016 to discuss the future of online security at the first Magenta Security Congress. Tim Höttges, CEO of Deutsche Telekom, spoke at the event along with internationally-recognized IT experts and a number of other speakers from Deutsche Telekom and partner companies. One of the guest speakers was Bruce Schneier, a leading expert in cryptography and computer security from the U.S. We also took the opportunity to present our new Telekom security portfolio at the event.

We are planning to host a second congress in 2017 due to the positive feedback.

MOBILE COMMUNICATIONS AND HEALTH (EMF)

Electromagnetic fields (EMF img) 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 they do not present a problem for people or the environment when we use them in mobile communications.

The effects of electromagnetic fields img have been thoroughly researched over past decades in numerous scientific studies. The World Health Organization (WHO) analyzes the findings of scientific research and last 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, and provides detailed information on the Group website regarding the latest technology and scientific risk assessments published by expert committees and organizations.

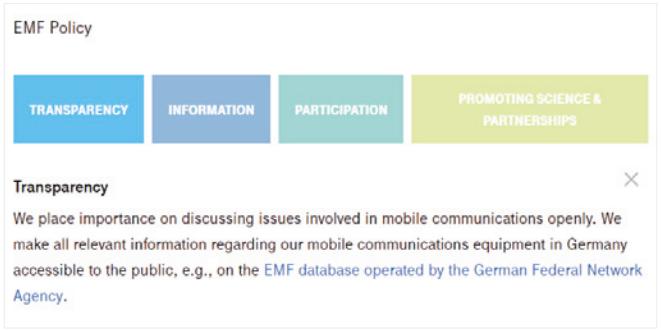
GOALS	MEASURES	MONITORING
› Protecting people's health	› EMF Policy › Voluntary commitment	› Evaluating the EMF Policy

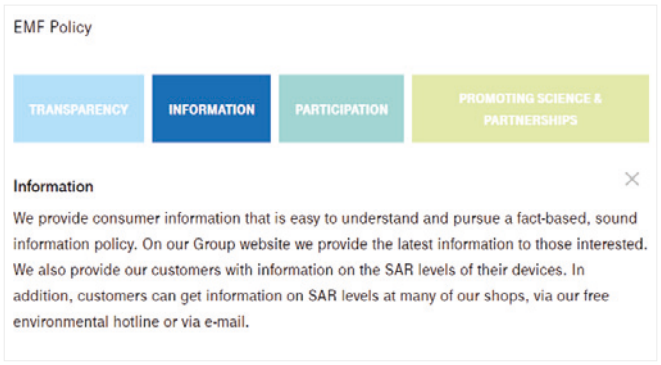
STRIVING FOR SECURE MOBILE COMMUNICATIONS

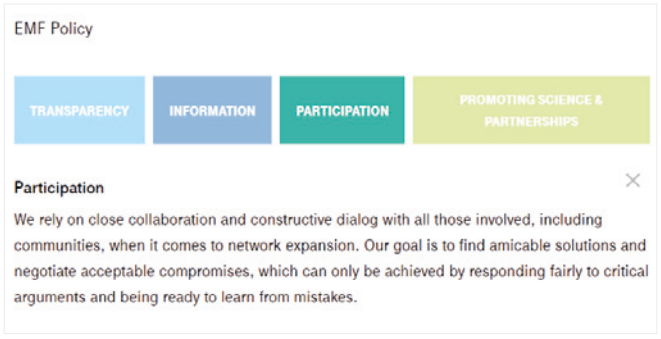
We want to make our mobile communications infrastructure and our new products, as well as the processes on which they are based, as resource-efficient, secure and safe for health as possible. In Germany these activities are based in particular on voluntary commitments by mobile communications providers and an agreement with local authorities' associations. Compliance with these voluntary commitments is reviewed every two years. We recently submitted our annual expert report to the German Federal Government in 2016. In collaboration with Telefónica, we also support the information portal www.informationszentrum-mobilfunk.de

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:







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.

EVALUATING AND IMPLEMENTING THE EMF POLICY

We want to seamlessly implement our EMF Policy throughout the Group. We help our national companies do this by providing specific tools. We developed standardized policies for funding research, for example, and published these on the Deutsche Telekom website. Our national companies are using these policies in their own funding programs. We also rely on our national companies' own initiative and encourage them to continue to improve their measures even after they have fully implemented the EMF Policy. The dialog conducted by the Deutsche Telekom national companies with other network providers and with consumers, politicians and scientists plays a central role in this context.

Regular reviews show us that the EMF Policy is being implemented in all of our action areas. We are also working on expanding our country-specific activities.

- In 2016 we introduced Small Cells, an innovative, high-performing mobile communications technology. Small cells add additional capacity to our mobile communications network in places with high traffic volumes. Small cells generally emit weaker electromagnetic fields than traditional macrocells as they are used in mobile communications networks. With small cells we can reduce cell phone transmission levels because the distances are so small. Because cell phone transmission levels are often the main source of electromagnetic fields in our immediate environment, reducing these is a particularly effective way to reduce EMF exposure. To guarantee the safety of the technology, we have conducted a series of projects in collaboration with RWTH Aachen, including projects to minimize emissions. Emphasizing transparency, we then discussed the results with stakeholders from the worlds of politics and science as well as with various associations. The results were incorporated into a pilot project launched in 2016 focused on setting up small cells in Munich. The project was approved by the Munich City Council.

- In Austria, the citizens' mobile communications forum gave interested citizens the opportunity to pose questions about mobile communications directly and online. The citizens' mobile communications forum is an initiative sponsored by the industry association Forum Mobilkommunikation (FMK). The goal over time is to turn the forum into a knowledge platform where people can go to to get their questions answered.

SOCIETY

We are a member of society and take responsibility for social concerns. As an telecommunications company, we feel it is our job to act as a trusted partner in the digital world. We want to make it possible for everyone to participate equally in the knowledge and information society. That is why we are laying the foundation for everyone to maneuver in the digital world safely and competently. In addition to our own initiatives and programs, we also support a large number of non-profit organizations.

INTERESTING TOPICS AND CONTENTS

Teachtoday Summit for Kids: around 150 children discuss data privacy →

"Yes, I can!" initiative: more than 1,100 projects sponsored since 2009 →

Refugee aid activities expanded to include job market integration →

Sea Hero Quest: study to help dementia research launched →

Promoting inclusion: collaborative project conducted during Paralympics →

Junior Engineer Academy: supporting the STEM profiles at 80 schools since 2005 →

A RELIABLE PARTNER IN THE DIGITAL WORLD

Digitization is changing our lives – how we communicate, how we stay informed, how we learn. That makes media literacy a key element in guaranteeing equal opportunities and participation in our society. With this in mind, our aim is to make sure that people know how to competently and safely use new technologies regardless of their social background or personal abilities. Our numerous projects and initiatives in Germany and Europe are targeted at children and young people as well as adults.

We also strive to make refugees feel welcome in Europe. We want to support their cultural integration and help them find their way on the job market. Our aim is to open career perspectives to help them start their new life. With these efforts we are helping make Europe and our company ready for the future.

GOALS	MEASURES	MONITORING
› Promoting media literacy and equal opportunities › Enabling access to digital technologies › Providing access to education	› Media literacy projects › Educational projects › Working with refugees › Providing technical infrastructure	› Social Commitment KPI › Network coverage status

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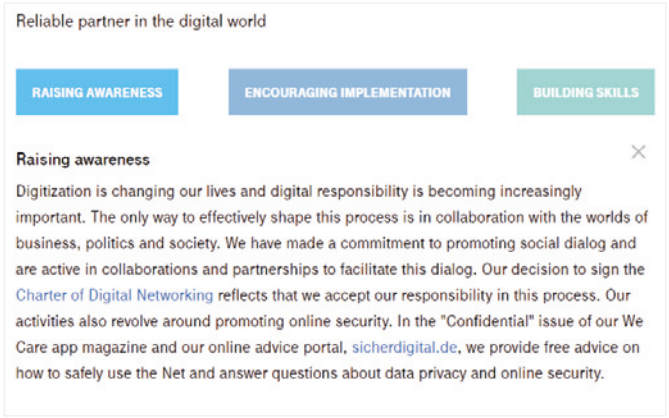
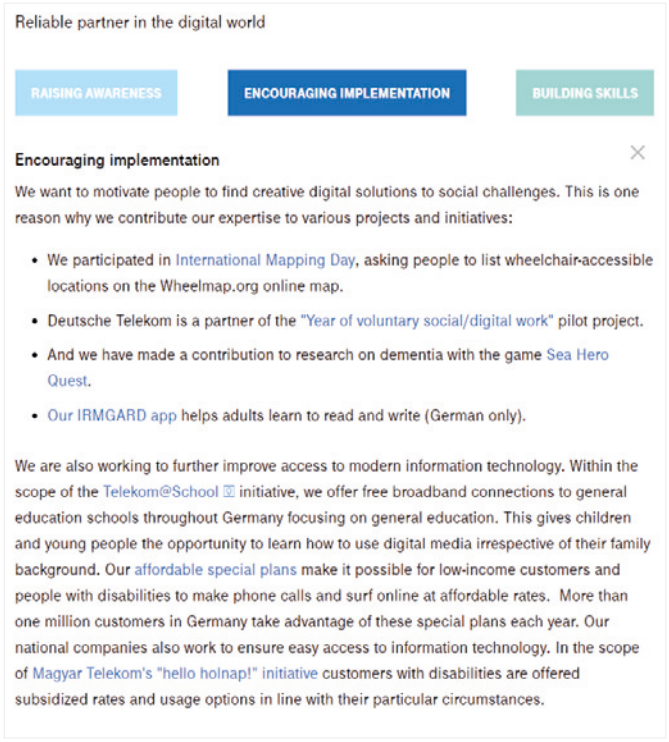
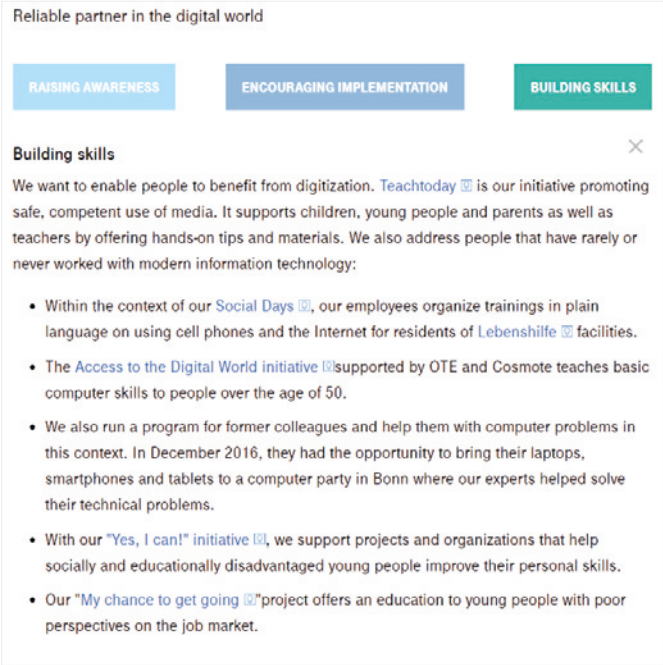
WHAT MAKES US A RELIABLE PARTNER IN THE DIGITAL WORLD

Access to state-of-the-art information technology is a prerequisite for participating in the information and knowledge society. That is why Deutsche Telekom works actively to ensure that everyone, regardless of age, background or education, can participate in our society. We are creating the necessary technical infrastructure and reducing the financial hurdles that prevent its use. We want to connect people with our products and services but also with our social involvement. To this end, we contribute our core expertise as an international ICT corporation.

ICT can help us master social challenges. We develop our own offers and support partner initiatives with our expertise in this area. Our activities focus on the following:






Reliable partner in the digital world
RAISING AWARENESS
ENCOURAGING IMPLEMENTATION
BUILDING SKILLS
Building skills
We want to enable people to benefit from digitization. Teachtoday is our initiative promoting safe, competent use of media. It supports children, young people and parents as well as teachers by offering hands-on tips and materials. We also address people that have rarely or never worked with modern information technology:
Within the context of our Social Days, our employees organize trainings in plain language on using cell phones and the Internet for residents of Lebenshilfe facilities.
The Access to the Digital World initiative supported by OTE and Cosmote teaches basic computer skills to people over the age of 50.
We also run a program for former colleagues and help them with computer problems in this context. In December 2016, they had the opportunity to bring their laptops, smartphones and tablets to a computer party in Bonn where our experts helped solve their technical problems.
With our "Yes, I can!" initiative, we support projects and organizations that help socially and educationally disadvantaged young people improve their personal skills.
Our "My chance to get going "project offers an education to young people with poor perspectives on the job market.

RAISING AWARENESS

We want to be a reliable partner in the digitized world, which is why we work to raise awareness of the opportunities and challenges that digitization brings and encourage public dialog. Our study on digital empowerment and involvement in the Charter of Digital Networking help further our efforts.

SIGNING THE CHARTER OF DIGITAL NETWORKING

The Charter of Digital Networking is an initiative that spans companies, industries and associations, and was founded at the instigation of the National IT Summit. Beside Deutsche Telekom, its initiators include other business enterprises, associations and academic institutions. The charter comprises ten principles regarding the social and economic potential of digital networking and dealings with data, infrastructures and standards. Companies that sign the charter commit themselves to these principles and, in doing so, show that they intend to contribute toward Germany's future-minded digital development. The charter stands for a shared set of values and sense of responsibility. The object is to hold a forward-looking dialog across all social levels and to create a common understanding as we move toward a digital society. Together, topical questions on digital transformation are addressed, answers developed and an exchange of experiences organized on the implementation of corporate digital responsibility.

NEW STUDY ON DIGITAL EMPOWERMENT

The majority of German Internet users do not feel their data is safe online. These were the findings of a representative survey on digital empowerment conducted between late 2015 through mid-2016 by the Cologne Center for Ethics, Rights, Economics, and Social Sciences of Health (ceres). The study was commissioned by Deutsche Telekom. 91% believe that their personal data is being accessed unnoticed on the Internet. 82% assume that most companies release data held on their customers to other companies. The findings show that companies need to do more to convince people to go along with digitization. Deutsche Telekom continues its efforts to increase transparency for Internet users. The sicherdigital.de advice portal, for example, provides information on online risks and protective measures. We are also helping the EU Commission come up with standardized symbols for the topic of data privacy. Similar to traffic signs, these symbols will make it easier for consumers to navigate the Internet [link to Customers & products; Consumer protection]. With our Teachtoday initiative and our involvement in "Deutschland sicher im Netz", we promote empowerment when it comes to personal data.

CAMPAIGNS: DIGITAL DETOX AND CHRISTMAS DAY SHARING

On December 24, 2016, T-Mobile Austria called upon people to participate in a digital detox as part of its "Silent night" initiative. The aim was to raise awareness of responsible smartphone use.

The "Silent night" app tracked how many minutes people switched their smartphone to silent. Our customers throughout Austria participated in the initiative, with a total of 14 million minutes spent silently on Christmas Day – a tremendous success. The idea of a digital detox was presented at a discussion panel of Austrian celebrities who talked about spending time away from their smartphones.

The silent minutes go to benefit Austrian children with cancer. Because participation was so impressive, we tripled our donation to the charities involved, donating a total of 45,000 euros. We can look back at a ten-year partnership and, with this initiative, we support follow-up cancer care camps for children and young people.

Deutsche Telekom's 2016 holiday campaign in Germany drew attention to the motto "Life is more rewarding through sharing." The story, "The magic Advent calendar", in which a little boy learns about the joys of sharing, was at the heart of the campaign. This put our Christmas campaign's focus on an emotional message that goes hand in hand with our commitment to society.

BUILDING SKILLS

We want to enable people to participate in digitization, which is why we teach specific target groups about risks and opportunities. Our Teachtoday initiative is designed to promote media literacy. The Deutsche Telekom Stiftung foundation is dedicated to encouraging skills in the STEM img subjects science, technology, engineering and mathematics. Sharing digital knowledge is also the aim of a number of webinars and massive open online courses (MOOCs) that are made possible by our networks. Another focal point in our efforts to build skills is the work we do to integrate refugees into the job market.

TEACHTODAY – INITIATIVE FOR SAFE, COMPETENT MEDIA USE

Teachtoday is our initiative for teaching people how to use media safely and competently. It supports children, young people, parents and grandparents as well as teachers by offering hands-on tips and material. Our homepage, teachtoday.de, is available in German, English, Romanian, Polish and Croatian.

Around 150 children talked about data privacy and participated in eventful workshops at the Teachtoday Summit for Kids in November 2016. The highlight of the event was the awards ceremony for the "Media, sure! But secure." competition. The jury presented awards to eight projects including a cross-border media workshop entitled "Das ist unser Netz! – To jest nasza siec!“ by Aktion Kinder- und Jugendschutz Brandenburg e.V. At the workshops, German and Polish kids have the opportunity to learn more about their own media use.

The Teachtoday media obstacle course toured Germany again in 2016. The goal of the obstacle course is to the raise awareness of children between the ages of 9 and 12 when it comes to secure media use. Among other destinations, the obstacle course paid a visit to the Schlingel childrenâ s film festival in Chemnitz. Teachtoday is a partner of the festival, which attracts more than 18,000 visitors and currently features more than 150 films from all over the world for children and young people.

Two issues of our Scroller media magazine were published in 2016. The issues focused on social networks and data privacy. The magazine targets children between the ages of 9 and 12 and provides parents and teachers with information in special supplements. Scroller is available online and as a free print version. It encourages children to think about how they use media and learn to co-create the digital world. The scroller.de portal is available in German and English. We also published the first interactive issue in German and Arabic in October 2016.

Digital education was on the agenda at the 2016 National IT Summit held in Saarbrücken. One central focal point was secure, competent media use by children, young people and adults. Teachtoday spoke with German Chancellor Angela Merkel at the event. Her credo for the future of digital education: targeted media education for all and intensified communication with each other. Teachtoday also interviewed Timotheus Höttges, Chairman of the Board of Management at Deutsche Telekom, about the digitization of society, the significance of data privacy and how to turn young people into responsible Internet users.

The Teachtoday initiative received a number of awards in 2016. We received four Fox Awards, which recognize effective and efficient marketing and communication solutions. The Gold Fox Award went to our communication concept and we received the Fox Visuals Gold Award for our visual presentation. The Scroller media magazine received the Silver Fox Award and the Fox Visuals Silver Award. Teachtoday also received three Comenius EduMedia Seals presented by the scientific association Gesellschaft für Pädagogik und Information (GPI). The entire initiative was recognized in the "didactic multimedia products" category, the obstacle course in the "computer games that encourage competence" category, and Scroller magazine in the "general multimedia products" category. Scroller was also recommended by Stiftung Lesen, the German Reading Foundation, to promote safe, competent media use.

SHAPING EDUCATION – THE DEUTSCHE TELEKOM STIFTUNG FOUNDATION

The Deutsche Telekom Stiftung foundation supports a number of STEM projects. The goal is to promote the skills of young people in math, natural sciences and technology and get them excited about the STEM subjects. The foundation began combining its activities under the categories of "education drivers," "education opportunities," "education innovations" and "education dialog" in July 2016. Projects like "Be a math whiz" and "Junior Science Café" are some examples of the foundation's successful efforts.

DEUTSCHE TELEKOM STIFTUNG – FIELDS OF ACTION

Education and Digitization Forum
The Deutsche Telekom Stiftung foundation launched the Education and Digitization Forum together with four other German foundations in 2016. Those working for the foundations are convinced that digital media can help improve the education system, thereby improving participation and equal opportunity. The collaboration formulated three core focal topics: "personalizing learning," "developing skills," and "creating change." When it comes to personalized learning, digital media can be used to give different target groups access to different learning approaches, including people with disabilities, particularly talented people and refugees. The goal of the second focal point is to convey the media skills necessary for living an independent life. "Creating change" focuses on developing an educational concept for using digital media at educational institutions and within the education system.

The Education Digitization Forum also looks to engage in dialog with different participants in the educational landscape and to develop new approaches to education. Experts from the worlds of science and education collaborate at conferences, in networks and at development workshops to find answers to the big questions and challenges involved in the digital transformation of educational institutions. The schulentwicklung.digital workshop focuses on changing the school and learning culture through the use of digital media. 38 schools that are already successfully using digital media in the classroom are participating in the workshop.

The STEM reading mentors
In collaboration with the German Reading Foundation, the Deutsche Telekom Stiftung foundation is looking for volunteer reading mentors to get children from the ages of 3 to 10 excited about STEM content. A total of 1,300 reading mentors have already signed up in the network, including six mentors in Madrid and Málaga. Their efforts made it possible to reach around 5,300 children throughout the country. The reading mentors receive training in both classroom and online formats. They are then able to work with children at day-care centers and elementary schools.

We also held two events with Deutsche Telekom Board of Management members in 2016. In May, CFO Thomas Dannenfeldt read out loud at a daycare in Bonn. CHRO Christian Illek read out loud to young schoolchildren in Frankfurt on German National Reading Day, November 18, 2016.

GestaltBar – the digital workshop
Young people need to learn how to skillfully and creatively use digital tools so that they can actively shape their lives and have the opportunity to work in a future-oriented profession. With its "GestaltBar – the digital workshop" project, Deutsche Telekom particularly targets students at lower-level secondary schools. The goal is to use a hands-on approach to introduce young people to digital technology and give them some insight into the different technical professions. Courses include topics like robotics, app development and 3D printing. The project is initially being conducted in four pilot locations – Bonn, Berlin, Hamburg and Cologne.

Calliope Mini – mini-computer for young schoolchildren
The Calliope Mini mini-computer helps young schoolchildren learn how to program. The computer is scheduled to be introduced into daily classroom activities throughout Germany in 2017. The Deutsche Telekom Stiftung foundation supports the project by developing and testing learning materials and course concepts. Ideas for the creative use of digital technology are currently being worked on at six universities within the scope of the "Elementary school digital learning" project.

Junior Engineer Academy
The Junior Engineer Academy gets secondary-level students (grade eight and higher) excited about technical professions and careers in engineering. The Junior Engineer Academy is offered as an elective at schools for two years and conducted in collaboration with universities, scientific institutes and companies. The project was implemented for the first time in 2005 and gives students the opportunity to put the knowledge they learn in the classroom into practice. Just under 80 schools in Germany currently participate in the Academy. The school network has been growing consistently since project launch. Participants meet regularly at annual conferences where they can share their experiences. Activities were expanded to countries in central, eastern and southern Europe in 2016 where technology-based school partnerships are being established. These include preparatory visits for teachers, conducting technology projects for students and the opportunity for international teachers to attend annual conventions.

FundaMINT
FundaMINT is a grant program for student teachers in the STEM subjects. It helps competent, motivated student teachers get ready for their future. Up to 25 grants are presented each year for a period of four semesters each. The program was expanded during the reporting period in collaboration with the Pädagogischer Austauschdienst (PAD), a department of the Standing Conference of the Ministers of Education and Cultural Affairs, and the Central Agency for German Schools Abroad. Grant recipients now have the opportunity to work at schools in central, eastern and southern Europe, conduct student projects and participate in preparatory and post-project seminars.

STEM Didactics Fellowship program
The Deutsche Telekom Stiftung foundation initiated the STEM Didactics Fellowship program in 2016. Up to nine fellowships are granted each year to young researchers and scientists in the fields of mathematics, physics, chemistry, biology, computer science, technology and science education. The fellows can attend seminars and workshops on topics like job negotiations and supervising doctoral candidates and are involved in the Deutsche Telekom Stiftung network.

MORE THAN 200 NEW PROJECTS FOR THE "YES, I CAN!" INITIATIVE

Our "Yes, I can!" initiative teaches young people key skills to enable them to act independently and with self-confidence. In doing so, it promotes equal opportunities within our society. In the reporting year, more than 200 new projects went live with funding totaling over 850,000 euros. The focal topic for 2016 was "Competence knows no borders," and integration was at the top of the agenda. As a result, the initiative upped its support for projects promoting participation in society, creating space for encounters and involving activities shared by

children and young people from different ethnic backgrounds. The "Yes, I can!" project has sponsored more than 1,100 projects throughout Germany with a total of almost 6 million euros since it was launched seven years ago.

THE "YES, I CAN!" – INITIATIVE SPONSORED PROJECTS 2009 - 2016

FROM PROJECT TO ASSOCIATION

- More than 1100 sponsored projects
- Just 6 million euros in sponsorship funds
- Well over 70,000 youngsters reached
- Regular activities, contests and events for associated organizations
- Successive networking of the organizations among each other
- High degree of acceptance among practitioners, academia, politics and media
- The "Yes, I can!" initiative became a non-profit association in fall 2011

The "Media workshops" pilot project got off the ground in Berlin in November 2016. The 6-month focus is teaching media skills at public institutions for children and young people. Educators from four Berlin-based institutions are participating and using what they learn in their own teaching activities. The media workshops focus on topics like "Making & Repair," "Computer, Internet & Social Media", "Film & Photo" and "Programming & Robotics." The goal of the project is to improve the skills of children and young people when it comes to the digital world.

The "Yes, I can!" initiative was integrated into the Deutsche Telekom Stiftung foundation in January 2017. The initiative's new focus will be on teaching media skills. The goal will be the long-term sponsorship and development of projects.

INTERNATIONAL COMPETITION FOR THE WOMEN'S STEM AWARD

With the Women's STEM img Award, Deutsch Telekom hopes to increase the attractiveness of STEM subjects and encourage women to choose careers in these areas. The prize awarded in collaboration with the "audimax" student magazine and the "MINT Zukunft schaffen" (Creating a STEM future) initiative. It goes to thesis papers written by female graduates that focus on one of the following key growth areas: digital life, Industry 4.0 img, networks of the future, cyber security or automotive technologies. For the first time, this year's competition was also open to international graduates from other European countries. Nine thesis papers were submitted from Finland, the UK, India, Macedonia and Austria. The goal is to increase the number of international applicants from STEM subjects in the future.

HELPING REFUGEES: FROM FIRST AID TO JOB MARKET INTEGRATION

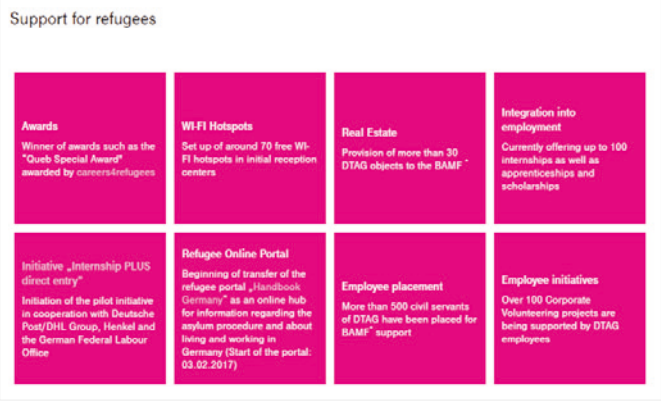
Our commitment to refugee aid began in2015. Our initial focus was on first aid. Measures included supplying Wi-Fi to refugee reception centers, providing accommodation and recruiting civil servants for the Federal Office for Migration and Refugees (BAMF). More than 700employees provided temporary aid to BAMF in working with refugees. More than 130civil servants employed with Deutsche Telekom transferred to BAMF.

The refugees.telekom.de online portal, which we set up in 2015, was further developed in collaboration with partners during the reporting period. We relaunched it in 2017 under the name "Handbook Germany". The online portal provides information on topics like jobs, education and life and living in Germany. handbookgermany.de addresses refugees in the place where they communicate most – social networks. Content is circulated on a number of social media channels. The platform can also be used on smartphones.

INTEGRATION INTO THE JOB MARKET AND LANGUAGE DEVELOPMENT ARE THE FOCAL POINTS OF OUR COMMITMENT. WITH THIS PROGRAM, WE AIM TO GIVE REFUGEES PROFESSIONAL PROSPECTS THAT WILL SIGNIFICANTLY IMPROVE THEIR OPPORTUNITIES IN THE GERMAN JOB MARKET.

Christian P. Illek, Deutsche Telekom Board Member for Human Resources

We also restructured our other activities in2016 and are planning to focus on integrating refugees into the job market. We are extending our offer of internships for entering the job market and focusing on longer-term offers such as training openings, entry-level training and scholarships at our in-house University of Applied Sciences. We are also developing new pilot initiatives like the "Internship PLUS direct entry" program, for which we joined forces with Deutsche Post DHL Group, Henkel and the Federal Employment Agency. The program's main target group is refugees with professional experience that don't have credentials recognized in Germany. We want to help these people improve their career prospects. To start with - and to help them find their way around - they participate in two phases of practical training (internships). We subsequently hire them for a limited period of two years. During this time, the refugees are given the opportunity to take part in integration and language courses. Many of our employees have been involved in refugee aid right from the start and have been supported by Deutsche Telekom in their efforts. In future, we intend to channel their efforts into supporting new colleagues who are starting work at Deutsche Telekom.



* German Federal Office for Migration and Refugees

EDUCATIONAL STEM ACTIVITIES IN CROATIA

Hrvatski Telekom (HT) recognizes the importance of fostering the interest of young people in science, technology, engineering and math (STEM). We therefore focused activities in 2016 on strengthening this interest.

Together we are stronger

In 2016, the competition for funding entitled “Together we are stronger” (Zajedno smo jači) concentrated on projects aiming to enhance the quality of STEM education in elementary schools. Our employees selected up to five finalists for each category out of 39 projects submitted in each of the two categories “New Technologies” and “Science”. The two winners were chosen by the expert panel comprising Hrvatski Telekom’s representatives and experts from specialist institutions and associations. Each project received funding of HRK 350,000 (approx. EUR 46,000). “Internet of things in Croatian elementary schools in 2016” by the Institute for Youth Development and Innovation was the winner within the category “New Technologies”. The project focuses on the Croatian Makers robotics game that teaches children advanced concepts of automation. The first project phase saw around 750 students from 50 different schools being reached. The Astronomical Society Višnjan won in the “Science” category with “Campus”. The project involves workshops and camps for elementary and secondary school students where they participate in STEM-related activities. The donation allowed new equipment to be purchased for the interdisciplinary Laboratory for Biology, Chemistry and Astrobiology (LABOS). Around 450 children are able to participate in workshops here.

Over the past ten years, Hrvatski Telekom has donated more than HRK9 million (approx. EUR 1.2 million) to provide support for implementation of 240 valuable projects through its “Together We Are Stronger” competition.

HT STEM HUB

The HT STEM HUB was launched in spring 2016. This is a project organized by Hrvatski Telekom together with the Faculty of Electrical Engineering and Computing (FER). It aims to create an active academic and economic community of young experts in various fields of Science, Technology, Engineering and Math (STEM).In August, we provided summer internships for students within the STEM HUB. They were given the opportunity to work on smart city solutions, augmented reality systems, robotics and intelligent control systems. Final year students also have the opportunity of taking a scholarship with a professional mentor from HT.

In October 2016, we took our joint venture with FER to a higher level by signing a five-year contract with the institution. Our intention is to give the STEM HUB an international profile by offering students the opportunity to work on international projects with HT experts and professionals from all over Europe.

HACK IT!

We joined forces with hub:raum – Deutsche Telekom's incubator – to organize the "HACK IT!" hackathon. The hackathon is part of our broader strategy to enhance STEM activities in Croatia. More than ten teams competed to develop the best solution for communication of the future within the space of 24 hours. The main prize was for HRK 20,000 (approx. EUR 2,700). A total of 150 developers, designers, marketing experts, and business professionals applied to take part in the hackathon and 43 were selected to participate in teams. The winning project provided a vision of a personal digital assistant. It predicts the user's requirements and wishes by collecting data through the mobile phone. For example, it automatically schedules a meeting arranged during a conversation and enters it into the digital calendar. Second place was taken by a team creating a platform for holographic communication. The third prize went to a mesh network for offline communication between devices. The teams get access to the hub:raum programs.

ACCESS TO THE DIGITAL WORLD PROGRAM

COSMOTE supports theAccess to the Digital World Program to reduce PC illiteracy among the over 50s and enhance their access to the digital world. In 2016, the program was held in three cities and a total of 765 people with an average age of 64 years attended. So far, more than 2,000 people have participated in this program. This program is acknowledged as being extremely important for contemporary society andit will be transformed and expanded in 2017. Specifically,the goal for 2017is to reach a population of more than 5,000 senior citizens so that they can make their lives easier and better with just one tablet and an internet connection!

ENCOURAGING IMPLEMENTATION

We want to motivate people to find creative digital solutions to social challenges. To do this, we provide tangible support and make it easier for them to realize their ideas. Our efforts include, for example, our involvement with the "Deutschland sicher im Netz" association and our collaboration with the German National Association of Senior Citizen's Organisations (BAGSO) to sponsor media literacy projects for seniors. We also encourage the development of innovative solutions such as new apps and develop our own sustainable products and services. We want to be a reliable partner in the era of digitization, which is why we closely evaluate all of the feedback we receive. Our stakeholder dialog gives stakeholders the opportunity to rate sustainability topics according to their importance and assess our performance in the different areas.

PARTNERING WITH "DEUTSCHLAND SICHER IM NETZ" AND BAGSO

The Deutschland sicher im Netz e.V. (DsiN) association has served as a central point of contact for consumers and small businesses interested in the topics of IT security and data privacy for ten years now. As a member of the association, we participate in projects like the myDigitalWorld competition for young people and the IT-Sicherheit@Mittelstand workshop series. We also participate in the Digital Neighborhood project, which trains people to become volunteers sharing their IT knowledge with others. The project was recognized as a "landmark" in the Germany – Land of Ideas competition in June 2016. Thomas Kremer, Deutsche Telekom Board Member for Data Privacy, Legal Affairs and Compliance, is chairman of the board at DsiN.

We promote media literacy among seniors in collaboration with the German National Association of Senior Citizen's Organisations, BAGSO. As a partner, we sponsored BAGSO's Internet Gold Award 2016. The award recognizes people over the age of 60 who use the Internet skillfully and help others to get started in the online world. As an advisory board member we are also involved in the joint Digital-Kompass project conducted by BAGSO and DsiN. Digital-Kompass is a platform for everyone helping seniors to navigate the Internet.

INNOVATIVE SOLUTIONS TO SOCIAL CHALLENGES

Technology can also be used to address social challenges, which is why we supported the development of a variety of digital solutions and educational offers during the reporting period:

Play to fight dementia: the Sea Hero Quest app

The mobile game Sea Hero Quest in Deutsche Telekom's Game for Good initiative paves the way for the world's biggest baseline study in dementia research. The object of the study is to help recognize signs of dementia at an early stage and to obtain information on the effectiveness of therapies. One of the first effects of dementia is the loss of spatial orientation. Although researchers have data from dementia sufferers, hardly any comparative data are available from healthy individuals. Sea Hero Quest therefore collects anonymous data on the orientation patterns of people playing the game. Players can also provide information on their age, gender and nationality to further contribute to the research. This data helps scientists understand exactly which abilities are affected in the early stages of dementia. All of the data is transmitted twice per second, stored at our high-security data center in Germany and then made available to scientists.

So far, over 2.7 million people have played Sea Hero Quest and, in doing so, have made their contribution to dementia research. 13 of our European subsidiaries flanked the game with communication measures, ads, media and public relations work, and thus helped "Play to fight dementia" on the way to success. Standard data on the spatial orientation of healthy people in all age groups is now available for the very first time. This standard data is seen as a key step in the development of new methods that will make timely dementia diagnosis possible.

Year of voluntary social/digital work: second round

The "Year of voluntary social/digital work" (FSJ Digital) pilot project, which is being conducted in the city of Halle in Saxony-Anhalt, moved into its second year. Under the FSJ Digital program, young people between the ages of 16 and 26 with an interest in modern media can work on digital projects or help people learn how to use new media at non-profit organizations, such as facilities for seniors and people with disabilities, day-care centers and clinics. Volunteers receive media teaching support during their entire time in the program. The concept is being tested at 25 facilities in Saxony-Anhalt. The program offers a wide spectrum of activities ranging from digital storytelling to creating accessible web content. The project is sponsored by the German Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (BMFSFJ) and supported by Deutsche Telekom and NrEins.de AG. The project will be evaluated after completing its second year.

Fast, safe response to sports injuries – the GET app

We contributed to the development of the GET app in 2016. GET stands for the German equivalent of "concussion test app." Athletes can use this interactive tool to find out whether they have a concussion after a fall or collision with another player. The app identifies signs of a concussion within three to four minutes. In addition to having access to information on concussions, users can conduct a quick test and check their response times and eye function. The app is provided by the "Protect your head" initiative of the ZNS – Hannelore Kohl Stiftung foundation.

MyShake app turns smartphones into an early warning system for earthquakes
Researchers from UC Berkeley are working together with Deutsche Telekom on a smartphone-based earthquake early warning system. The general idea is smartphones that use an accelerometer to read earth movement. If the data correspond with the vibrational profile of an earthquake, the MyShake app sends the time, location and strength of the tremor to the Berkeley Seismological Laboratory for further analysis. An earthquake is confirmed if at least four phones register the movement. We are currently looking for more people to use the MyShake app in order to create a network with better coverage. The plan is to begin sending earthquake warnings to users following a one-year pilot phase.

Shared Heartbeat app
The Shared Heartbeat app is a joint project of Magyar Telekom and Isobar Budapest and was launched in April 2016. The app enables newborn babies to hear their mother's heartbeat. The heartbeat of a mother is a defining factor in an infant's life but this sound moves away after birth. We aim to use technology to connect people in ways previously unimaginable and enhance the most natural bonds through this app.

Cheering Heart app
The Cheering Heart app allowed anyone in Hungary to express support and cheer athletes and teams participating at the Olympics, helping them to excel in their discipline. Athletes were provided with a heart that vibrates and flashes once a heartbeat is sent to them, indicating that lots of people at home are thinking about them. A heartbeat can be sent in numerous ways: using #egyekvagyunk, by sending a message or clicking a button on the Internet site egyekvagyunk.hu, as well as by shaking their smartphones. The hearts have been used at the Olympic Games, the Paralympic Games and other major sport events. So far, more than 2 million heartbeats have been sent to athletes.

Navigation stick for the visually impaired
As a socially responsible company, T-Mobile Czech Republic aims to support visually impaired people. We have been cooperating with the Czech Technical University to develop a unique navigation solution for the blind. Connecting up global navigation satellite systems (GNSS) and wireless data transfer networks has created one of the most advanced orientation solutions for visually impaired people. T-Mobile Czech Republic has supported the development of this navigation solution by providing connectivity in 3G and 4G, data SIM cards and modems. The newly developed navigation stick for blind people is connected to a smartphone and the navigation center. Based on a 2G-4G app, the service enables navigation data, voice communication and images to be transferred. It also utilizes a camera for orientation in buildings where GNSS does not work. Currently, the solution is in the final testing phase and will be launched in 2017. We will be offering the technology and a special tariff to blind people who have been trained to use this tool.

DIGITAL SCHOOLS IN ROMANIA

In a partnership with Cisco and Webhit, Telekom Romania is providing modern technologies for performance learning in 36 schools throughout Romania. The program offers resources ranging from digital learning to live virtual lessons through telepresence. A total of 10,000 pupils have access to the implemented digital solutions. In 20 of the 36 interconnected schools, telepresence centers have been set up to allow students to participate in lessons taking place at the other schools. The children can follow the content of the class and edit in real time. In addition, the lessons are recorded and made available to students on a dedicated online platform. In the other schools, a software application replaces the telepresence center and provides students in isolated areas with access to digital content as well as putting them in contact with teachers in the big cities. The success of the program is quantifiable. The participating schools recorded a significant rise in attendance rates together with an improvement of the level of performance and competitiveness of the students.

We also launched an electronic school catalogue to support the digitalization of Romanian schools. The digital bundle includes a tablet and internet connectivity, as well as access to an educational management platform. It contributes to the efficient organization of the school, an improvement in teaching, and an increase in interactivity between teachers, students and parents. Schools where the platform has been introduced have seen up to 63 % fewer absences and test results have improved.

CONNECTED KIDS

Digital literacy is becoming a basic skill required for participating in any aspect of society. T-Mobile Austria wants to use its Connected Kids project to raise awareness among students, parents and teachers about the many different ways of using mobile Internet for learning. The company also wants to advance the use of digital media in schools. The topic of this year's "Connected Kids" event was "education 4.0 – flipped classroom". The aim of the event was to introduce teachers, parents and employees to new learning formats that correspond with the current transformation of society towards digitalization, automatization and interconnectedness.

7,879 students in 372 participating classes and 434 teachers have already had the chance to explore digital learning in a connected classroom since its launch in 2013. Educational and technical support is provided by T-Mobile Austria to make sure students get to experience all the advantages of mobile communication in teaching.

The Connected Kids blog is an important tool to make the experience of using digital media in schools and families as part of a connected classroom available to the public.

Long-term project goals include inspiring students to pass on what they learn to people outside traditional educational institutions.

CODING WORKSHOP FOR KIDS

Coding is a serious matter for many people and it is associated with complex and painstaking work to save hundreds and perhaps thousands of lines of code. However, programming language is no different from the language, which we use every day as far as IT specialists are concerned. That's why thousands of volunteers encourage ordinary citizens to try learning about coding in the EU Code Week and help them to understand the principles of programming.

This year, the CoderDojo foundation was the coordinator of the EU Code Week on behalf of the Ministry of Digitalization in Poland. This was a great opportunity for T-Mobile Poland to get involved in the action and support the foundation.

Between 15 and23 October 2016, children and young people in 13 towns in Poland participated in coding activities. Mentors from the CoderDojo foundation encouraged them with their passion for coding and helped them to take their first steps in this magical world. Super-Dojo Ninja provided the culmination of all the classes. It took the form of a meeting between children and mentors from across Poland at our premises on 22 October. Nearly 200 children took part in the workshops and gained insights into the secrets of coding. 120 mentors showed how great programming can be.

ENGAGEMENT@TELEKOM

Our social commitment reflects our responsibility as a company acting in the political, social and business environments. To us, this also means encouraging the volunteer efforts of our employees, which contribute significantly to strengthening the sense of community. By getting involved in the community, our employees also propagate our values and promote a favorable reputation for Deutsche Telekom in their immediate environment. Volunteering is also very beneficial when it comes to internal HR development. It expands each person's horizon and has a positive impact on social skills and teamwork. It also encourages identification with the company.

That is why we give our employees ample opportunity to volunteer, preferably with a focus on teaching media skills. This is just another way in which we help simplify and enrich the lives of those around us. We also support our employees in their private volunteer activities.

GOALS	MEASURES	MONITORING
› Using our core areas of expertise to benefit society › Supporting society as a trusted partner	› Corporate volunteering › Corporate giving › Donation Policy › Cooperation with non-profit organisations	› Social Commitment KPI › Reviewing compliance with Donation Policy

TAKING RESPONSIBILITY IN OUR SOCIETY

We contribute to society in a number of ways with our corporate citizenship program, engagement@telekom. engagement@telekom is based on two pillars:

- Long-term partnerships with non-profit organizations
- Corporate volunteering (supporting our employees in their volunteering activities) and corporate giving (our donation activities)

In times of digital transformation, we want to be a trusted partner to society. We contribute our core expertise and the commitment of our employees to these efforts.

We give our employees the opportunity to volunteer for social projects or the environment within the scope of our Social Days. Examples include our participation in Civic Involvement Week sponsored by the National Network for Civil Society. Our social commitment often takes the form of longstanding partnerships like our partnership with Nummer gegen Kummer, the Telefonseelsorge crisis helpline, the Lebenshilfe aid organization and DKMS, the German Bone Marrow Donor Center.

Corporate volunteering img is also an important component of our training and development activities. The volunteer efforts of our apprentices are given special recognition in our Group competition, "Responsibility wins!".
Our corporate giving concept includes donations for aid organizations worldwide, preferably those with which we have longstanding partnerships, and fast disaster relief. Our Group Donation Policy lays out the guidelines for these activities. For example, we have been collaborating with Germany's Relief Coalition, Aktion Deutschland Hilft, for 13 years now.

When it comes to our corporate volunteering, we collaborate closely across country borders and share experiences and best practices.
We use a set of KPIs to measure our success:

- The Social Commitment ESG KPI reflects our performance.
- The Community Investment ESG KPI reflects our social commitment in terms of financial, human, and material resources.
- The Beneficiaries ESG KPI measures the huge number of active contributors as well as the broad target groups they reach.
- The Media Literacy ESG KPI highlights the high percentage of projects and activities promoting the competent handling of media. It is highly relevant to us as it correlates closely with our core business.

In 2016 we have analyzed the impact of our engagement with the SDGs. The results show that our corporate citizen strategy is a large contributor in achieving the goals, with emphasis on SDG #4, #5, #10 and #17. For 2017 we are planning to further strengthen the connection between our corporate citizenship program and the SDGs - focusing on core activities (e.g. inclusion by broadband expansion and innovation) as well as our focal topic “digital literacy”.

"RESPONSIBILITY WINS!" COMPETITION

Our "Responsibility wins!" competition gives our apprentices and co-operative degree students the opportunity to get involved for the greater good and develop their skills beyond the scope of their professional training. Many of them all over Germany once again participated in 2016. A total of 47 projects were submitted to the jury. Four of them received an award in February 2017 at an awards ceremony held at Deutsche Telekom headquarters in Bonn. Because so many good ideas were submitted, first place was awarded twice: to a team of apprentices from Hamburg and to one from Nuremberg. Both teams launched projects giving refugees the chance to see what it is like to work at Deutsche Telekom and complete an application training offer.

INTERNATIONAL RED CROSS

During the reporting period we supported the Restoring Family Links (RFL) program conducted by the International Red Cross in the context of our donation program. It often happens that family members lose contact with each other when fleeing their home country. The RFL program tries to put families in contact with each other via phone, Internet or handwritten messages and to locate missing persons, especially children.

HUMANITARIAN ACTION FOR THE PEOPLE AFFECTED BY THE FLOODS IN SKOPJE

Skopje is the capital of Macedonia and the city was hit by the "water bomb" storm on 6 August 2016. 21 people lost their lives, dozens were injured or went missing, and roads, houses and infrastructure were damaged.

Makedonski Telekom immediately called on its employees to take humanitarian action. They were asked to help thosepeopleaffected by the flooding and provide essential resources. Apart from collectingfood and toiletries, our colleagues also visited the municipality Stajkovci which had been most severely affected by the flood. They helped to rescue some of the furniture in flooded accommodation, removed mud and cleaned up homes. Our volunteers also took away waste and debris that had been deposited by the flood waters. They worked tirelessly and with great dedication for many hours each day. Alongside the volunteering work carried out by our employees, we also donated EUR 32,000 toward reconstruction of homes in the municipality Gazi Baba. We provided power banks and mobile units for local citizens in the affected areas. Our mobile phone network was fully operational.

The Telekom for Macedonia Foundation and the Red Cross started a donation hotline and this collected more than EUR 100,000.

SOCIAL INITIATIVES BY OTE-COSMOTE

COSMOTE Scholarships Program

COSMOTE ran its scholarships program for the 15th consecutive year. The program provides 51 scholarships for first-year students facing financial and social difficulties with a total value of EUR 770,000. Alongside financial support, COSMOTE offered the scholars fixed and mobile products and services free of charge to cover their telecommunication needs for the duration of their studies along with cable TV services. Over a period of 15 years, the program has provided a total of 581 scholarships valued at more than EUR 4.3 million.

Supporting NGOs for children

Once again this year, the OTE Group supported 16 charitable organizations caring for children all over Greece by contributing financial aid that exceeds EUR 550,000. Over the past 17 years, the OTE Group has supported more than 55 institutions with over EUR 7 million contributing to the improvement of children's living conditions all over Greece. Again, three of the NGOs were selected by vote of the employees. Two of these help to satisfy the basic needs of children in terms of food, clothes, education and housing. The other NGO provides psychological support to children at the Oncology Units of Hospitals in Athens.

Contribution to Children's Hospitals

In 2016, the OTE Group cooperated with the "Pediatric Trauma Care" non-profit organization and contributed to the creation of Trauma Centers in two Children's Hospitals in Greece. Over recent years, the Group has allocated more than EUR 370,000 to infrastructure and healthcare equipment for children in nine Greek public hospitals. Up until now, this helped more than 81,000 children.

EDITION II OF "EXEMPT FROM THEORY" – T-MOBILE FOR THE YOUNG!

Since August 2015, T-Mobile has been a strategic partner in the Exempt from Theory program initiated by the start-up Social Wolves in 2014. The program is a contest that helps young people to gain their first professional experience after school. The aim is to develop practical skills in project management among young people and inspire them to take part in social activity.

Participants identify an idea for the most interesting action and then put it into practice with the support of mentors. Each finalist will receive an international certificate signed by the Project Management Institute.

As part of the partnership, T-Mobile Polska provides internships for students, and several dozen employees also act as mentors. They look after the technical equipment for the interns, and assign a special award for the best technological project. We are also working on an e-volunteering platform where students can address problematic issues and our employees can help them online.

In 2016, 11,000 students signed up for the program in the most recent edition and they carried out 506 projects which reached about 5 million beneficiaries. We are now in the middle of the third edition and 7,700 students have registered so far.

Participation in this project provides another example for implementation of corporate responsibility activities that benefit young people, foster volunteering among employees, and strengthen the company's image as a professional and socially responsible employer.

TUN FUND PRESENTS FOURTH SUSTAINABILITY AWARD

T-Mobile Austria started out 2016 with its fifth annual call for submissions for Austria's popular sustainability prize through its T-Mobile Environmental and Sustainability Fund (TUN Fund). The goal of the fund is to tap the potential of mobile communications with the aim of finding solutions to environmental and sustainability problems. In 2016, the jury selected the winners from 69 submitted projects. Awards were

presented to the projects "InterprAID", an online platform for interpreting and intercultural mediation, “Be.Energised Community”, a management and accounting platform for charging stations of electronic cars and “Speech to text device”, an augmented reality text display for the hearing impaired. The additional school award was presented toATSS (autonomic transmitting sonar system),a platform that stops the accumulation of silt in reservoirs in order to facilitate generation of green electricity. A total of EUR 50,000 was handed out at the awards ceremony which was held in November 2016 at the T-Center in Vienna.

FREE HEALTHCARE PROGRAM "ONE LIFE"

At Telekom Albania, we are committed to our customers and we care about their quality of life. In September 2016 we introduced the “One Life” program. This program offers free healthcare services to our customers.

Our mobile customers who recharge their prepaid account by EUR 7.30 are rewarded with the Silver package. This includes free unlimited visits to a surgeon, pediatrician, orthopedist, gynecologist or pathologist. The Gold package is for customers who recharge their account for three consecutive months. It includes an annual health check package of complete blood count, cholesterol, glycaemia and cardiac tests, dental checks and dental cleaning. Our postpaid customers can become part of the “One Life” program simply by registering.

CULTURAL & SPORTS SPONSORSHIP

Culture and sports are a source of pleasure, of inspiration and also of innovative strength for society. An inspiration to many people, they create a sense of community and enable understanding across cultural and political borders. As an international corporation, we feel that sponsoring cultural activities and sports is another element of our corporate responsibility.

GOALS	MEASURES	MONITORING
› Strengthening involvement in cultural activities › Promoting competitive and recreational sports	› Sponsorship Policy › Promoting school sports, recreational sports and inclusion projects › Supporting cultural offers	› Reviewing compliance with the Sponsorship Policy

GETTING INVOLVED IN CULTURE AND SPORTS

We encourage variety in cultural expression throughout the Group. In Germany, we are one of the leading sponsors of culture and sports. In addition to providing funding, we support artists, athletes, event organizers and associations in their communication and marketing activities. Regional involvement at our locations also plays a key role.

Sponsoring music is a long-standing tradition at Deutsche Telekom and a vital element in the our brand communication activities. We want to give as many people as possible access to cultural events, thus encouraging them to share thoughts and ideas. Our main sponsorship focus is placed on events like the Beethovenfest and the International Telekom Beethoven Competition in Bonn, which has been providing a stage for up-and-coming pianists from all over the world for eleven years.

We are a partner of the Junges Theater Bonn and sponsor a number of projects including a media education school project that works to motivate young schoolchildren to take a fun, creative approach to learning about new media.

We support both professional and mass sports with our sports sponsorship activities, which focus on soccer partnerships with the German Football Association, FC Bayern Munich and other German major league soccer teams. We also place emphasis on those aspects of sports that foster community life. We sponsor athletes via the Deutsche Sporthilfe organization, projects focused on mass and school sports and athletes with disabilities. And we make some noise at our Bonn location with the help of the Telekom Baskets Bonn.

ENCOURAGING ENTHUSIASM FOR SPORTS WITH THE TELEKOM BASKETS

We want to take responsibility for our immediate social environment, which is why we sponsor the Telekom Baskets in Bonn.

Ticket sweepstakes for the Telekom Baskets

Before the 2016/2017 season got underway, we launched our ninth Tix for Kids ticket sweepstakes. We raffled off two sets of tickets (2 x 30) for each home game. Participation was open to all schools in Bonn. Businesses# also had the opportunity to become ticket sponsors for social welfare institutions, school classes, club teams and work centers for disabled people. We participated in the sweepstakes as well and donated an additional 242 tickets to various organizations including the Maria im Walde children and youth center and refugee housing.

Baskets@school student training project

Deutsche Telekom's Baskets@school initiative makes it possible for students in 5th through 10th grade to have their sports idols visit their school. Children and young people experience what professional basketball training is like by participating in a training session that lasts for around 90 minutes. The goal of the project is to strengthen team spirit and teach students from the region more about basketball. Pros from the Telekom Baskets teach the students tricks and special moves. Head team trainers offered a total of eight training sessions from November 2016 through April 2017.

STOLLENHELDEN: THE NEW SOCCER PROGRAM FOR FUTURE STARS

Stollenhelden (Soccer Heroes), Deutsche Telekom's new soccer program for future stars, in an advancement of the ANSTOSS! soccer initiative. We are involved in youth soccer with projects like "Soccer Heroes of the Month," "New sports experience" and "Team spirit." The sponsorship program supports amateur soccer clubs with a focus on young talent.

Soccer Heroes of the Month

Each month we recognize the best goal shot by soccer players up to 15 years of age. They all have the opportunity to upload videos highlighting exceptional goals. Five are pre-selected by the jury. People can vote for their favorite online at stollenhelden.de. The "Soccer Hero of t he Month" receives a prize worth 1,000 euros for them and their club. They are have the opportunity to compete for the title of "Soccer Hero of the Year."

New sports experience

We run the "New sports experience" sponsorship initiative in collaboration with the German National Paralympic Committee (DBS) and the Sepp Herberger DFB foundation. The blind soccer training course gives teams with players 12 years and older the change to have new

experiences and learn how to play blind soccer. In "Blind stadium experience" students with and without impaired sight attend a German soccer league game together and follow the action via headphones. This experience promotes camaraderie among young people.

Interactive sports experience
Within the context of restructuring our soccer sponsorship activities, we also expanded our online activities. We offer information for children and young people, parents and trainers on our homepage stollenhelden.de. Soccer parents and dedicated trainers can visit our Facebook page to talk about the development of their soccer players.

YOUNG REPORTERS AT THE 2016 PARALYMPICS

The RioMaNiacs young reporter project is a collaboration between Deutsche Telekom and the Aktion Mensch charity lottery organization. An integrative reporter team comprised of one disabled and one non-disabled student from the German Sport University in Cologne reported online on the 2016 Paralympics in Rio de Janeiro, Brazil. Via the riomaniacs.de social wall, the reporters followed the events and reported on the latest news from the Paralympic living quarters of the young German Paralympic athletes. The reports were designed particularly to get young people interested in the Paralympics. The integrative nature of the project shows sports can bring together people with and without disabilities.

Deutsche Telekom has been a sponsor of the German National Paralympic Committee (DBS) since 2006. We are a national partner of "Together for Germany – The German Paralympic Team" and promote and support Germany's Paralympic athletes.

A UNIQUE CONCERT EXPERIENCE AT THE BEETHOVENFEST AND JAZZFEST FESTIVALS

Beethovenfest Bonn
We were again Chief Sponsor of the Beethovenfest Bonn in 2016. The slogan of this year's concert experience was "Revolution." The program's two focal points were the French and Russian revolution with the Toulouse National Orchestra and the Ural Philharmonic Orchestra. The student manager project of the Young Beethovenfest initiative again organized an event at last year's festival. The Outside the Box! concert featuring vocalist Helen Schneider and the Stuttgart Chamber Orchestra was organized by secondary school students over a period of eight months. The students handled financing and advertising and make sure the concert runs smoothly. The team was also responsible for artist and sponsor services, visitor services, the online presence on different channels, a press conference and planning and running the entire supporting and educational program. Beethovenfest employees assisted the students in all of their responsibilities.

Jazzfest Bonn
We were also once again the Chief Sponsor of last year's Jazzfest Bonn in April 2016. In this role we presented a double concert at the Telekom Forum on April 22 where the Bundesjazzorchester (German Jazz Orchestra) and the Thomas Quasthoff Quartett entertained the audience.

SPORT IS GOOD CAMPAIGN

The 2016 Biggest Sports Hour
"The Biggest Sports Hour" is a sports and movement festival and more than 50,000 people from 16 cities in Romania and Bulgaria participated in the sixth edition of this festival. Approximately 100 volunteers backed the organization of the event. Telekom Romania is hosting the festival within the "Sport is good" campaign. 41 sports classes took place in the festival including a shooting gate for football enthusiasts that was supported by 64 famous national and international trainers. We organized a run called "TriKids" for the little ones and a bicycle training session entitled "Kids Bike School". During the event, we set up a new world record for "the largest number of people running 100 meters in a 12-hour outdoor relay". Around 1,000 runners took part and ran a total distance of 154 km in the city of Bucharest over a period of 12 hours. We were also able to advise more than 700 people on nutrition and a healthier lifestyle.

Telekom Romania supported the second edition of Brasov International Marathon
In May Telekom Romania organized the Brasov International Marathon as part of the "Sport Is Good" campaign. More than 2,000 national and international runners participated in the marathon. The fees collected from the 5 km race and 15% of the value of the other competition races (marathon, relay-marathon, half-marathon and 10 km race) were donated by the Telekom Romania Foundation to the "Copiii de Cristal" Association for the benefit of the children with autism.

FREE WIFI IMG SERVICES AT 20 TOP ARCHAEOLOGICAL SITES AND MUSEUMS IN GREECE

The OTE Group has been cooperating with the Greek Ministry of Culture and Sports to offer free WiFi at 20 archaeological sites and museums throughout Greece. The aim of this initiative is to promote Greek cultural heritage through technology, enhance interaction by the public and increase the connectivity of the sites. The investment exceeds EUR 2 million and includes research, design and development relating to wireless infrastructure, procurement of the necessary equipment, operation and maintenance of the networks, and provision of free wireless internet services for a period of three years. Free WiFi provision will be gradually completed by the end of 2017.

THE OTE GROUP'S TELECOMMUNICATIONS MUSEUM IN THE NEW DIGITAL ERA

The OTE Group's Telecommunications Museum has completed the huge task of documenting and digitizing its collection. This is one of the few Greek museums that have documented and digitized the majority of its collections, including more than 23,000 items and files that comprise the story of telecommunications and Greece as a country. The collection can now be accessed by everybody. The online archive is constantly being enriched and it currently includes more than 600 exhibits displayed on the new Museum's website.

EMPLOYEES

Our employees are behind our success. We encourage independence, create development opportunities and offer systematic health management. We pay attention to the individual needs of our employees and enable them to contribute their personal strengths.

INTERESTING TOPICS AND CONTENTS

Christian P. Illek, Board Member for Human Resources, on the innovation culture at Deutsche Telekom →

64 potential supervisory board members completed training program →

30 experts trained as Cyber Security Professionals since 2014 →

Online courses for more innovation: 3,500 employees from 31 countries attend second massive open online course (MOOC) →

Sustainable development: 420,000 days spent on continuing education for our employees in Germany →

Inclusion action plan completed →

WORKING IN THE DIGITAL AGE

Christian P. Illek, Member of the Deutsche Telekom Board of Management for Human Resources since April 2015

Mr. Illek, what does digitization mean for all of us as well as for society – is it a blessing or a curse?
We are seeing dramatic changes in our world due to digitization. As the saying goes: "Life will never be as slow as it is right now." We all need to deal with these changes – both personally and professionally. One thing we can be sure of - digitization knows no limits. This may sound threatening to some, but anyone who takes a closer look will notice that they are already part of this development: when they surf the Internet, use social media or simply check their account balance online. I consider the situation as a positive one and am convinced that digitization will promote us as a society and as a company. Previous industrial revolutions show that those countries and businesses that adopted new technologies at an early stage are those that are well off now.

Doesn't Deutsche Telekom have a home advantage in this respect? Its services play a significant role in digitizing our everyday life.
The major challenge that we at Deutsche Telekom are also facing is how to digitize our core business, which we have been growing for decades, and take our employees with us on this journey. We are not a start-up; we have an established structure and culture. That is why we need to consider how to properly balance out the enormous changes we make in the Group in terms of digitization. We want to take as many employees with us on this journey as possible. Although we have some employees who do not wish to take this step into digitization, there are also others who can hardly wait. We need to consider these two mindsets in the digital transformation of our Group.

And what do you tell those employees who do not want to come along on this journey?
I would tell them: "Give digitization a chance, there are no alternatives. Get actively involved. That will secure your job in the future." And I would definitely point out the many supportive offers at our Group that enable our employees to keep up with digitization. We need to show people that digitization is also about guaranteeing your attractiveness as an employee.

And what will change with digitization?
The work of the future will in many ways be a lot more project-based than today.. Team structures will be much more heterogeneous. We will have to come to terms with the fact that some of our activities, in particular standardized, repetitive tasks, will be carried out by intelligent machines. The topic of employee participation, i.e., democratization of the workplace, will be boosted by digitization. Independent work and self-management are becoming increasingly important. Information monopolies are starting to dissolve, knowledge is being shared. Social media, although still dismissed by some as a gimmick, will become the main drivers of process productivity, and offer huge potential as yet untapped. I firmly believe that in the future we will collaborate much more in virtual communities, not only within the company but also with our partners and customers.

And what are the new challenges Human Resources will have to face?
Good HR management provides orientation and transparency – both in everyday work and regarding the future challenges our employees will face in our work environment. We support our employees in mastering and shaping digitization– the best team that will drive us along our path to becoming the leading European telecommunications provider.

Key innovations are no longer the product of individuals but are created in collaboration. That is why we are interested in the topic of digital, virtual collaboration, what trends exist outside of our company and how we can use them in human resources management. With work becoming increasingly mobile, access to our systems via mobile devices needs to be possible as well. This, of course, also has an impact on our leadership styles. We are paving the way by demonstrating the collaborative leadership models that are out there. We are focusing on concepts like workspaces and work environments, from office layouts to what people need for mobile working.

Getting the right people to the right place at the right time has always been HR management's key task. During a time when everything is in motion, this is becoming an entirely new challenge. How can that challenge be mastered with almost 220,000 employees?
One example is our strategic Skills Management project, which will help us manage our HR planning more effectively while promoting the employability of our employees. The goal of this pilot project, which has been agreed with the Group Works Council, is to create a database that provides a transparent overview of our employees' skills. We will be able to use the database to identify skills gaps for each employee and team and then encourage any necessary training. The skills database is another example of our productive collaboration with employee representatives. This project is a great example of how employers and employee representatives are prepared to shape the digital transformation together, in the interest of employees. After signing the first collective agreement on mobile working last year, we have taken things a step further with our skills database.

If the professional world is steadily and radically changing, how can people keep up?
I think that is a question most people do not even ask themselves. Because digitization has many positive effects and can increase quality of life, they are prepared to take this path. In my experience, people flourish when they have freedom and can grow. Employees, regardless of their age, are increasingly expecting creativity, diversity and openness as well as individual training and development opportunities from their working environment and tasks. They want to take on responsibility and new challenges – ideally no day is like another. And when it is no longer important where and when we work and constant availability and accessibility is no longer a sign of performance, work can more easily be combined with private life.

But couldn't it be that employees are scared of losing their jobs due to digitization? Aren't there studies with dramatic predictions?
There are studies that predict dramatic job losses and there are studies that expect a very favorable impact on employment figures. We will see very different results depending on the industry and field. This also applies at our company, as we will be making job cuts in some fields while creating new jobs in others. The sooner a company recognizes and addresses the topic of digitization, the better prepared it will be for the changes to come and the more able to shape the best possible future for the company and its employees. I believe that digital solutions will help us meet growing customer requirements and offer more services. That means that we will have more possibilities for corporate action and thereby create jobs.

I don't know what the future holds. But in having a positive attitude toward change and innovation, I can help shape the changes to come – whatever they may be. That is what we need to do to guarantee a strong future at Deutsche Telekom.

RESPONSIBLE AND AGILE EMPLOYER

Competent, dedicated, employees with an entrepreneurial approach are key to success along our path to becoming the leading European telecommunications company. As a responsible employer, we want our employee relations worldwide to be based on dialog and focused on collaboration and fairness. We give them the opportunity to realize their potential and to contribute their individual strengths and ideas within our Group. In a market characterized by transformation, we use pioneering methods and tools to help them approach necessary changes and new technological opportunities with flexibility.

GOALS	MEASURES	MONITORING
› Employee relations characterized by fairness and responsibility	› Fair pay and flexible working hours › Dialog with employee representatives › Socially acceptable staff restructuring › Employee and pulse surveys › Regulations to reduce excessive stress › Performance assessment tools	› Reviewing implementation of our Employee Relations Policy › Assessing employee satisfaction › Reviewing compliance with current collective agreements and relevant Group and company policies

SHAPING EMPLOYEE RELATIONS AS A RESPONSIBLE EMPLOYER

As a responsible employer, we pursue dialog-oriented employee relations throughout the Group and engage in trusting, 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 at a European level is the European Works Council. We also have executive staff representation committees and disabled employee representatives at unit, company and Group level.

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. We regularly assess employee satisfaction with our employee survey and also conduct surveys on specific topics and in specific units.

Flexible working models

Having the chance to structure one's work according to one's own needs considerably improves work-life balance and helps prevent stress and the feeling of being overworked. That is why we encourage flexible working models. Our offer ranges from flexitime and part time to lifetime work accounts. We have been offering lifetime work accounts to around 100,000 employees and civil servants in Germany since early 2016. This reflects 90 percent of all employees in Germany. Lifetime work accounts give our employees the opportunity to finance future absence from work of longer than one month, which may be used for early retirement, a sabbatical or to support a period of part-time work. Executives have had this option since 2012. We set up 6,000 lifetime work accounts by the end of the year. In 2016, the sector-specific collective agreement on mobile working laid the foundations for establishing mobile working as a new format within the company.

Socially responsible staff restructuring

The ICT img industry is undergoing a far-reaching transformation and our customers' demands are subject to constant change. We have to continue to grow and develop to be ready for the future. This also means quantitative and qualitative staff restructuring at some of our companies. The main objective is to structure these changes for our employees in a way that is as socially responsible as possible. At the companies affected, for example, we decided to enter into collective agreements that rule out compulsory redundancies. Within the scope of this socially responsible staff restructuring, we employ alternative instruments such as severance payments and phased retirement as well as strategic training programs that help our employees prepare for new assignments.

Employee satisfaction and participation

We highly encourage a feedback culture throughout the Group characterized by open dialog and constructive communication with our employees. An important tool in these activities is our You and Me (YAM) social network with around 115,000 users, which replaced our earlier Telekom Social Network in 2016. Not only can our employees visit YAM to get all the information they need, they can also participate in cross-level dialog and suggest their own topics for discussion. Our Board managers also regularly use YAM as a platform for direct dialog. Another key element of our feedback culture is our employee survey. We supplement this survey with pulse surveys, which give us a snapshot of the mood Group-wide twice a year. Our Group-wide ideas management activities are another key tool in encouraging employee contributions to the success of the company.

We have seen an increase in the number of employees participating in our Group-wide pulse surveys as well as our ideas management activities. 73 percent of our employees took part in the November 2016 pulse survey, the highest participation rate we have seen so far. Employee satisfaction remained high as well at 73 percent. Statistically speaking, one out of every eleven employees submits their ideas to our ideas management team, giving us a continually high participation rate. We also offer our employees different ways to get involved, e.g., in the form of corporate volunteering projects.

We have set Group-wide standards for managing employee relations. These are documented in our Guiding Principles, Leadership Principles and our Employee Relations Policy.

EMPLOYEE RELATIONS AT OUR NATIONAL COMPANIES

We employ reviews to gauge progress when it comes to implementation of our Employee Relations Policy at our national companies. Two to three national companies are subject to a review each year. Our national companies use the results to further improve relations between the company and its employees. The results also help us assess employer/employee relations and any human rights risks involved in our business activities.

In 2016 we conducted an employee relations review at e-value, the service center unit of OTE (Helenic Telecommunications Organization S.A.) and Cosmote (Cosmote Mobile Telecommunications S.A.) in Greece and at T-Systems Iberia. We publish the results on our website.

The review showed that employees at e-value are very satisfied with their employer. e-value is very concerned with team building and promotes a work culture based on trust and transparency. In view of the current economic instability in Greece, these aspects are highly valued by employees. The company successfully implemented all eleven elements of our Employee Relations Policy.

At T-Systems Iberia, the review showed that the core elements of the policy, e.g., training, non-discrimination and complaint channels, were also successfully implemented . The health rate is at an excellent level at the company (97.7 percent). In addition to other health-promoting measures, T-Systems Iberia also offers its employees psychological support if needed. The company also runs a "Stable Table of Labor Relations," a platform set up to encourage communication between the four main trade unions.

In 2016 we also took a look at how the measures recommended after the 2015 review were being implemented.

SOCIALLY RESPONSIBLE STAFF RESTRUCTURING CONTINUED

The transformation of our company, which will help us stay competitive in the future, was a central topic in the past few years and will continue to be in years to come. 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. Vivento, our internal service provider for staff restructuring at Deutsche Telekom in Germany, supports us in these activities.

Civil servant transfer

Around 500 civil servants employed with Deutsche Telekom transferred to federal, state or local authorities in 2016 with the help of Vivento. This high number can partially be attributed to a growing need for personnel on the part of a number of authorities in the wake of reform projects. 2016 also saw the addition of numerous new activities in connection with high refugee numbers. The job offers placed by various authorities were particularly attractive to employees from Group units that were restructured in 2016 as well as all employees looking for a new challenge outside the Group. Employees with civil-servant status showed particular interest in transferring to the German Federal Office for Migration and Refugees (BAMF) within the scope of our "Deutsche Telekom helps refugees" initiative as well as to IT jobs offered by federal and state authorities. Vivento also helped employees find positions with federal, state and local administrative authorities.

Staff restructuring at T-Systems

T-Systems in Germany has been undergoing an extensive transformation since 2014, which has now been successfully completed. This transformation was accompanied by complex staff restructuring measures. T-Systems launched the Job Service & Placement (JSP) project in 2014 to support employees affected by the change. The company offered support to employees whose positions were cut through a variety of measures. We were able to entirely avoid compulsory redundancies as a result.

JSP prepares employees whose positions are subject to restructuring in the transformation process for employment opportunities within and outside of our company. Advisors and coaches assist these employees with a professional career analysis, advise them on their perspectives, help them through the application process and help them identify interesting job openings. Employees switching to an internal or external position with less favorable pay and benefits can also qualify for compensation payments. Employees involved in the JSP program were given first choice over external applicants for internal T-Systems job offers in Germany and we offer employees additional training of up to six months as needed. We also offer support in the form of information events such as a seven-week workshop series. At these workshops, our employees can improve their personal skills and strengths and learn how to best apply these on the job market. Continuing education such as English coaching and XING training complete our offer.

In 2016 we decided to continue JSP beyond the scheduled end date in the summer of 2016 until June 30, 2017. More than 1,300 employees have found new jobs since we launched JSP.

Staff restructuring at Telekom Deutschland

Telekom Deutschland is engaged in an ongoing process of transformation in order to guarantee long-term competitiveness. This process involves a three-pronged approach of staff restructuring, upsizing and downsizing. There were around 2,000 new hires in 2016, more than 70 percent of which involves junior staff who have been trained at the Group. Around 3,600 employees left Telekom Deutschland in 2016 with the help of socially responsible options such as early retirement, severance pay, phased retirement and transfer to various German authorities. We take an innovative approach to internal restructuring activities such as forward-thinking skills management (link to Skills management: ready for the challenges of tomorrow).

And we are forging new paths when it comes to working hours as well. Working hours that are the same at every department are no longer current and fit neither the expectations of our customers nor our actual working hour needs, for example when it comes to network build-out. Within the context of restructuring Telekom Deutschland, we are speaking with employee representatives about more flexible working hours in

order to help us come up with custom-fit solutions. These include permanently reducing weekly hours in the service and technology areas to help us manage the restructuring process. We are also working on making the weekly work schedule more flexible. Our idea is to be able to increase weekly working hours by two to four hours during peak load times and then reduce them by two to four hours when things are slow. That would give us some flexibility with a responsible approach while also helping us secure employment.

FLEXIBLE WORKING HOUR SCHEMES EXPANDED FURTHER

We offer a wide range of optional working models tailored to the needs of specific target groups.

Voluntary commitment to encouraging part-time employment

Our goal is to improve the work-life balance and more effectively facilitate part-time models in everyday work routines, for men as well as women. With our Group-wide policy on part-time work, we made a commitment in 2010 to encourage part-time work in executive positions. In 2016 a total of 35 executives throughout Germany were working part-time. Deutsche Telekom also made a similar voluntary commitment regarding employees covered by collective agreements and civil servants. 13.4 percent of employees covered by collective agreements and 20.7 percent of Deutsche Telekom civil servants throughout Germany are currently working part-time. In 2016 we developed another part-time model, which we refer to as "additional days off," which is scheduled to go into effect in late 2017. The model gives part-time employees additional days off to help them be even more flexible with their schedules.

Lifetime work accounts

Since early 2016 we have been offering lifetime work accounts to around 80,000 employees and Deutsche Telekom civil servants throughout the Group. These give them the opportunity to finance future absence from work of longer than one month, which may be used for early retirement, a sabbatical or to support a period of part-time work. Our employees can finance their lifetime work account either from their gross salary or with time credits converted into monetary amounts. Until 2018 we will also support employees who are below a certain income limit with an annual contribution. As many as 6,000 lifetime work accounts were set up by the end of 2016.

Guaranteed return to full-time work

Part-time employees throughout the Group can be sure that they can return to their previous schedule earlier than planned if they want to do so. This guarantee has been in place since January 1, 2014. All they need to do is give 3 months' notice; business requirements will not be considered in such cases. That means more flexibility and security for employees. With this policy, we are setting the bar for part-time employment. This makes discussion about returning to a full-time position unnecessary.

Phased retirement

Phased retirement is a model to help employees with a smooth transition to retirement. Employees aged 55 and above throughout the Group can reduce their final working years and begin early retirement. We offer phased retirement both as a block and as a part-time model. Unlike regular part-time regulations, we make a substantial top-up payment to the employees' part-time pay with our phased retirement offer. That means that reducing their weekly hours does not mean a proportionately high reduction in net pay for employees. A total of 1,996 phased retirement contracts were signed during the reporting period, 1,293 with employees under collective agreements, 127 with employees not covered by collective agreements and 576 with civil servants.

Part-time training for single parents

We have been offering single parents up to the age of 25 the opportunity to complete a training program or cooperative course of study part-time at Deutsche Telekom in Germany since 2011 in collaboration with the German Federal Employment Agency. 20 young people began their part-time training with this program in 2016.

Returning to work after parental leave

Within the scope of the Stay in ContacT parental leave program, Deutsche Telekom offers employees on parental leave a part-time program to help them return to work.

Job sharing, splitting and pairing

We also offer a number of additional options for reducing working hours such as job sharing, in which two or more employees share a position. This option can be employed using a job splitting model where each employee is responsible for different tasks or via job pairing, where employees share responsibility for one area.

2016 COLLECTIVE BARGAINING ROUNDS FINALIZED

We pursue a trusting relationship to employee representatives and pay our employees salaries that are fair and based on market standards. In the 2016 collective bargaining round the negotiating partners agreed on the following terms for the large majority of employees of Deutsche Telekom in Germany.

- Starting in 2016, 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 phases by a total of 4.7 percent for employees in the lower pay groups and 4.3 percent for employees in the higher pay groups. The first increase took place on April 1, 2016 with the second scheduled to follow on April 1, 2017. The duration of the new collective wage agreements is 24 months and they are scheduled to end on January 31, 2018.

- Salaries at T-Systems for some 20,000 employees under collective agreements will be raised in two phases by a total of 3 percent for employees in the lower pay groups and a total of 2.5 percent for employees in the higher pay groups. The first phase took place on June 1, 2016 with the second scheduled to follow on April 1, 2017. The collective wage agreement had a term of 24 months and will expire on March 31, 2018.

- The wages of apprentices and students in cooperative study programs will also be increased in two phases. On April 1, 2016, they were raised by 35 euros with another 25-euro increase scheduled for April 1, 2017. Subsistence allowance has been increased to 23 euros.

- During the 2016 collective bargaining rounds, the partners also agreed to introduce a remuneration system using salary bands at Deutsche Telekom AG. The former remuneration system with its fixed group levels had been introduced in 2001 and was replaced at Deutsche Telekom AG by the banding system already being used at Telekom Deutschland GmbH on October 1, 2016. This is another step toward standardizing and harmonizing our German remuneration systems.

- Collective agreement regulations to protect employees from compulsory redundancies were extended until December 31, 2018, at Deutsche Telekom AG, Telekom Deutschland GmbH and the associated service companies as well as at T-Systems.

GREAT INTEREST IN EMPLOYEE SURVEY

We feel it is important to take the opinions of our employees into consideration when growing the Group, which is why we regularly ask them what they think. Our most important feedback tools include our employee survey, which is conducted every two years, and the bi-annual pulse survey. The pulse survey gives us a snapshot of the current mood in the Group and allows us to monitor the effectiveness of the follow-up measures taken as a result of the employee survey. This lets us make quick adjustments if necessary.

Around 73 percent of our employees throughout the Group participated in the November 2016 pulse survey, the highest participation rate we have seen so far. 73 percent of participants expressed high satisfaction with their employer. The next Group-wide employee survey is scheduled for 2017.

HIGH TURNOUT FOR GROUP-WIDE IDEAS MANAGEMENT

A large number of employees once again participated in our Group-wide ideas management activities in 2016. One out of every eight employees submitted ideas in Germany alone, giving us a continually high participation rate. This shows how strong our employees' interest is in actively playing a part in improving our products and services. The economic benefit resulting from the 10,125 ideas submitted translated into a total of 168.5 million euros in cost savings and tapping new business potential. One idea submitted in 2016 deserves special mention: it enabled us to reduce our mast replacement rate from 14 percent to 10 percent, thereby making a significant contribution to conserving resources and reducing cost.

We particularly encourage our employees to submit ideas on the topics of the future, which is why we launched the Magenta Service Innovations ideas management campaign in November 2016, calling for innovative suggestions on the topic of customer care. At total of 32 ideas were submitted, a reflection of the popularity of this ideas management campaign among our employees.

Our employees' ideas can also hold their own in external competitions. One employee idea won the Deutscher IdeenPreis 2016 award presented by the German Institute for Business Management (dib). Another idea took home third place in the "Best idea for occupational health and safety" category of the 2016 Ideas Management Award presented by Deutsches Institut für Ideen- und Innovationsmanagement.

FUTURE WORK – WORK IN THE DIGITAL AGE

The primary aim of our human resources policy is to promote virtual collaboration and new workplace structures. We want to create a communicative, performance-oriented working environment and encourage diversity in innovation, independence and agility at the company. These things require a modern working environment. We also employ a variety of measures to support flexibility, virtual collaboration and a corporate culture centered around sharing knowledge. The first and, as of yet, the only collective agreement on mobile working concluded by an employer association creates the framework.

Open-plan offices

We are creating open office layouts and tearing down the proverbial walls to promote inter-departmental collaboration. Employees at Deutsche Telekom in Germany can structure their work flexibly and choose their work environment. Room concepts tailored to requirements and an inspiring environment promote creativity and a sense of well-being as well as cross-hierarchy collaboration. We moved into our new Group campus in Hamburg in 2016 and effectively created new, open-plan offices at our facilities in Frankfurt and Bonn. The majority of restructuring activities at our headquarters in Bonn has been completed and our employees have moved into the new offices. Large locations in Essen, Berlin and Düsseldorf will follow. Several thousand employees are already experiencing the new office world.

Virtual collaboration

In addition to redesigning our office landscape, we encourage virtual collaboration in a variety of ways, including independently organized working groups. Instead of rigid, closed project teams, our employees work together to develop cross-functional and cross-hierarchical solutions and to increase their knowledge informally. During the reporting period, for example, 40 international working groups, referred to as "communities of practice," were working at T-Systems on more than 20 strategic topics such as cyber security, the cloud and Industry 4.0. Community members receive intensive support with online training offers. Our employees at T-Systems invested a total of 31,000 hours in meetings and web conferences in their community of practice in 2016. We have been improving virtual collaboration and shared learning processes since 2014 with our digital Working Virtually platform. Thanks to the platform, we reached out to 17,600 T-Systems employees in 2016, offering them digital learning opportunities around the clock. They can find numerous learning videos, webinars, weekly learning calls and a number of other offers on the platform. Our employees have already invested a total of 6,546 hours in digital learning.

Digital learning

In collaboration with our partners from the world of science, we have developed a format that combines new forms of collaboration and learning: Magenta MOOC. MOOC stands for Massive Open Online Course. It is an online course targeted toward a large number of participants that provides the opportunity to learn anywhere and at any time. The format is particularly suited to our needs as we face the challenge of reaching more than 225,000 employees in 50 countries.

After our first Magenta MOOC in 2014 met with excellent response throughout the Group. we decided to again offer the program in 2016. Under the motto, Go Digital, participants could develop solutions that

address one of ten actual challenges we face in our business at Deutsche Telekom. Topics included connected cars, Internet of Things and managers as role models in the digital age. Participants were divided into teams where they applied innovation methods like design thinking and were assisted by mentors and tutors. Around 3,500 employees from 31countries signed up for the program. The video contributions were accessed around 50,000 times. 177 small, international, cross-departmental teams developed solutions for a variety of challenges. Magenta MOOC shows how we effectively apply the ideas of our employees. It also encourages cross-departmental, cross-hierarchy and cross-border collaboration and improves the digital skills of our employees.

Innovative strength through Group-wide collaboration

The topic of open, cross-departmental collaboration is becoming increasingly important as digitization progresses. We need methods and approaches that bring our employees from different areas closer together. In 2016, we brought together the strengths of different innovation areas at our company in our Co-innovation Labs. There Telekom Innovation Laboratories (T-Labs), Deutsche Telekom's main research and development area, is now collaborating with the T-Systems Innovation Center in Munich and the T-Systems Global Systems Integration unit, our implementation partner, which develops innovative solutions in collaboration with our customers. At the Digital Co-innovation Labs, which are structured along the lines of a start-up, our colleagues work with agile processes and use a variety of tools and methods like design thinking, a creative process for coming up with ideas, prototyping and implementation. This helps us develop products that address trends early on and offer maximum customer benefit.

OCCUPATIONAL HEALTH AND SAFETY

The health and performance of our staff are the foundation of the long-term success of our business. We feel that it is our duty and responsibility to maintain and promote the health of our employees. We use numerous target-group-oriented measures and extensive preventative offers to support our employees – from trainees to our older employees – in their personal health and safety.

GOALS	MEASURES	MONITORING
› Promoting employee health and performance	› Occupational health and safety management system › Counseling offers › Preventive measures › Assessing risks, e.g., as part of the employee survey › Regular workplace inspections	› External and internal audits › Accident rate › Health rate › Evaluating measures and offers › Employee satisfaction and health index from employee survey and collective agreement on stress prevention

PROMOTING THE HEALTH OF OUR WORKFORCE

Our health management strategy is designed to maintain and promote our employees' health and performance. We view occupational health and safety legislation as minimum requirements.

Incorporating health and safety management throughout the Group

Our occupational health and safety measures are effectively integrated into our operational structures via certified management systems and appropriate policies and guidelines. The internationally recognized OHSAS18001 management standard, which has been in use since 2010, serves as the foundation. During the reporting year, 70 German and international locations were audited according to OHSAS 18001 and 51 German and international locations were audited according to ISO 14001. Their certification was renewed in all cases. With these results, we can guarantee a high health and safety standard in years to come.

All of the parties, tasks and measures involved in the health and safety management system are described in a handbook entitled Health & Safety Environment. The handbook was signed by our top executive managers as a symbol of our commitment to health and safety. Our health and safety measures are centrally steered at Group level with health managers being responsible for implementation at the different locations. We systematically assess the effectiveness of our measures. This includes reviewing the results or our employee survey, evaluating stress prevention measures under collective agreements, competitor benchmarks and other relevant indicators. The analysis of this data forms the basis for annual measures that by far exceed legal requirements. Some examples include our extensive psychosocial counseling offers and initiatives like driving safety training and activity and exercise offers.

One focus of our corporate health promotion activities is encouraging our employees to assume responsibility for their own health. We place our managers under the obligation to encourage a corporate culture based on these values and have incorporated health promotion into our leadership model. Implementation of this model is assessed using unit-specific targets, some of which are based on the results of our employee survey.

Results of different indicators during the reporting period

Different indicators reflect the effectiveness of our corporate health management activities:

- The health rate at Deutsche Telekom in Germany dipped slightly by 0.2 to 93.8 percent*. (*95.5 percent excluding long-term absences, down by 0.1)
- The accident rate is considerably below the industry average.
- According to health insurance providers, the number of our employees suffering from mental health problems and the length of treatment is rising only slightly in contrast to the industry trend.

There are clear reasons explaining this trend, but we are planning to implement extensive measures to counteract this development in 2017.

This year's RobecoSAM img rating, for example, again attests to our high standards. RobecoSAM is one of the leading rating agencies, annually assessing the sustainability performance of major corporations. We scored 100 out of 100 points in the Privacy and Operational Health & Safety category of the 2016 RobecoSAM Corporate Sustainability Assessment, making us an industry leader.

FITNESS AT WORK: ACTIVITY AND EXERCISE OFFERS EXPANDED

We have been offering our employees special fitness programs at locations in Germany since 2014 to help counteract the effects of a day spent working at their desks. Qualified "mobile fitness coaches" teach easy-to-do exercises particularly for the back and neck to small teams of employees. We continued this program, which is popular with our employees, in 2016 within the context of our extensive health promotion activities; more than 1,000 courses were held by the end of 2016. We plan to continue this offer in 2017.

We added a new activity offer during the reporting period with the Active Workplace project. Recent scientific studies show that regular interruptions of a seated occupation are more effective than lengthy training sessions after work. Active Workplace gives our employees the opportunity to incorporate exercises into their daily schedule.

During a six-week pilot, 60 employees tested a variety of mobile exercise equipment. The "desk bikes," or bicycles attached to the desk, proved the most popular. The pilot phase was scientifically followed by a study conducted by Berufsgenossenschaft Verkehr (the occupational accident insurer of the transportation industry), the Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA) and the German Sport University Cologne. The academics examined not only the test participants' levels of acceptance and whether they felt good using the equipment, but also physiological activity parameters, energy conversion levels and individual posture. Not only were participants having fun, their mental activity also increased. Another positive side effect was that participants burned more calories when cycling than when just sitting.

Because the positive response of our employees was supported by the accompanying study, we decided to purchase 460 desk bikes in 2016. More than 4,000 employees currently participate in the program. We are planning to expand the program in 2017 and include international locations as well.

PSYCHOSOCIAL COUNSELING AS PART OF CHANGE MANAGEMENT

Changes at work can be perceived as stressful, which is why transformation processes currently underway at Deutsche Telekom are intensively supported by the Employee and Executive Advisory Service. Our goal is to provide support to employees and managers and prevent psychological crises.

To this end, we offer individual counseling as well as other services. Employees can take advantage of several one-hour counseling sessions. Accompanying offers are available to managers and those responsible for change processes. Talks and workshops on psychological health complete the offer. Targeted communication measures inform employees at affected locations of these offers.

In 2016 we particularly accompanied the restructuring measures at GHS (Group Headquarter & Shared Services) by offering psychosocial counseling. We provided managers there with a guideline on health and leadership during change processes, for example. The guidelines also provide orientation regarding specific approaches and links to additional information and support offers.

T-SYSTEMS: HEALTH APP AND CORPORATE CULTURE PILOT PROJECT

Health app

We introduced the Froach health app at T-Systems during the reporting period. The app was developed by a Berlin-based start-up and can be customized by companies to meet their individual needs. It helps our employees take active, health-promoting mini-breaks. People who sit every day staring constantly at their PC displays, without taking time for some short breaks, will feel various types of aches and pains over time, and their eyes will become tired as well. The "main actor" of Froach is a friendly green frog that motivates users to be more active in short animated videos. The project was initially tested in Germany. Froach became available at T-Systems in English in fall 2016 and is being introduced globally.

Corporate Happiness pilot project

T-Systems has started initiating changes in its corporate culture within the scope of a pilot project. The aim of the project is to apply the scientific findings of "positive psychology" to identify values that will enable all employees to better realize their potential. The project encourages them to independently work toward their own, and the company's, success. During the reporting period we trained 27 "happiness ambassadors" within the scope of the pilot project, offered trainings and impulse talks and launched the "Stop complaining" initiative.

WORKSHOP MAKES PROMOTING HEALTH A TOP PRIORITY

A corporate culture that promotes health needs role models. A health-promoting leadership style is an integral part of our Leadership Excellence and Development (LEAD) program in Germany. Managers learn about the options available to them for their own preventative health care and how to strengthen their individual resources. We also teach them about the basic principles behind a health-promoting leadership style and how they can apply these in their daily activities. Managers can also take advantage of other workshops on leadership and health. These offers will continue to be available in 2017. We also support our managers in their responsibilities by offering online trainings on health & safety facts, mental health and corporate integration management, which helps employees get back to work after a longer period of illness.

RECENT STUDY ON DIGITIZATION AND HEALTH

What are the effects of the digitization of work on the health of our employees? To find out, we conducted a study in collaboration with BARMER GEK health insurance, University of St. Gallen and German weekly, BILD am Sonntag. More than 8,000 participants from Germany were polled via phone call in July and August 2016. The results show that digitization is already a part of life for our employees Those surveyed welcomed the possibility of flexibly structuring their working hours and working at different places, saying that in this way, digitization helped reduce the conflict between career and family. The study also showed that having a good relationship to their managers helps employees effectively take advantage of digitization. However, participants also mentioned negative consequences of the digital workplace, such as difficulty falling asleep, headaches and back pain. The survey also revealed that there are still major differences when it comes to corporate health offers such as courses on stress prevention. The majority of those surveyed, both younger and older employees, were optimistic about the digitization process. Visit the BARMER GEK homepage for more information.

As a modern ICT company, Deutsche Telekom closely deals with the challenges of digitization in the company's corporate health management activities. We continue to advance our corporate health management policy to meet changing requirements. During the reporting period, for example, we offered online fitness courses, online coaching for better health, expert chats and video counseling. These offers allow us to reach our employees at any time no matter where they are. Our Health & Safety Management department also analyzes new, potential problems that could arise in connection with digitization. In spring 2017, for example, we are planning to conduct a risk assessment of mental stress within the context of our employee survey. The results will be compared with the findings of the latest BARMER GEK study, which will help us develop new health offers.

HEALTH MONTH

As part of our "Total Health" program, an in-company training program promoting physical exercise to improve employees' health and lifestyle, and enable them to participate in relaxing activities with their co-workers, we organized a "Health Month" in October 2016. During this month three offers were made with a total of 756 employees participating:

IMSS Brigade running medical tests

We invited the IMSS Brigade (Mexican Social Security Institute) to our office in Puebla. They ran medical tests like calculating the body mass index and glucose update and gave tetanus or influenca vaccines. 382 employees participated in 8 days of tests. The medical problems found were diabetes, high cholesterol, high blood pressure and obesity. 284 of the participants were diagnosed with medical conditions; 98 people are without any risk.

Health Talks

The IMSS also gave talks about health issues like: medical checkups, handling stress, eye care, smoking, high blood pressure, body postures at work, health insurance, depression, healthy food and first aid. The purpose of the talks was to provide our employees with information and advice on important health matters and therewith contribute to their long-term well-being. 232 employees participated in the talks.

Kiloton – our program for weight loss

Obesity is a very serious health risk. By staging an internal competion known as Kiloton we encourage our employees to reduce weight and body fat within seven weeks.Kiloton combines exercise and a balanced diet. The activities offered included a nutritionist program, kick boxing and dance classes on the premises, as well as weekly tips on how to reduce or lose weight. 142 participants made up47mixed teams in the Puebla and Mexico City offices. The program was built as a competition to provide additional motivation for our employees and strengthen their team spirit. The program again was a great success and each participant achieved the weight loss in a healthy way with a lot of exercise.

HEALTH DAYS AT T-SYSTEMS RUSSIA

Our voluntary medical insurance program is available for all employees and includes a Health Day. A doctor is available for several hours at all our offices to carry out consultations every Monday. Our members of staff can ask the doctor questions about their concerns, get advice or obtain a referral note for treatment at a state clinic. Up to 20 employees can use the service every Monday. Around 15 people visit the doctor each week.

T-Systems Russia also provides the opportunity for a visit to a specialist doctor once a year:

- Neurologist: 60 employees attended a consultation in 2016
- Ophthalmologist: 60 employees attended a consultation in 2016
- Cardiologist: 107 employees attended a consultation in 2016

In addition, 70 employees were vaccinated in the fall of 2016.

HEALTH ACTIVITIES AND E-LEARNING FOR EMPLOYEES

In 2016, Slovak Telekom made arrangements to carry out a large number of preventive health checks for employees. The checks included measurement of blood pressure, cholesterol levels, varicose veins and hemoglobin. Health boxes were also provided for front-line staff, first-aid courses, massage sessions, lymphatic drainage, health seminars, and information about healthy food in the workplace. These activities are very popular at Telekom. 2,793 employees took advantage of the health checks and 1,390 participated in 14 health seminars and workshops featuring nutrition specialists, doctors and other professionals.

We have been using e-learning solutions to train our employees for more than ten years. They have proved to be successful for the education and training required under statutory regulations such as occupational safety and fire protection. More than 150 courses are available online. The e-learning system automatically notifies employees if they have not completed an assigned course. We incorporated a gamification mechanism in the system which allows employees to collect points for studying courses and then qualify at different levels. The element of competition and game further promotes digital education within Slovak Telekom.

TRAINING AND DEVELOPMENT

The need for highly qualified workers in the STEM img subjects (science, technology, engineering and math) will continue to grow in coming years. This development will particularly be felt in business areas such as cloud technology, big data, cyber security and the Industrial Internet. Our extensive training and continuing education offers help prevent a lack of these skilled workers, sharpen our company's competitive edge and get us ready for the digital future.

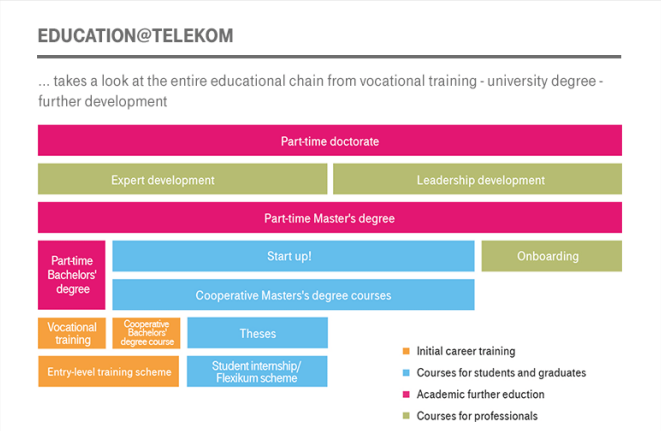
GOALS	MEASURES	MONITORING
› Promoting our employees' skills development and performance	› Training offers › Training and development › Management development › Talent programs › Digital forms of learning	› Number of openings for apprentices › Participation in training and development opportunities › Percentage of digital learning formats used › Employee satisfaction

INVESTING IN TRAINING AND DEVELOPMENT

Our goal is to identify and get talented young people on board early on in their careers. That is why we extensively invest in training and continued education. From 2016 until 2018 we are planning to annually hire a total of 2,200 apprentices, students in cooperative study programs and interns for our entry-level training scheme in Germany. This fixed number of openings enhances planning security. We currently offer nine training programs, eight cooperative bachelor's programs and three cooperative master's programs. We are one of the largest training providers in Germany with around 7,600 young people in training.

A wide array of development opportunities for our experts and managers complement our training offer. With these efforts, we improve career proficiency and effectively promote life-long learning.

The cornerstones of our vocational training and development programs are our Employee Relations Policy, Guiding Principles and Leadership Principles.



Strategic focal points

Our aim is to more intensively structure our vocational training and development programs around our company's future needs. Big data, all-IP img and security are some of our strategic focal points. In mid-2016, for example, we launched a pilot project using an online course to train employees to become big data experts. 50 employees from five different countries participated in the one-year e-learning pilot project. Our cyber security professional training, which we launched in 2014, went into its third round. This course has also been available since 2016 to employees with job experience.

Promoting digital learning

We have been promoting digital learning at our corporation for many years. In 2016 more than 30 percent of all course hours at our company were completed in digital form, with Germany recording more than 35 percent. Our modern formats are boosting the popularity of digital learning. Take our massive open online courses (MOOCs), for example. More than 3,500 employees from more than 32 countries signed up for these courses by the end of 2016. Other popular formats include simulations, short learning units for on the go and games. We also rely increasingly on informal digital learning. Our experts use communities to share ideas on tomorrow's topics. There are currently roughly 40 international communities of experts, 20 of which focus on Deutsche Telekom's strategic business areas. Community members at T-Systems use the "communities of practice" digital collaboration format to facilitate collaboration across segments, countries and hierarchies.

We will continue to expand our offer of digital learning formats in 2017. We laid the foundation for this at T-Systems in 2016 by purchasing licenses for external online platforms. T-Systems employees can now take advantage of a variety of learning offers from any location based on their requirements. 70 percent of T-Systems employees have signed up for the offer so far. In view of the favorable reception the program received at T-Systems, we are planning to roll out use of digital learning licenses throughout the Group and expand our list of providers for courses such as English coaching.

Group-wide leadership development

With our LEAD (Leadership Excellence and Development) program, we offer standardized business-based, strategically relevant learning formats to all managers at the Group. The portfolio covers central topics that support managers in mastering daily challenges as well as in their roles as leaders and team managers. The program is based on our leadership principles "Collaborate," "Innovate" and "Empower to perform." T-Systems also introduced a Vice President Leadership program in 2016. 32 selected managers will spend nine months learning about leadership and digital transformation in face-to-face and online courses.

Tools for performance assessment

The Performance Dialog is the tool that we use to assess the performance of currently around 2,800 top-level managers. The assessment involves not only target achievement levels but also looks at how the manager went about achieving these goals. Managers complete a self-assessment and obtain feedback from their colleagues sharing the same hierarchal level. We also continue to use our Compass tool to assess civil servants and employees covered by collective agreements in Germany and our Performance & Potential Review for employees outside collective agreements in Germany, a tool that is also used at many of our national companies.

Reviewing effectiveness

We regularly and systematically review the effectiveness of our training and development activities. These reviews involve standardized surveys conducted as part of our quality circle, which gives us a regular overview of the quality of our training and development activities via monthly reports. Our Bologna@Telekom program designed to encourage part-time study, for example, is now subject to extensive quality controls – from the application process to graduate management. We also ask employees to evaluate our training and development offers in our regular employee survey and employ additional tools beyond our standard reports and surveys in special cases.

RECRUITING TARGET: TO BE A GLOBAL MAGNET FOR DIGITAL TALENT

As a leading European ICT img service provider, we need the best minds: creative thinkers and employees with a knack for technology that want to help us design the digital transformation. We are looking for top people with talent to work for us as a global corporation. Our recruiting activities definitely play a key role in the ongoing internationalization of our company, which is why we continue to look for top talent in external and internal talent pools in a number of countries. We compiled all of our recruiting activities into one Global Competence Center in 2016 because standardized processes and tools help us work more efficiently.

We have positioned ourselves as an attractive employer in Germany, our native market. Our surprising, target group-oriented campaigns and initiatives on social media help boost our image as a sought-after employer. In 2016, the Potentialpark ranking once again confirmed that we have the best career website in Germany, and our social media activities landed us second place in a company comparison.

Last year we were also presented two awards by the Trendence Employer Branding Award committee: one for the best university marketing and the other for our "Vom Flüchtling zum Talent" (From refugee to talented employee) project in the Employer Branding Innovation of the Year category. In this project we specifically target refugees as potential candidates. The project is comprised of the www.careers4refugees.de job platform, internships for refugees and our "Train the trainer" project in which we teach volunteers and employees how to give application training.

We are currently particularly focused on increasing our attractiveness as an employer on new and growing markets. An example: Our Women's STEM img Award, which we have been presenting since 2013 in collaboration with "audimax" student magazine and the MINT-Zukunft-schaffen (Creating a STEM future) initiative, is now open to STEM students not only from Germany but also from other European countries.

Our new Global Competence Center will take over full management of our recruiting activities in 2017. Positions that require a particularly high degree of talent will be managed by our Global Strategic Active Sourcing team. Our experience with active sourcing, or active, personal contact with potential candidates via networks, trade fairs and events, has been so positive that we are planning to use this tool worldwide. This will make it easier for us to find and win over top talent.

START UP! TRAINEE PROGRAM FOR YOUNG INNOVATORS

Our international Start up! trainee program makes it possible for young people with entrepreneurial spirit who are open to new ideas and innovation to get started at Deutsche Telekom in Germany. We hope to attract graduates in STEM subjects to the trainee program. During a period lasting 15 to 18 months, trainees familiarize themselves with different areas of the company in Germany and abroad. They take on challenging project assignments in various business areas. Experienced mentors assist the trainees. The program is supplemented by innovative training formats and events. Our Start up! trainees also pursue their own initiatives and support social projects within the context of events such as our Social Days. A collaboration was launched in 2015, for example, among different refugee accommodation centers in and around Bonn under the motto "Telekom cares." Following a donation campaign in 2016, our Start up! trainees worked together with a children's home in Königswinter to plant a garden, tend it and bring in the harvest, which they enjoyed at a Thanksgiving celebration.

DEUTSCHE TELEKOM'S IN-HOUSE UNIVERSITY EDUCATES EXPERTS FOR THE TELECOMS MARKET

We educate experts for tomorrow's telecoms market at our University of Applied Sciences in Leipzig (HfTL). With 1,400 students in full-time, cooperative and part-time bachelor and master's programs, HfTL is the only university in Germany to offer this special profile. When it comes to research, we focus on ambitious topics that are relevant to society like conserving natural resources and advancing Germany standing in the technology sector. Research and teaching go hand-in-hand. Our research findings are seamlessly incorporated in the academic eduction of our students, guaranteeing that high-quality scientific knowledge is shared by the university, the company and society.

New data privacy certification program for Deutsche Telekom employees

Data privacy is a key factor in the acceptance and use of modern technologies. That is why we have set up a department for data privacy and security at HfTL university. Starting in the 2017 summer semester, Deutsche Telekom employees can expand their knowledge and expertise within the scope of the one-year certification program entitled Data Privacy and Security in Information Systems. The certification program conveys detailed knowledge of data privacy approaches in areas such as data management, data analyses, process design and law. We are also planning to give people with the right qualifications the opportunity to build on the certification program by taking a master's degree.

Graduates of this master's program will be able to develop scientific methods for problem solving in IT systems and advance data privacy methods through practical contributions.

Competition instead of class
Connecting academic education with the latest research results in the area of software engineering and using the latest teaching and learning methods has been a reality at HfTL since 2014 thanks to a challenging software engineering competition. In the 2016/2017 winter semester more than 160 students participated in the 3rd Software Engineering Competition. Students are asked to develop innovative solutions to current problems in the telecommunications industry and other business sectors. The projects cover a wide range of topics from web applications for associations and apps that can be used for song writing to budget planning for roommates. The student projects will be judged by an internal jury at the university on the basis of specified criteria. Creative implementation as well as programming, user friendliness, mobile usability and project documentation are all taken into consideration. The winners of the competition can look forward to attractive prizes like a workshop on the software development method Scrum and IT security or a trip to CeBIT.

Training experts for the 5th generation mobile communications
The HfTL university participates in global research and the development of 5th generation mobile communicationsin collaboration with different partners and projects. HfTL also focuses on training future experts in this technology.

Current research topics and challenges in the area of mobile communications are directly addressed in course materials. Ongoing exchange of knowledge and experience is guaranteed thanks to the active, intensive collaboration of bachelor and master's program students in development projects.

Hands-on lab activities are focused on optimizing the air interface in live-system operation.

Students develop measuring platform for polymer optical fibers
A key element in our study programs at HfTL is to actively involve students in research and development projects. This approach is also being taken in a recent research project on developing an environmentally friendly, energy-efficient production method for polymer optical fibers, which are used in data communication as well as in smart lighting concepts. HfTL is collaborating on the project with the Institute of Textile Engineering of RWTH Aachen University and Perlon-Nextrusion GmbH from Dormagen, Germany. The project is sponsored by the German Federal Environmental Foundation. Within the context of this research project, HfTL students developed an innovative measuring platform and programmed a user-friendly software for using the measuring platform.

ENCOURAGING DIVERSITY IN EDUCATION

We stand for open-mindedness and are committed to diversity, which is why we accept different levels and needs when it comes to junior staff.

- Depending on how long their families have been in Germany and where they come from, young people with migrant backgrounds often encounter particular problems on the job and vocational training market. We see encouraging them as an opportunity and are careful to guarantee an non-discriminatory selection process. And we have been successful: Today, 9.2 percent of our apprentices and students in cooperative degree programs have a nationality other than German, representing a total of 66 countries.

- In 2009 we launched the "My chance to get going" entry-level training scheme in collaboration with the German Federal Employment Agency. The project prepares disadvantaged young people with very little chances on the vocational training market for an apprenticeship at Deutsche Telekom. Results so far have been good. 483 out of 630 interns from 2009 through 2015 started a vocational training program with us. 104 were accepted into the first year of the program and 334 directly into the second year. Another approx. 30 interns started the program in 2016.

- Since 2011 we have been collaborating with the German Federal Employment Agency to offer single parents the opportunity to complete a training program or cooperative degree program part-time. 20 young people began their part-time training with this program in 2016.

- To encourage diversity in the program, 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, it has meanwhile risen to 22 percent.

- Around one percent of our apprentices are young people with disabilities. This is above-average in view of the total number of disabled people in Germany.

We have been helping refugees get their careers started since 2015 within the scope of the Group's refugee initiative. Between 2016 and 2018 we will be offering up to 100 refugees per year the opportunity to attend vocational training, a cooperative program of study or an internship within our entry-level training scheme. Around two-thirds of the openings we offered in 2016 were filled. In the recruiting process we rely on our longstanding, successful cooperation with the German Federal Employment Agency's job centers. We are particularly interested in integrating refugees into regular training structures and offering them the support they need. They receive professional support from their trainers or coaches and also have the opportunity to attend additional, job-related language courses. The training staff receives assistance from an external service provider to make sure that the special needs of this target group are met. The refugees also have access to counseling and supportive services as needed. Deutsche Telekom is planning to continue its involvement in integrating refugees into the professional landscape in the years to come.

DIGITAL SKILLS IN EDUCATION

Digital skills are one of the main qualifications that we encourage in our junior staff over the course of their vocational training or studies. To this end we give them access to different digital media. The main hub of our activities encouraging the development of digital skills is our online learning platform for apprentices and cooperative university students, which has been up and running since 2008. We encourage the next generation to post their own knowledge on the platform and to participate in the experience and knowledge of others in addition to focusing on the ongoing expansion of core learning offers. During the reporting year, for example, we added a variety of new topics to our digital materials, integrated a digital course on the topic of health and launched a learning blog. We also offer a number of online tools that our junior staff can use to assess their own skills and compare their knowledge and results with their program requirements. They can use the learning platform to virtually plan their learning schedule, document it and then later make it available to other apprenticds. We support independent learning with this offer.

TRAINING PROGRAM FOR CYBER SECURITY PROFESSIONALS ENTERS NEXT ROUND

Training courses for cyber security professionals (certified by the Chamber of Commerce and Industry) are important continuing education offers which we have established at our company in Germany. We launched this program at our company in 2014, closing a gap on the German education and job market. According to a study by the BITKOM industry association, IT data privacy experts are extremely hard to find on today's market. The study found that there were no vocational training programs and very few degree programs that people could attend to learn the necessary skills. Our aim is to change this, which is why we offer a two-and-a-half-year part-time course for professionals. Deutsche Telekom apprentices and students in cooperative study programs can apply for the program after completion of their vocational training or course of study. Skills development is integrated into standard activities and supplemented by topic-based and general modules in a variety of formats (classroom courses, e-learning, blended learning). Hands-on learning is combined with an academic approach. Those who complete the development program receive a certificate for IT security professionals from the German Chamber of Commerce and Industry. We won third place in early 2016 with the concept in the "Large Enterprise" category at the Education Awards hosted by the German Chambers of Commerce and Industry (DIHK).

The development program entered its third round in September 2016. A total of 30 professionals are currently taking part in the cyber security program. The first group will complete their certification exams in March 2017. The program is in high demand with 300 applications submitted each year.

The topic of usable security and privacy, i.e., the "human" factor in IT security, plays a particularly significant role in the program. With this focus, the program addresses the question of how to best design security systems so that they can be effectively used by people. In 2015 we collaborated with the Fraunhofer Institute for Communication, Information Processing and Ergonomics (FKIE) to develop a continuing education offer particularly focused on this aspect. The offer complements our training program for cyber security professionals. Participants can work toward a certificate as a "network forensics professional" or a "media forensics professional" within the scope of an academic program, making them certified experts in analyzing security incidents. The course was developed in collaboration with a number of universities.

In 2016 we also prepared another program that will be available to all of our employees as of 2017. The program addresses a number of IT security topics (including reverse engineering, forensics, network security, cryptography, cloud security and forensics and computer crime law.

SKILLS MANAGEMENT: READY FOR TOMORROW'S CHALLENGES

Forward-thinking skills management is essential to companies that want to stay competitive. The HR units engage in cross-departmental communication in order to identify the skills that our employees will need in the future and areas in which new skills are needed. We then structure our continuing education courses, re-qualification programs and new-hire activities accordingly.

Planning the job profiles of the future

The rapid pace of technological transformation is making it necessary to identify early on which skills our employees are going to need in the future. Our HR department collaborates closely with specialist units to this end within the scope of the Speed Boat project. They work together to identify strategic focal topics, develop future job profiles and determine the skills and hiring needs through the year 2020. Measures are then defined to close any gaps in terms of skills, hiring and training. The project was launched in 2015. After the first year, the teams had already defined the first job profiles of the future, e.g., data center infrastructure manager at Deutsche Telekom Technik. The project is considered a role-model project for the entire Group.

T-Systems HR Academy

Our human resources at the HR department also need regular continuing education to help them stay on top of the latest technological trends and future skills requirements. The T-Systems HR Academy focuses on the requirements of the digital future. The academy is currently offering a combination of face-to-face and online seminars in German and English in the workshop series that began in March 2016, Almost 1,000 employees signed up for the online seminars and almost 200 employees participated in 16 face-to-face workshops in Germany. The HR department also held an HR summer camp in which more than 40 T-Systems employees from different countries participated. At the camp, participants applied the design thinking method to three key HR projects.

ENCOURAGING AND RETAINING TALENT

Dedicated, technology-minded and service-oriented employees are pivotal to the success of our business. This makes it important to secure the loyalty of these talented employees, encourage them, get them involved and develop their skills further.. Our global talent management system serves as the basis for succession planning and placement of talented employees at our company.

„Talents@Telekom“: online platform simplifies hiring process
Talented people who are planning the next steps in their career or looking to gain experience by working on strategic projects can sign up on our Talents@Telekom online platform. Employees from Human Resources and Recruiting throughout the Group can use the platform to get in touch with them. With more than 449 employee profiles, 27 percent of which were posted by women and 41 percent by international colleagues, the response to the platform was slightly less than the previous year. The share of women (24 percent in 2015) and international colleagues (36 percent in 2015) increased compared to the previous year. The platform is a useful tool in simplifying the process of finding the right person for a position anywhere in the Group and increasing an employee's chance of getting noticed. It also encourages employees to gain experience at different business units or national companies and in a range of functions, furthering diversity at the Group.

"Do it yourself!" Talent Conference offers opportunity for dialog
Around 210talented people from roughly 20 countries attended the Talent Conference in Bonn in September 2016. The year's motto was "Do it yourself!“ or "How to take charge of your career." Participants had the opportunity to learn more about effective strategies to help them advance their careers. The event also offered an opportunity to network with around 100 of the Group's top-level managers, who made guest appearances at the event.

SECOND PERFORMANCE DIALOG FOR EXECUTIVES

Performance Dialog, which was introduced in 2014, is a tool for developing and assessing the performance of top-level managers. During the reporting period, the review was conducted with all executives worldwide for the second time.

Performance Dialog encourages ongoing dialog between executives and their superiors. Working together closely with their superiors and reflecting intensively on their own leadership style is expected to improve the performance of our executives and make the assessment process more transparent. This performance assessment is based on our Guiding Principles and our Leadership Principles "Collaborate," "Innovate" and "Empower to perform." In addition to being reviewed by their superiors, their colleagues for the same hierarchical level also assess their leadership style. This peer feedback also has a direct impact on target achievement.

Our Compass tool for assessing employees covered by collective agreements and civil servants in Germany and our international Performance & Potential Review continue to be used throughout the Group.

EMPLOYEE DEVELOPMENT IN CROATIA

Our professional education programs “HT Academy” and “Education of your choice” enable all our employees to participate in a rolling program of skill enhancement. In 2016, we launched our new talent management program “Top Talent” with the aim of retaining and motivating our key people and high-potential staff. Manager nomination and assessment center results were used to identify 105 talented high-flyers with expert or leadership career potential out of larger pool. The high-flyers participating in targeted development activities over a period of 1.5 years. They were given individual development plans and took part in customized development programs, strategic projects and special events like the talent forum. By the end of 2016, 30 percent of these top talents had been promoted to a more complex or managerial role.

MAGENTA INFUSION LEADERSHIP PROGRAM WITH GIBS IN SOUTH AFRICA

In order to develop leaders who can deliver on the TSSA strategy of Growth and enable our value proposition through competency development, we collaborated with GIBS (The GordonInstituteof Business Science Business School of theUniversity of Pretoria) to design the Magenta Infusion Leadership Program with the help of expert assistance and specialist input. The focus of the program was on competency and behavioral change based on our cultural pillars of:

- Collaboration
- Innovation
- Empowered to Perform leading to Customer Centricity

The blended learning approach comprises master classes facilitated by worldwide specialists, e-learning modules, leadership competency and behavior assessment, team collaboration, courageous conversations and a marketplace day. We succeeded in achieving the desired outcomes of the program. These involve our leaders in contributing to a good financial year 2016, behavioral changes such as a change in mind-set, increased collaboration and better understanding of the strategy. The evaluation of the master classes received from delegates on the value added provided by the program was between 83 and 85 percent.

In 2017, we will hold another leadership competency and behavior assessment and expect to see competency improvements. All in all, 109 leaders completed the program in 2016.

EMPLOYABILITY PROGRAM

T-Systems Netherlands deliberately encourages employees to invest in their professional development and position themselves as experts in their individual fields. This is reflected in the company’s Employability Program, which promotes employees’ well-being by enhancing their knowledge of the internal tools and international platforms provided by the organization.

In 2016, we evaluated the Employability Program that has been running for a number of years. Our priority is to maintain a high level of awareness level for this topic. During the course of 2017, we are going to put more instruments in play to enable our employees to increase their value inside and outside the organization. Our mission statement is “Movement and growth – personal and for the organization”. We want to train our employees for the internal and external labor market and preserve employment opportunities in the Netherlands. Our training and projects are focusing on future workforce (developing IT and business skills), work in a digital age (virtual, intercultural and flexible working), health benefits, and recognition (inventiveness and recognition of individual contributions). We use our career checks to measure the progress of the program.

DIVERSITY AND EQUAL OPPORTUNITIES

People from approximately 150 countries, women and men, young and old as well as people with different abilities and cultural backgrounds, work together effectively at Deutsche Telekom. This diversity helps us remain a key player in global competition with the best team, good ideas and the best products.

GOALS	MEASURES	MONITORING
› Encouraging internationality and intercultural experiences › 30 percent of management positions to be filled by women	› Fair Share initiative to increase the number of women at our company › Work-life balance offers › Multiplier and mentor programs for experts and managers › Action plan to promote inclusion › Entry-level training scheme for disadvantaged young people	› Percentage of women at the company › Percentage of women in managerial positions › Percentage of employees working part-time or on parental leave › Percentage of employees with disabilities › Percentage of disadvantaged young people starting an apprenticeship › Diversity in HR development programs

SUPPORTING DIVERSITY

Our aim is to promote and benefit from the diversity of our employees as a source of creativity and innovation. That is why we offer our employees numerous opportunities to grow personally and professionally, regardless of their gender, age, sexual preference, health situation, ethnic background or culture.

We are particularly concerned with increasing the number of women in expert and management careers at our company. We want to be the first DAX-30 company to have 30 percent women in middle and senior management positions. To this end, we launched the Fair Share initiative.

We have been encouraging our employees to value diversity at the Group since 2015 with our unconscious bias campaign. We used explanatory videos and practice-oriented workshops to show to our employees how an unconscious bias influences thoughts, feelings and actions and how such behavioral patterns can be overcome. We held more than 90 workshops (face-to-face or online) in Germany in 2016 alone. We offer multiplier and mentor programs to establish managers as role models and ambassadors who encourage diversity. Many of our employees have become actively involved in addressing various aspects of diversity, for example as members of internal initiatives such as queerbeet, a network of lesbian, gay, bisexual and transsexual employees, or of the numerous women's networks that have been established within the Group. These measures are heavily based on our Diversity Policy, Guiding Principles and our Employee Relations Policy as well as the Deutsche Telekom Social Charter. We are also a founding member of the Diversity Charter association. Click here for more information for investors and rating agencies.

As early as during the hiring process we emphasize diversity and consider options other than just traditional educational routes. One good example is 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 extensive offerings to allow our employees to work at their best. This includes daycare offers and assistance with caregiving, offers which exceed legal requirements. Examples include different options for reducing working hours and the guaranteed return to full-time work. All employees can return to their full weekly hours whenever they want. In 2016 we also introduced lifetime work accounts, which can be used by our employees to take limited time off, for example.

We regularly assess the effectiveness of our measures for encouraging diversity and publish the findings on platforms such as Fair Share and the Deutsche Telekom work-life report. The share of women on our Group's Supervisory Board has meanwhile risen to more than 40 percent. And the proportion of part-time employees at our company continues to increase as well. 13.4 percent of employees covered by collective agreements and 20.7 percent of Deutsche Telekom civil servants throughout Germany are currently working part-time. The number of disabled employees working for us in Germany puts us well over the statutory quota of 5 percent.

FOURTH GERMAN DIVERSITY DAY

As in previous years, we participated in the fourth German Diversity Day held by the Diversity Charter association in 2016. This year we hosted a Rhine-Ruhr Diversity Network event under the motto "Diversity makes the difference – cultural skills for business success." Around 100 managers met at the event to discuss the role diversity plays in success in the business world.

GERMAN DIVERSITY CONFERENCE 2016

The Diversity Conference is an independent platform for dialog, strategy and innovative projects focusing on diversity. We have been organizing it in collaboration with the German newspaper Tagesspiegel and the Diversity Charter association since 2012. Deutsche Telekom is a founding member of the initiative. Key players from the worlds of business, politics, society and science once again met at the conference in Berlin in 2016. Focal topics included real life experience of organizations and companies and questions like: Which trends are going to define the workplace in the future? What has changed in the last ten years since the Diversity Charter was founded? What areas require the most attention? Participants tweeted about the topics and presentations during the event. The tweets were posted on a Twitter wall. Deutsche Telekom made the software available at no charge.

INCLUSION ACTION PLAN COMPLETED

We are committed to enabling people with and without disabilities to work together. For years now, we have made sure that more than 7 percent of employees at the Group are people with disabilities, considerably more than at many other companies. With our "Experience diversity – Inclusion@DT" action plan we added another tool promoting inclusion in 2016. The action plan helps us comply with the UN Convention on the Rights of Persons with Disabilities. The convention specifies targets and gives advice on how to encourage inclusion. It also requires companies to create universal access at the workplace so that it is accessible to both people with and without disabilities. Our commitment to employees with disabilities received the 2016 Rhineland Palatinate award for exemplary employment of people with disabilities.

CHILD AND CAREER MENTORING PROGRAM: SECOND ROUND COMPLETED

We completed the second round of our Child and Career mentoring program in September 2016 after a run of 22 months. In the program, we provide support to young experts and managers during the time before, during and after parental leave. They are mentored by an experienced manager during this transitional period, learn new skills during tandem activities and benefit from dialog in new networks. 31 tandem teams took part in the second round of the program. More than 90 percent of participants were female and half of the mentors were women. 58 percent of participants landed a new position at the company with the help of the program, 32 percent of which transferred to a more challenging area.

TRAINING PROGRAM PREPARES EMPLOYEES 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) . The goal is to create a pool of candidates who could potentially assume a position on the supervisory board at a Deutsche Telekom company in Germany or abroad. We are particularly interested in encouraging women to take on supervisory board positions. In addition to information on the traditional activities of supervisory board members, the training also gave insight into practical experiences presented by supervisory board members, case studies from the Group and a simulated supervisory board meeting.

The second round of the program with 33 participants ended in summer 2016. This time seven of the participants were men. So far we have trained a total of 64 potential supervisory board members, around half of which work at national companies outside of Germany. Eight people who have completed the program were appointed to a Deutsche Telekom supervisory board.

FAMILY MANAGER PILOT PROJECT COMPLETED

In July 2015 Deutsche Telekom set up the Family Manager pilot project as a point of contact offering employees personal advice on all kinds of topics relating to the reconciliation of work and family. This offer also included a family hotline. This pilot project was scheduled to run for one year and was available in Bavaria only.

The results following completion of the pilot project were good. 200 employees and managers contacted a family manager for advice within that year. 500 employees at our Munich and Nuremberg offices also signed up for monthly seminars on the topic of caregiving. We were able to use what we learned from the project to further improve the work-life balance of our employees.

COMMITMENT TO INCREASING THE NUMBER OF WOMEN IN MANAGERIAL POSITIONS

In 2010 we became the first DAX-30 company to commit to staffing 30 percent of our mid and upper-level management positions worldwide with women. Our Fair Share initiative is designed to help us achieve this goal. In 2011 we also launched an initiative together with two other companies to boost the number of women in managerial positions at the 30 DAX-listed companies, an initiative that is unique in Europe. With these initiatives we were able to help fuel the ongoing public debate on the topic.

We initiated a number of measures to help us achieve our goal: work-life balance offers such as parental leave models, flexible work hours and childcare offers, a mentoring program for supervisory board candidates and targeted communication with talented women via our Talents@Telekom platform.

As a result, we have been able to continually increase the share of women in management positions since 2010. With 40 percent on the Group's Supervisory Board, we have already surpassed our own goal in Germany as well as the legal quota introduced on January 1, 2016. Since announcement of the women's quota of 30 percent in early 2010, we have been able to increase the percentage of women throughout the Group from 19 percent to a current 25,4 percent . We extended the deadline to 2020 and expanded the area of application to the two levels below the Board of Management and managing boards as well as to our internal supervisory boards in Germany. With these efforts, we are significantly surpassing the statutory regulations in effect in Germany since 2015. We are planning to further pursue the measures we have already taken in order to reach our goals.

SPONSORSHIP OF “EVERY WOMAN IN TECHNOLOGY” AWARDS

T-Systems Limited partnered with Everywoman in 2013 and is now an active member of the network. Everywoman is a membership organization that has championed the advancement of women in business since its foundation in 1999. It works alongside companies looking to develop and retain a pipeline of female leaders who want to advance themselves and others.

We have our own Everywoman community with the aim of helping staff connect and stay inspired by providing the opportunity to network internally and externally, and to attend in-company webinars, bi-monthly meetings and an annual event to hear and learn from each other and from leading women in the technology industry. As part of our commitment to the Everywoman program, we attended the “Everywoman in technology” awards in 2016 taking some of our customers with us to help build our brand and maintain a broad client relationship. The awards play a vital part in highlighting role models whose stories and achievements demonstrate to those young women and girls that they too can achieve great success if they opt to forge a career in IT.

T-Systems views the Everywoman program as an important part of its strategy and will continue to support it in 2017.

SUPPLIERS

We are systematically working to create a sustainable ICT img supply chain. Our efforts are based on trusting, long-lasting relationships with our suppliers as well as tried-and-true tools, methods and measures.

INTERESTING TOPICS AND CONTENTS

Measures for a sustainable supply chain →

Buyer handbook on sustainable procurement introduced →

Award for climate protection along the supply chain →

110 participants in sustainability dialog in China →

Four new additions to supplier development program →

2016 audit results at a glance →

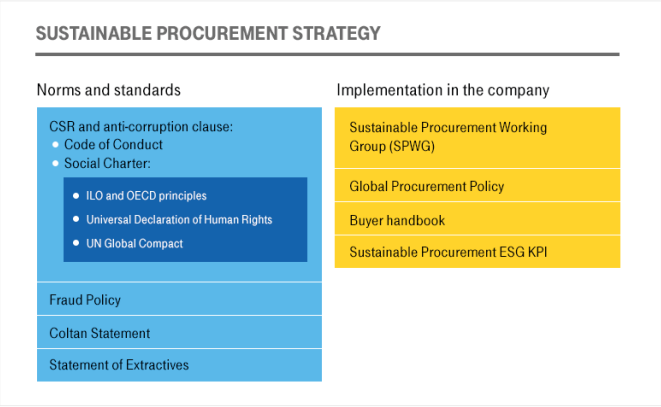
SUSTAINABLE PROCUREMENT STRATEGY

Non-governmental organizations (NGOs) and media continue to uncover violations of human and employee rights as well as environmental standards along the supply chain for phones, laptops and other ICT img products. As one of the largest telecommunications service providers worldwide with more than 30,000 suppliers in over 80 countries, we take this issue seriously. We use effective management tools to make sure our suppliers and manufacturers provide humane working conditions and are involved in effective environmental protection.

GOALS	MEASURES	MONITORING
› Implementing sustainable procurement strategy	› Standards and guidelines › Group-wide implementation by Sustainable Procurement Working Group › Employee training courses › Stakeholder engagement › Establishing escalation procedure for serious cases	› Sustainable Procurement ESG KPI › Sustainability rankings

MANAGING SUSTAINABILITY IN PROCUREMENT PROCESSES

We continue to make our supply chain more sustainable and have laid the foundation for this with our sustainable procurement strategy. We adhere to principles for socially and environmentally friendly procurement throughout the Group and manage our processes with the help of internal and external performance indicators and management tools.



Fundamental norms and standards

We have defined minimum social and environmental standards for our corporate governance through our Guiding Principles and voluntary commitments. We also require our suppliers to comply with these standards. Our CSR and anti-corruption clause forms an integral part of our supplier agreements to ensure compliance. The clause makes reference to the following Group policies:

- Our Group-wide Code of Conduct,
- Our Social Charter.

In addition, our collaboration with suppliers is based on the following principles:

- The Fraud Policy,
- The Coltan Statement and
- The Statement on Extractives.

With our Social Charter we have made a commitment to complying with the fundamental principles and standards set forth by the International Labour Organization (ILO img) and the Organisation for Economic Co-operation and Development (OECD img) as well as with the Universal Declaration of Human Rights and the UN Global Compact img.

Commitment to sustainable procurement

Our strategy for realizing sustainable procurement practices is based on our CR strategy and has been effectively incorporated into our procurement processes. The Sustainable Procurement Working Group (SPWG) ensures Group-wide, i.e. international, compliance. The members of the SPWG img are available to assist our employees in all sustainability-related procurement matters. The heads of the CR and Procurement departments are jointly responsible for the implementation of sustainable procurement practices. They report directly to the Board of Management member for Human Resources and Finance, respectively. Our escalation process calls for decisions to be made at Board of Management level in serious cases. We have also specified all necessary requirements to ensure sustainable procurement for the BuyIn joint venture.

We have incorporated our sustainability principles into the Group's Global Procurement Policy to provide orientation for our buyers. The procurement practices set forth in the policy provide specific guidelines for procurement in Germany and serve as recommendations for our subsidiaries. An e-learning tool is available to our employees throughout the Group for training purposes. Our buyers can, for example, use the tool to learn how to implement our sustainability principles in their daily business activities. Our new buyer handbook provides an overview of which CR criteria need to be taken into account during which part of the procurement process. We use random sampling to review acceptance of our CSR and anti-corruption clause among our suppliers.

KPI img to promote sustainability

We measure and manage our sustainability performance in our procurement activities with the Sustainable Performance ESG key performance indicator (ESG KPI). This KPI measures the ratio between the procurement volume we receive from suppliers whose compliance with social

and environmental criteria has been verified through self-assessments, E-TASC img or social audits, and our total procurement volume. Our goal is to cover 80 percent by 2020.

Scores in sustainability ratings

Every year leading rating agencies measure the sustainability performance of large enterprises. Deutsche Telekom scored 98 out of 100 points in the supply chain management category of the 2016 RobecoSAM img Corporate Sustainability Assessment. We were able to make improvements from the previous year and are currently among the industry leaders.

110 PARTICIPANTS IN INTERNATIONAL SUSTAINABILITY DIALOG

Around 110 interested parties from ICT companies, NGOs, scientific institutes and auditing firms met in Nanjing, China under the motto: "How sustainability can accelerate the delivery of business benefits." The event was organized by the Joint Audit Corporation (JAC), a collaboration of 13 telecommunications service providers of which Deutsche Telekom is a founding member. Participants talked about how to best realize sustainability along the ICT supply chain as well as its benefits for companies. The discussion included approaches on how to assess the entire product life cycle in consideration of social and environmental criteria.

The event made one thing perfectly clear: Sustainability along the supply chain pays off. Responsible employee relations not only help improve employee satisfaction, but also reduce employee churn rates, increase product quality, minimize rework and up productivity.

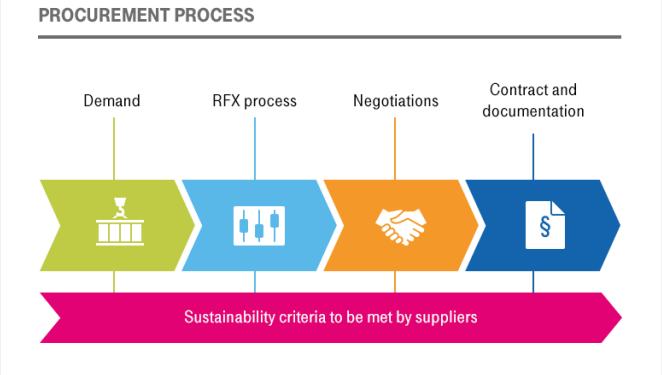
JAC is planning to further improve sustainability along the supply chain by intensifying audit activities and encouraging suppliers and other relevant stakeholders to share their experiences more actively.

TRAINING AND HANDBOOK ON SUSTAINABLE PROCUREMENT

The topic of sustainability in day-to-day business was a focal point of our training activities for buyers in 2016. New employees attended a four-day training where they learned about processes and tools for sustainability. In addition, 561 employees took advantage of our Sustainable Procurement e-learning tool in 2016. We are planning to rework and update our online training offer in 2017.

We created a new buyer handbook during the reporting period. It provides an overview of which CR criteria need to be taken into account during which part of the procurement process. The handbook helps our buyers quickly identify where to apply sustainability processes, where to find the right documents and who to contact with questions.

Our training activities go beyond our own employees. We also offer sustainability training to our business partners and suppliers through our supplier development program.



SUPPLY CHAIN MANAGEMENT

We maintain business relationships with more than 30,000 suppliers in over 80 countries. Our relationships with suppliers are based on trust and dialog combined with monitoring and providing concrete support for the implementation of sustainability standards. We have a variety of instruments, methods and measures in place to help us improve the sustainability of our supply chain. Our basic aim is to recognize the cause of any problems and to work closely together with our suppliers to resolve them.

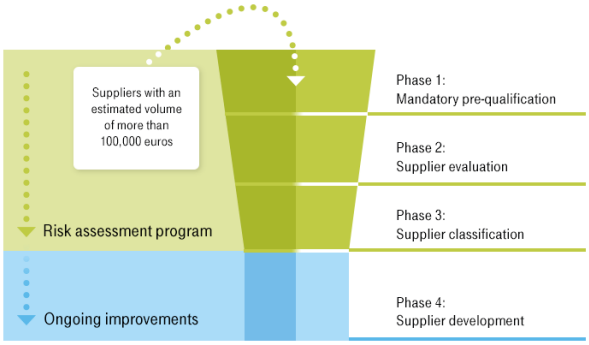
GOALS	MEASURES	MONITORING
› Increasing the share of suppliers audited for sustainability	› Weighting sustainability aspects at 10 percent for bids › Supplier surveys and self-assessments › Supplier evaluation and development › Escalation process for violations	› Results of online surveys › Social audits › Sustainable Procurement ESG KPI

IMPROVING SUSTAINABILITY IN THE SUPPLY CHAIN

Depending on the development phase of the supplier relationship, we use different tools to make our supply chain more sustainable. A ten-percent sustainability-weighting factor is included in all bids for proposals. This creates strong incentives for suppliers to offer more sustainable products and services.

We also use a four-level approach to minimize risks and encourage our suppliers to improve their practices. The funnel chart illustrates the process. Via our supply chain management system we initially ask all potential suppliers with an annual order volume of more than 100,000 euros about 18 sustainability-related aspects (phase 1). These aspects relate to human rights and corruption as well as environmental protection and occupational health and safety. All suppliers are subject to mandatory re-qualification after three years.

RISK MINIMIZATION AND SUPPLY CHAIN MANAGEMENT



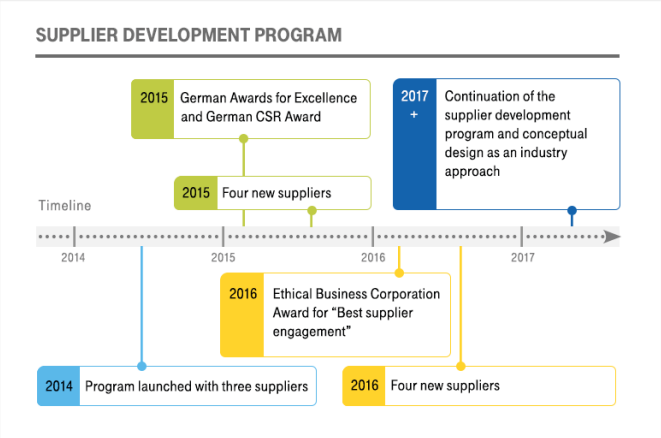
As the business relationship proceeds, we ask strategically relevant and/or high-risk suppliers to enter extensive information about their practices in the E-TASC img (Electronics Tool for Accountable Supply Chains powered by EcoVadis) information system. Experts evaluate these statements on the basis of additional background information and targeted research. We take things a step further in our relationships to some suppliers that exhibit a higher CR risk and conduct on-site social audits (phase 2). In doing so, we focus not only on direct suppliers of Deutsche Telekom but also on downstream suppliers as far as possible. We also boost the effectiveness of our audits by collaborating with thirteen other companies in the Joint Audit Cooperation (JAC). The increase in the number of JAC members means that the number of suppliers that do business with several members of the cooperation is growing. This prevents audit redundancies.

Based on the information obtained from suppliers and on audit results we classify and evaluate suppliers according to CR criteria (phase 3). This is done using supplier scorecards, which let us assess a supplier's sustainability performance and compare them with other suppliers at a glance. All available sustainability information (from the E-TASC information system, our own research, audits and pre-qualification results) are included in our assessments of top suppliers.

We work closely with our suppliers to address any acute problems that are identified. We have set up a continuous process to help these suppliers improve their sustainability for the long-term. Our supplier development program (phase 4) and sustainability workshops are key elements of this process. We held workshops with four suppliers in 2016. In cases of significant disregard of our requirements, we initiate an escalation process to effect fast resolution in accordance with the Deutsche Telekom sustainability standards. The results of the supplier evaluations and the measures taken to solve the problems are recorded centrally.

FOUR NEW ADDITIONS TO SUPPLIER DEVELOPMENT PROGRAM

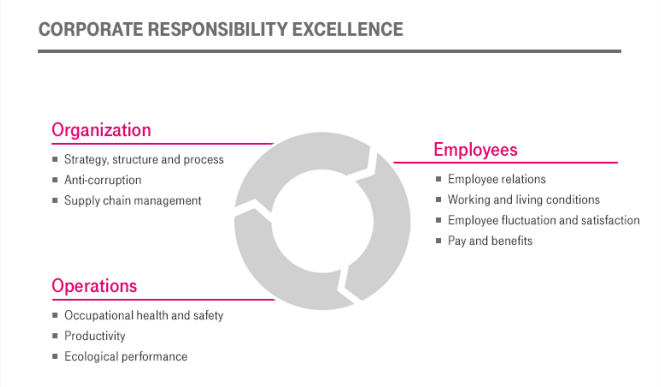
We collaborate as partners with our suppliers to make sure they are able to meet our high sustainability criteria with measures like our development program for key strategic suppliers. In this program we work together to come up with solutions for topics such as environmental protection, working hour regulations and occupational health and safety. It is a clear win-win situation for us as well as our suppliers because better working conditions have a positive influence on employee loyalty and motivation, raise productivity and improve the quality of products. In 2016 we added four new suppliers to the program; it now comprises a total of eleven suppliers.



The program's success is tangible. The following improvements have been made at Chinese suppliers, for example:

- Work hours at one of our suppliers have dropped from 68 to 48 hours a week.
- Another supplier upped its productivity by 12 percent thanks to improved production processes.
- Waste at the main facility of another supplier was reduced by 16 percent thanks to a waste analysis.
- One supplier now generates 16,902 metric tons less CO_2 per year, equivalent to the CO_2 emissions of 10 fully booked flights from Berlin to New York.

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. Suppliers receive support from Deutsche Telekom experts as well as professional external consultants in applying these measures. All activities and results are documented so that we can gauge the effectiveness of the measures employed. Adjustments are then made as needed.



We conducted a pilot online survey during the reporting period to assess the effectiveness of corrective measures following social audits. Supplier employees had the opportunity to anonymously rate improvements in nine different areas. We analyzed the results of the survey and introduced additional improvement measures where necessary.

We are planning to use such surveys as a standard tool in the future to assure the quality of improvement measures introduced in social audits and in our supplier development program.

We also developed training content for our suppliers. This content will be made available via an online tool in 2017 and suppliers will be able to use it independently. We are hoping this will help us reach even more suppliers.

COMMENDATION FOR COMMITMENT TO SUSTAINABLE SUPPLY CHAIN

We are committed to the sustainability of our supply chain and were once again recognized for our efforts in 2016. The Ethical Business Corporation presented us with 1st prize for Best Supplier Engagement. The jury was impressed by our supplier development program (SDP). They were particularly inspired by the results that our suppliers have already achieved.

From left to right: Luis Neves (Climate Change & Sustainability Officer, GCR DTAG), Antonio Veloso (Senior Expert for Supply Chain Management, GCR DTAG), John Spear (SDP, EPI Consulting cooperation partner)

We were also able to score points with our engagement in the supply chain during the previous year. In 2015 we were presented the German Award for Excellence in the "Responsible sourcing" category at the DQS Sustainability Conference for our "ongoing supplier development efforts for permanent improvement of sustainability performance." In 2015 we also received an award in the "CSR along the supply chain" category of the German CSR Award. The award recognized our genuine approach to ongoing supplier development.

AWARD FOR CLIMATE PROTECTION ALONG THE SUPPLY CHAIN

The NGO CDP regularly reviews the climate protection activities of companies. For the first time CDP asked companies in 2016 how they involve their suppliers in their climate protection activities. We were among the leading companies right away.

- After all, we act ourselves as a supplier to our customers. Suppliers publish their CO_2 emissions within the scope of the CDP supplier program. We received a top score of "A." Out of 4,300 participants only 112 suppliers received this score.

- CDP's new supplier engagement rating assesses how well companies have been able to integrate the topic of climate protection into their supply chain. In 2016 only 29 out of over 3,300 participants qualified for the Supplier Engagement Leader Board, among them Deutsche Telekom.

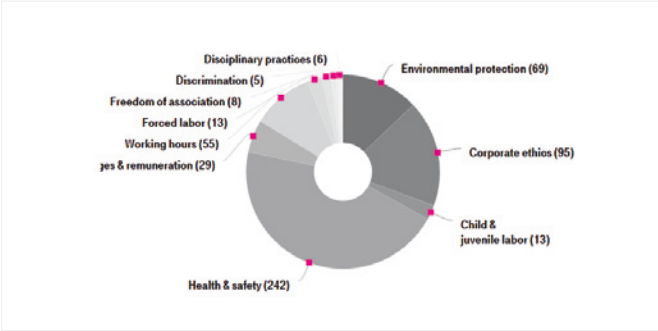
We were also included in the A list in CDP's general ranking for the first time in 2016.

2016 AUDIT RESULTS

A total of 73 social audits, 13 on direct and 60 on indirect suppliers of Deutsche Telekom, were conducted in 2016 through the auditing program set up and managed at Group level. Just like in previous years, our activities were focused on suppliers in Asia, particularly China and a few neighboring countries such as Singapore, Malaysia, Thailand, India and Vietnam. We also conducted social audits in Mexico, Brazil and eastern Europe.

Audited suppliers included manufacturers in the areas of IT hardware, software and services as well as networks and devices. No cases of corruption or bribery nor any critical violations of compliance policies or the right to intellectual property were found during the audits.

THE 2016 AUDIT RESULTS AT A GLANCE



Legend: Area (Number of violations)

DETAILED RESULTS

We do not audit all of our suppliers (over 30,000) equally but instead focus on strategically important or high-risk supplier groups. We focus on roughly 200 suppliers that are regularly audited every three years. The majority of these audits are conducted within the scope of the Joint Audit Cooperation (JAC).

A total of 535 violations of Deutsche Telekom supplier requirements were identified during the audits conducted in 2016, 17 of which were unacceptable incidents. The audits also uncovered additional critical findings at 49 suppliers – 197 individual cases in total. Click herefor some examples of unacceptable and critical violations as well as the measures taken to improve these situations.

468 of the identified violations (52 of which were critical) were remedied by the end of 2016. The improvement measures had not yet been effectively concluded in the other cases. Most of the violations related to occupational health and safety (47 percent), This reflects an increase of 3 percentage points compared to 2015. The number of corporate ethics violations also increased slightly (from 16 to 18 percent). This can particularly be attributed to inadequate CR management and, especially with regard to procedures and policies, risk assessment, -risk monitoring, reporting and training. Working hour violations came in third with 12 percent (2015: 12 percent).

EXAMPLES OF PROBLEMATIC FINDINGS

Area	Findings at suppliers	Initiated improvements	Status (end of 2016)
Business ethics	No process in place to protect intellectual property or confidential information.	Introduction of a process to protect the intellectual property and confidential information of the supplier and its customers.	Ongoing
Discrimination	All male employees interviewed said they were checked for tattoos during the application process.	Making sure that applicants are no longer checked for tattoos.	Ongoing
	Conducting pregnancy tests during recruitment.	Removed pregnancy test item from health certificate report.	Completed
Environmental protection	No environmental permit or similar permit obtained from local authorities.	An environmental permit was issued.	Completed
	Improper disposal of hazardous waste from sludge containing aluminum.	Making sure that hazardous waste from sludge containing aluminum is disposed of by a qualified specialist.	Ongoing
Health and safety	No effective fire alarm system installed.	Purchased and installed a fire alarm system.	Completed
	Emergency exit signs were hung in the wrong places.	The emergency exit signs were repositioned and hung in compliance with legal regulations.	Completed
Wages and performance-related remuneration	Overtime was not recorded, making it impossible to assess whether employees were being paid overtime rates specified by law.	Making sure all employees are paid overtime rates specified by law.	Ongoing
	Due to a structural calculation error, employees were receiving insufficient basic wages for full hours worked if they did not show up to work on all work days in a month.	Making sure all employees are paid the wage rates specified by law.	Ongoing
	Overtime rates for temporary workers were too low.	Temporary workers are no longer being hired.	Completed
	Employees being let go were not being paid their final salary payment within seven days as required by law.	Making sure that employees leaving the company receive their final salary payment within seven days.	Ongoing

Wages and performance-related remuneration	Employees did not start receiving social security coverage from their employer until they had completed a two-month trial period.	The local social security office confirmed that this regulation is permitted by law.	Completed
	No union organizations or works council in place.	A union organization or works council is being formed.	Ongoing
	Not all employees had full social security coverage and a retirement plan or full maternity leave.	Making sure all employees have full social security coverage as specified under law.	Ongoing
	Employees had to pay a certain amount of money as a deposit on work clothes loaned to them by their employer.	Making sure that employees no longer have to pay a deposit for work clothes or similar.	Ongoing
	Part of the wages exceeding minimum wage as well as overtime were being paid in cash. Payments were documented.	Wages need to be regularly reviewed as to whether they are fair or at least in line with the subsistence level.	Ongoing
Working hours	Considerably more overtime was being worked that permitted by law.	Measures were taken to gradually reduce overtime so that compliance with national working hour regulations can eventually be achieved.	Completed
Child and juvenile labor	Young employees had to pay the costs for a health test conducted during recruiting themselves.	Making sure the costs for the health test are paid by the company.	Ongoing
	Young employees were working night shifts and overtime.	Making sure that young employees no longer work night shifts or overtime.	Ongoing
Disciplinary measures	Fines were being used as a disciplinary measure. Employees not in compliance with internal guidelines were subject to pay deductions.	Making sure fines are no longer used as a disciplinary measure.	Ongoing
	According to work instructions and the employment contract, employees are under the obligation not disclose the amount they are being paid. Violation of this regulation is seen as a serious matter that can lead to termination of employment; it also makes it difficult to exercise the right to collective bargaining.	The reasons specified in the work instructions for determining a serious violation are being reviewed and adjusted as necessary. This particularly applies to the requirement that employees refrain from disclosing wages.	Ongoing

RESOURCE SCARCITY AND RAW MATERIALS SOURCING

Production of electronic devices like smartphones is harmful to the environment and requires large amounts of water and energy. Because the production facilities of suppliers and manufacturers are often located in regions where water is scarce or the population does not have sufficient access to electricity, the availability of resources plays a more significant role there than it does in countries like Germany.

Moreover, valuable raw materials like metals are used in producing smartphones and other ICT img products. Some metals, including tantalum, gold, tin and tungsten, are extracted from ores, some of which are extracted in the eastern part of the Democratic Republic of Congo under conditions that are inhumane and/or associated with civil war. The parties involved in conflict in the region use the profit for purposes such as financing civil wars. Deutsche Telekom does not produce any ICT products itself. We purchase these products from international manufacturers and sell them at our stores, offer them in the context of service provision or use them in our network infrastructure. We require our suppliers to refrain from using any of these conflict resources. We also support industry initiatives like the Conflict-Free Sourcing Initiative, which work toward a more sustainable supply chain.

GOALS	MEASURES	MONITORING
› Conserving resources and promoting responsible resource extraction	› Supporting the Conflict-Free Sourcing Initiative › Conflict-free resources integrated into our manufacturer product requirements › Coltan Statement › Statement on Extractives › Research project on recycling tantalum	

SUPPORTING RESPONSIBLE RESOURCE EXTRACTION

Deutsche Telekom requires its suppliers to protect the environment and use resources responsibly. These requirements are documented in our Social Charter. They are also included in detail in our CSR clause, which has been a mandatory component of our General Terms and Conditions for Purchasing since 2013. We require our suppliers to provide information on their activities as part of a self-assessment and conduct supplier audits to emphasize the importance of these requirements. In the scope of the audits, we check whether our suppliers use an environmental management system and how they manage their energy and water consumption, as well as other factors. We also explicitly ask them about their waste management system.

Handling critical raw materials

We collaborate with suppliers and industry initiatives to effect responsible raw materials sourcing. One
of our requirements on suppliers is that they do not use any conflict resources in the devices that we sell or the network technology we employ.

We published our Coltan Statement in 2005 and added the Statement on Extractives in 2009. The use of conflict-free resources has been a product requirement on our manufacturers since 2014. The purpose of this decision is to make sure that both our direct suppliers as well as their sub-suppliers minimize the social risks that come with extracting raw materials. We require our suppliers to comply with Deutsche Telekom's Statement on Extractives img. Policies regarding conflict resources and their use are also an integral aspect of our supplier audits.

Recycled tantalum, on the other hand, is considered conflict-free, That is why Telekom Deutschland GmbH is conducting a research project on reclaiming precious metals such as gold and tantalum from outdated network infrastructure components.

TOGETHER AGAINST CONFLICT RESOURCES

Deutsche Telekom has supported the Conflict-Free Sourcing Initiative (CFSI) ever since it was founded in 2008. CFSI is the largest business initiative for responsible raw materials sourcing. Its objective is to identify conflict resources and prevent their extraction and sale.

CFSI is based on a working group that was founded in 2008 by the Global e-Sustainability Initiative and the Electronic Industry Citizenship Coalition industry associations (Extractives Working Group) to address sustainable raw materials extraction. Since then, the number of metal processing companies and smelters participating in CFSI has continued to grow. 241 of these companies have been audited in compliance with the standard audit protocol (as of January 2017).

CLIMATE & ENVIRONMENT

We are dedicated to protecting the climate and environment. To this end, we record and reduce CO_2 emissions along our entire value chain. We also implement numerous measures to improve energy efficiency, conserve resources and minimize environmental impact.

INTERESTING TOPICS AND CONTENTS

Improved energy efficiency at German data centers →

Tantalum recycling intensified →

Pilot test for energy-efficient climate control a success →

Inclusion in CDP ranking →

Cogeneration units reduce CO_2 →

Cornerstone laid for Biere 2 →

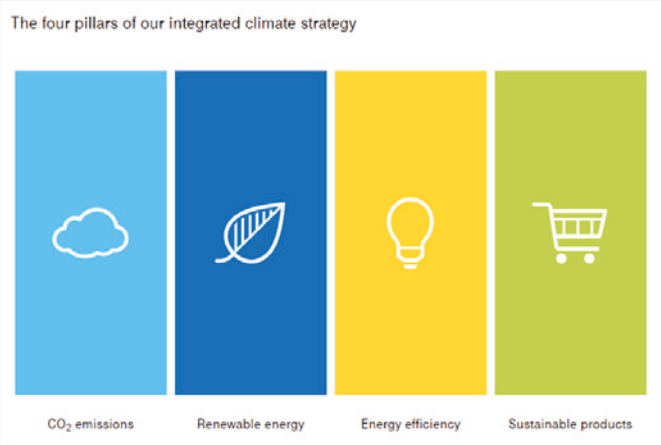
CLIMATE STRATEGY

One of our goals is to reduce the 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 base year 2008 (excluding T-Mobile USA). One step in this process is investing in energy-efficient network technology.

And we are concerned with more than just reducing our own carbon footprint. We want to help our customers reduce their CO_2 emissions as well. The GeSI img SMARTer2030 study shows that information and communications technology may be part of the solution in the fight against climate change. Products such as our cloud and mobility solutions help reduce the amount of CO_2 emissions our customers produce. And we continue to expand our offer of solutions like these.

OUR INTEGRATED CLIMATE STRATEGY

We have bundled our climate protection activities in our integrated climate strategy. Our strategy consists of four climate protection aspects that significantly influence our business activities: CO_2 emissions, renewable energy, energy efficiency and sustainable products. We have set goals for all of these aspects and defined KPIs to help us regularly review our progress. Our integrated climate strategy is also tied to our "Leading European Telco" Group strategy, allowing us to effectively integrate climate protection measures into our core business.



The four pillars of our integrated climate strategy:
CO_2 emissions

Our goal is to reduce the absolute amount of CO_2 emissions we produce throughout the Group. By the year 2020, we are planning to reduce our CO_2 emissions by 20 percent compared to base year 2008 (excluding T-Mobile US). To help us achieve this goal, we record all direct and indirect emissions using the globally recognized GHG protocol. By 2016, we were already able to reduce our emissions by 5 percent compared to 2008 in absolute figures.* In Germany we were able to realize a reduction of 6.5 percent in the same period of time. Key forces behind this reduction include using modern building technology and office concepts as well as an efficient vehicle fleet and replacing business trips with audio and video conferences. Initial projections within the scope of our 2016 climate target monitoring show that the broadband expansion in Germany is impacting our CO_2 emissions to an unexpected degree and that these are rising above those that we planned in 2013. As soon as we have completed our climate target monitoring activities we will be able to precisely identify these impacts and discuss them as well as any measures that need to be taken with the Group's Board of Management at the end of the year. The results will be presented in the next CR report.

*Data only confirmed by PwC for Germany

Renewable energy

We are assessing ways to increase the share of green energy in use at our company, e.g., by purchasing guarantees of origin for energy from renewable sources, generating our own renewable energy and introducing carbon pricing. Some national companies are setting a great example: Magyar Telekom in Hungary, T-Mobile Netherlands, and OTE in Greece obtained 100 percent of their electricity from renewable sources in 2016. We have also introduced parameters throughout the Group that can be used to assess electricity procurement in terms of sustainability. These parameters help us make our energy mix more transparent and increase the share of energy obtained from renewable sources at our company. The share of energy from renewable sources in use at the Group was almost 10 percentage points higher on average in 2016 than in the national energy mix of each relevant country*.

* When calculating the share of energy from renewable sources, we also use the share of renewable energy in the country mix, as the (usually lower) share of renewable energy in the residual mix is not available. For Germany, the EEG surcharge paid is taken into account when calculating the share of renewable energy.

Energy efficiency

We continue to expand the capacity and performance of our fixed-line and mobile networks to meet the demands that come with rapidly growing data traffic. Because network operation calls for a considerable amount of energy, we are investing in modernization and energy-efficient technology. In order to measure our progress, we introduced two new key performance indicators (KPIs) in 2016. They show our energy consumption Energy Intensity KPI and our carbon footprint Carbon IntensityKPI in proportion to the transmitted data volumes.

Sustainable products

Many of our products and services provide various sustainability advantages. They can help reduce energy consumption and CO_2 emissions, improve healthcare and make logistics more efficient and environmentally friendly. In 2015 we generated 39 percent of sales with products and services that provide sustainability advantages such as these while ruling out any significant sustainability risks. This reflects an increase of two percentage points compared to 2014.

Collaboration for climate protection

Effective climate protection calls for joint efforts on the part of business, politics, science and society. That is why we are involved in a number of German initiatives, such as the 2° Foundation, and international associations. One of these is the Global e-Sustainability Initiative img (GeSI img). As an industry association, GeSI's vision is to help make society greener and more climate-friendly with the help of ICT solutions.

CO_2 EMISSIONS

In order to achieve our climate protection target, we need to reduce our CO_2 emissions including our energy consumption. Areas with especially high energy needs, such as our networks (fixed-line and mobile) and our data centers, are particularly high on our list. In these areas it is particularly difficult to decrease energy consumption with continuously increasing data volumes and transmission rates. Other focal points include how we operate our buildings, business trips and our fleet of company and service vehicles in Germany. Our vehicle fleet boasts roughly 26,000 vehicles in Germany and is one of the largest in Europe.

GOALS	MEASURES	MONITORING
› Decreasing Group-wide CO_2 emissions by 20 percent by 2020 compared to 2008 (without T-Mobile US	› Reducing business trips and using audio and video conferences › Reducing fuel consumption by streamlining and optimizing our fleet › Modernizing and upgrading network infrastructure › Consolidating data centers › Optimizing energy use in buildings	› Energy Consumption KPI › CO_2 Emissions KPI › Carbon Intensity KPI › Energy Intensity KPI

PROTECTING THE CLIMATE

"We assume responsibility for a low-carbon society" is one of the key action areas of our CR strategy. We intend to keep this promise with the help of our Group-wide climate protection target, which was adopted in 2013: We are planning to reduce our CO_2 emissions by 20 percent by 2020 compared with 2008 (excluding T-Mobile USA). We have specified a variety of measures and developed measurement tools to help us reach this goal.

Measurable success in climate protection

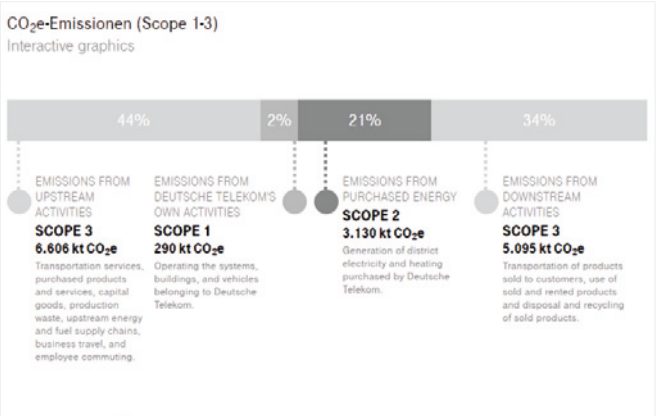
We use different key performance indicators (KPIs) to measure the effectiveness of our climate protection efforts. KPIs also provide transparency to shareholders regarding our progress in realizing our climate target. We have been recording two new KPIs since 2016: Carbon Intensityand Energy Intensity. These KPIs express the ratio between our CO_2 emissions or energy consumption and the data volumes we transport. They will be replacing our Energy Consumption KPI, which creates a correlation between energy consumption and revenue. In contrast, these new KPIs provide a clear depiction of developments in the energy and emissions efficiency of our network, thereby underlining the relationship between these developments and our core business.

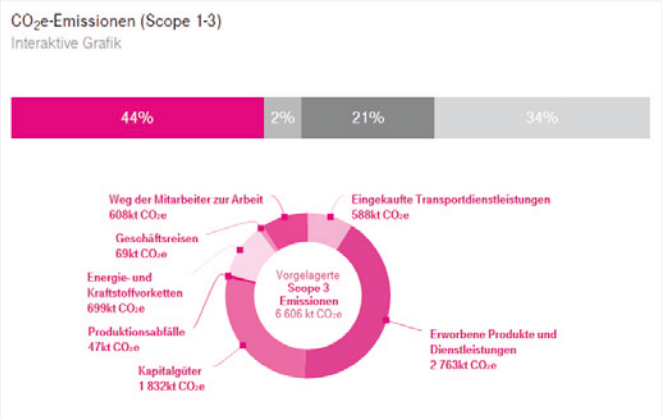
Direct and indirect emissions

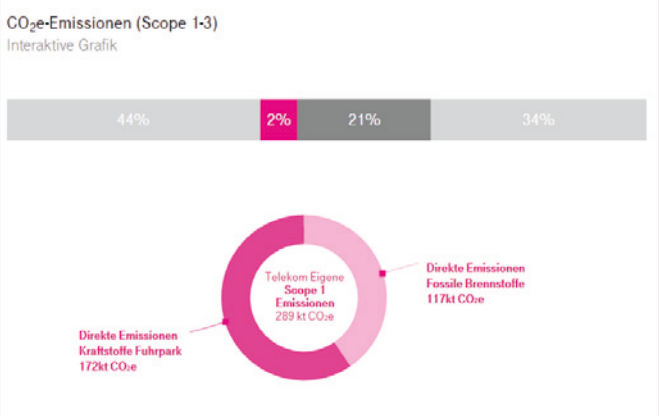
We use the internationally recognized GHG protocol to measure our CO_2 emissions. This standard distinguishes between three CO_2 emissions categories (Scope 1, 2 and 3). We use Scope 1 and Scope 2 emissions to calculate our CO_2 Emissions KPI. We have also been recording all relevant Scope 3 emissions pertaining to our business in Germany since 2013 as well as the emissions generated by various national companies since 2015.

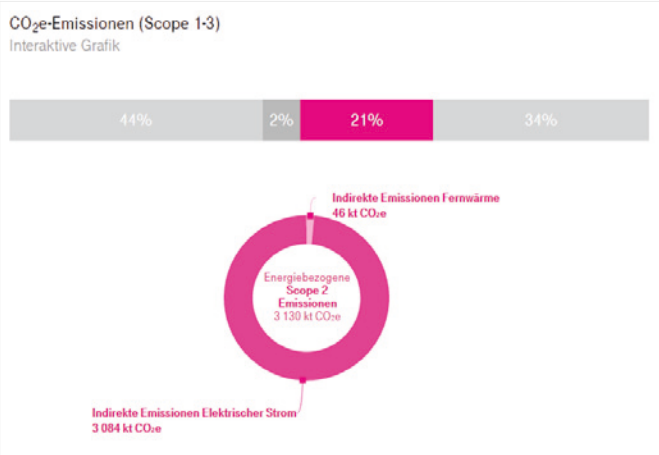
RECORDING SCOPE 3 EMISSIONS

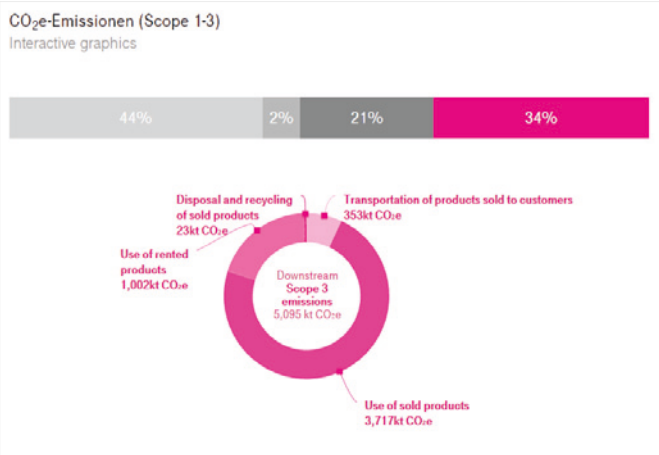
Indirect emissions along the value chain, or Scope 3 emissions, make up the majority of our total emissions. Recording these emissions helps us design targeted measures to reduce our carbon footprint at a corporate and product level.











We have been fully disclosing the Scope 3 emissions generated throughout the Group since 2016. They came to 4,879,850 metric tons of CO_2 equivalents in Germany, roughly 2.6 percent more than in the previous year. This slight increase can be attributed, among other things, to an increase in the number of devices being leased by our customers and higher investments in network expansion. As in previous years, most of these emissions were generated by the use of end devices sold or leased out by us (roughly 40 percent). Emissions generated by purchasing technology to expand our networks as well as the purchase of end devices and other goods and services were significant as well.

We have been publishing the emissions generated by our key European national companies since 2015, adding U.S. subsidiary T-Mobile US in 2016. Emissions sources at our national companies are similar to those identified in Germany. At national companies without any relevant fixed-line business such as those in Austria, Poland and the Netherlands, however, purchased products and services are the main source of Scope 3 emissions.

Overview of Scope 3 emissions (t CO_2e)

National company	2015	2016	Comparison year-on-year
Hungary	508,909	572,533	↗
Croatia	403,033	320,386	↘
Slovakia	207,182	265,095	↗
Greece	1,333,851	1,240,755	↘
Romania	497,635	428,305	↘
Austria	108,236	116,802	↗
Czech Republic	189,951	188,179	↘
Netherlands	189,836	190,656	↗
Poland	326,503	361,560	↗
United States	2,928,545	3,137,648	↗
Total	**6 693 381**	**6 821 919**	↗

ENABLEMENT FACTOR: CUSTOMERS REDUCING CO_2

Our products and services not only connect people, they also help them reduce their CO_2 emissions. That is why, in addition to calculating our own carbon footprint, we also calculate the amount of CO_2 our customers can avoid producing by using our products and services. The ratio between these two figures – the "enablement factor" – allows us to assess our overall performance when it comes to climate protection. We began calculating the enablement factor in a pilot project launched in 2014. The calculation methodology was developed further in 2016. This process included specifying statistical methods for reviewing data and information provided by the Group's various departments in order to improve the validity of our data and ensure comparability in years to come. We were able to perform twelve case studies for our products in Germany by the end of the year. One study focused on the savings our customers achieved by using our cloud offers and outsourcing their infrastructure to our highly efficient data centers. In addition, we carried out five case studies for Europe.

Our findings: The savings achieved by our customers in Germany in 2016 were 33 percent higher than our own CO_2 emissions (an enablement factor of 1.33 : 1). The reductions potential of our customers throughout Europe (including Germany) in 2016 was not quite as high as our own CO_2 emissions, resulting in an enablement factor of 0.95 (see analysis).

We always take a conservative approach in our case studies and the methodology we use. This applies to both the emissions reduction realized by our customers and our own emissions generated throughout the value chain. For example, we incorporate all levels of emissions generation when assessing our carbon footprint, including emissions generated when our customers use our products (e.g., emissions produced by our Entertain customers' TV sets).

NEW CHP PLANTS UP AND RUNNING

With our energy management activities, we are planning to reduce our energy use and come a step closer to achieving our climate target.

We are increasingly using combined heat and power (CHP) plants in addition to the conventional power grid. The majority of 32 units in total (as of late 2016) power our network nodes. The CHP plants convert the energy supplied by gas into electricity and heat. We use the waste heat produced on site to heat our office buildings, which brings overall energy efficiency to a level of up to 90 percent. As a comparison, electricity generated by conventional sources and fed through the general German power grid has an efficiency level of roughly 40 percent. By using these plants, we have been able to reduce the CO_2 emissions caused by network operation.

We put two new CHP plants in Berlin and one new unit in Frankfurt into operation in November 2016. Around 350 MWh of electricity and 500 MWh of heat was produced at these locations through the end of the year, reflecting a reduction in CO_2 emissions of 97 metric tons. For comparison: An average two-person household uses around 3.1 MWh of electricity each year.

Innovative local energy concept

A local heating pipeline runs from our CHP unit in Berlin to a neighboring school. Waste heat from the unit heats the school and its gymnasiums throughout the year. Not only does this reduce costs, it also helps reduce CO_2 emissions by up to 800 tons a year. The school was able to get rid of its old gas boiler and pays a reasonable price for the waste heat produced by the CHP unit. We received the Green Buddy Award from the City of Berlin in November 2016 for this innovate local energy concept.

Planned upgrading measures

We are planning to upgrade two other CHP plants in the cities of Ulm and Rottweil. Absorption chillers will be installed in both units to convert waste heat into cold air, which will then be used to cool network nodes. Additional, environmentally friendly dry coolers will also be installed in order to further reduce water consumption during the cooling process. Renovation is scheduled for completion in 2017.

9,924 TONS OF CO_2 COMPENSATED

Preventing greenhouse gas emissions is one of our top priorities. Investing in certified climate protection projects is one way to compensate for some of the CO_2 emissions that we are unable to avoid generating or reduce.

Telekom Deutschland compensated for 9,924 metric tons of CO_2 in the 2016 reporting year. These included emissions associated with our events (participant 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.

CLIMATE-FRIENDLY MOBILITY

We set a new target for climate-friendly mobility in 2016: to reduce the average CO_2 emissions produced by all new car purchases (company cars and service vehicles) to 95g CO_2/km by 2020. This new target is based on our previous target (110g CO_2/km by the end of 2015), which we successfully achieved.

We pursue a three-pillar strategy to ensure a climate-friendly fleet management strategy:

- Rightsize: selecting appropriately sized, energy-efficient, low-emissions cars. By introducing our Green Car Policy we have also created incentives for drivers of company cars to select smaller, more efficient cars.
- Economize: encouraging a fuel-efficient, low-emissions driving style with driver training courses
- Substitute: piloting and testing alternative mobility concepts.

Alternative engines

We can further reduce our fleet's carbon footprint by purchasing vehicles with alternative engines and fuel systems. We have been turning to natural gas and electric vehicles for some time now to help us achieve this goal. For us, low-emissions natural gas engines are a good step on the road to climate-friendly mobility in principle. This technology is able to effectively reduce pollutants and CO_2 emissions, particularly if renewable resources such as biogas obtained from bi-products and waste are used. However, long-range use of natural gas vehicles is still very limited due to an insufficient number of natural gas filling stations. We find the limited offer of suitable compact cars available from manufacturers particularly restrictive. Nevertheless we continue to use natural gas vehicles as both company cars and service vehicles. We are especially planning to continue to keep tabs on developments in electric mobility and employ electric cars effectively.

Extensive choice of mobility options

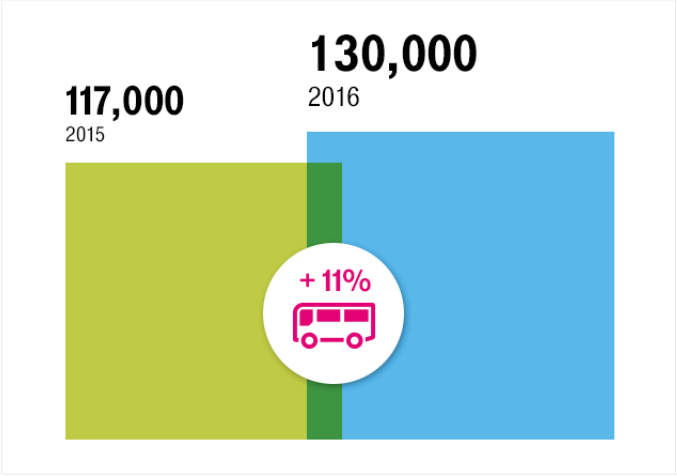
We also encourage our commuting employees to actively protect the climate by enabling them to buy discount season tickets for local and regional public transportation. We also rely on other modern forms of mobility including our shuttle service, which we have been offering at a variety of locations for ten years, rental bikes for getting around in the city and rental cars. Our employees benefit from the attractive option of buying bicycles and e-bikes through a salary sacrificing scheme.

The offer has been well-received by our employees. More than 1,300 bikes were acquired via the salary sacrificing scheme by the end of 2016.

ON THE GO AND GREEN: E-BIKES, SHUTTLES, RENTAL BIKES

Since 2015, we have offered our employees the chance to purchase a bicycle or e-bike as a green and healthy alternative, through deferred compensation schemes. With the support of Telekom MobilitySolutions, employees can lease a bicycle through their employer for three years. The monthly payments are subtracted from the employee's gross salary. The new offer has met with tremendous response right from the off. Roughly 1,300 employees are already taking advantage of the offer.

We provide shuttle service between different locations, e.g., to the Cologne/Bonn airport or the Siegburg ICE train station to reduce the carbon footprint of business trips. Roughly 130,000 passengers used this service in 2016. The offer was expanded in 2016 to include additional routes in order to meet increasing demand. Employees can use an app or visit the intranet to conveniently book a shuttle.



Our employees can also use bicycles available at more than 30 Deutsche Telekom locations to get to their business appointments within the city.

MORE ELECTRIC CARS IN USE

There are still several hurdles to overcome before electric cars can be widely employed. Limited range, insufficient charging infrastructure and high procurement costs make the cars unattractive in many usage scenarios. It is particularly difficult to find suitable service vehicle models. There is a bright side, however. Thanks to the government environmental bonus, we were able to somewhat reduce the costs for electric vehicles in our fleet.

Nevertheless, our electric car projects have only been possible because project partners have supported the set-up of charging stations at our locations. We participate intensively in selected electric mobility pilot projects in order to take advantage of the medium-term potential of electric mobility.

- At our Bonn offices, for example, we offer four next-generation electric and plug-in hybrid rental cars. Employees can use these cars for business trips free of charge. Thanks to incentives such as the budget from our Green Car Policy penalty program, we were able to purchase two new cars in 2016 in addition to the two existing ones.
- We have been participating in an e-mobility funding project ("Wirtschaft am Strom") in Hamburg together with Deutsche Telekom Technischer Service since April 2014. Ten electric service vehicles were employed until October 2016. Based on the experience gained in this project, we will be procuring additional electric service vehicles in 2017.
- We have two electric chauffeured cars in our management fleet for trips in the Greater Cologne/Bonn area and in Berlin. Charging stations for the car were set up on-site.
- A few selected hybrid cars have been available in our company car segment since summer 2014. We also offer electric cars as company cars in selected regions.

FOSTERING THE USE OF ELECTRIC CARS

In May 2014, T-Systems Netherlands introduced electric cars for lease drivers in order to help reduce the CO_2 emissions of the company's cars. Charging stations have now been installed in parking area(s) to facilitate charging sessions during office hours.

Pure electric and hybrid cars help to reduce CO_2 emissions as shown in the table below. The reduction in CO_2 emissions is good for the environment and the lower tax rates additionally provide a big advantage for drivers. These two advantages promote the popularity of these types of car in the Netherlands. This is illustrated by the 22.6 % share of cars designed to reduce CO_2 in the company's fleet at the end of 2016.

Car type	CO_2 emissions	%
CNG (natural gas)	88 g CO_2	3.0
Conventional hybrid	86-88 g CO_2	12.8
Plug-in hybrid	36-49 g CO_2	5.1
Pure electric	0 g CO_2	1.7
Total		**22.6**

RECOGNITION OF LEADERSHIP ROLE IN CLIMATE PROTECTION

Inclusion in CDP ranking

We made it on the A list in the most significant international climate protection ranking, the CDP ranking, for the first time in 2016. CDP commends companies that report their CO_2 emissions extremely transparently and in detail. Within CDP, we have reported not only Scope 1 and Scope 2 emissions but also Scope 3 emissions from our business operations in Germany and almost all our international companies since 2014.

German Awards for Excellence 2016

We received an award in the Carbon Footprint category at the 3rd Sustainability Conference held by DQS, The Audit Company, in June 2016. This honor was presented in recognition of our accomplishments in recording our emissions along the entire value chain, including involvement of our suppliers. The award is presented to organizations with exemplary sustainability management practices.

Good practice competition on Scope 3 emissions

We received an award in 2016 in a competition entitled "Good practice of corporate climate management along the value chain." The competition was held by WWF (World Wildlife Fund) and CDP in cooperation with consultancy firm Ecofys. The German Global Compact network sponsored the competition as a partner. Fifteen companies received awards in the competition. Deutsche Telekom impressed the jury in category 13 (rented and leased equipment) with our rental plan for modems and routersand our router virtualization approach. This was featured as good practice in a publication put out especially for the competition.

ENERGY EFFICIENCY

Our network infrastructure forms the basis of our products and services. At the same time, operating this infrastructure is a main source of energy consumption at our company, which makes achieving greater energy efficiency in network operation a key component of our climate protection target. We take different approaches for the fixed network, mobile communications and data centers. When it comes to our networks, we engage in activities such as replacing outdated technology with new technology, e.g., the migration of our fixed-line network to IP technology. We track the migration progress by annually comparing energy consumption values and resulting CO_2 emissions with the planned figures. In addition, we are currently consolidating data traffic into only a few, particularly efficient data centers.

GOALS	MEASURES	MONITORING
› Reducing energy requirements › PUE factor of 1.4 in the fixed network in Germany by 2020	› Consolidating data centers › Migration to IP › Efficient technology for cooling, for energy supply within the network and for data centers	› PUE factor › Energy consumption

OPERATING ENERGY-EFFICIENT NETWORKS

We operate our own fixed-line and mobile networks in Europe and the U.S. Much 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. We pursue three different approaches to reduce our energy needs:

- We update our network infrastructure, e.g., by migrating to IP technology, installing highly efficient air conditioning units and systematically removing equipment we no longer need.
- We optimize energy generation and supply with the help of technical innovation.
- We use more energy-efficient technology for lighting, monitoring and above all cooling our facilities.

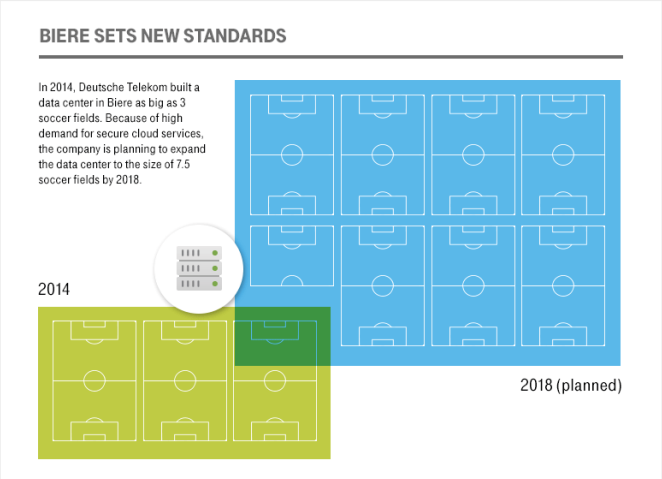
Our internal energy service provider, Power & Air Solutions, which provides energy for our Group companies in Germany, plays a key role in these activities. Power & Air Solutions' energy management practices have been ISO 50001 certified since 2013.

Measuring and controlling energy consumption
The PUE (Power Usage Effectiveness) factor is measured annually and is an important performance indicator for managing our climate protection measures. We are planning to reduce the PUE factor of our fixed-line network in Germany to 1.4 by the year 2020. We expect to see this value continue to fall over the next few years and are confident that we will reach our goal. This will allow us in part to compensate for increasing energy requirements due to growing volumes of data and new features.

Researching efficient network technologies We successfully wrapped up the EARNI research project in 2016. The project' goal was to improve network capacity utilization and energy efficiency by using multipurpose technologies.

EXPANSION OF ENERGY-EFFICIENT DATA CENTER IN BIERE

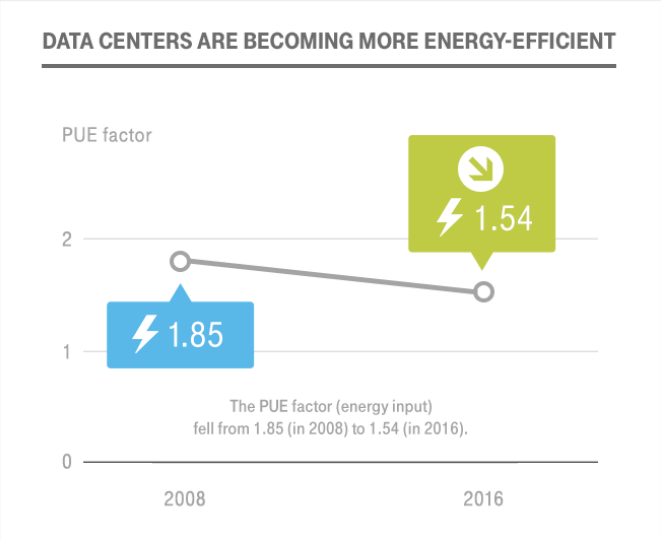
Our data center in Biere (near the city of Magdeburg) was put into operation in 2014 and is one of the world's most efficient data centers. And because demand for cloud services "made in Germany" is on the rise, we are currently expanding it to increase the server capacity by 150 percent. The expansion process began in September 2016 and Biere 2 is scheduled to be up and running by Q2 2018.



REDUCED CO_2 EMISSIONS IN DATA CENTERS IN GERMANY

We also keep our goal of reducing our carbon footprint in mind when planning and operating our data centers. To achieve this goal, T-Systems takes a two-step approach. It starts with optimizing energy consumption at each data center site and then continues with improving processes throughout the global data center landscape.

The key indicator of increased energy efficiency at our data centers is the PUE factor. We were able to reduce the average PUE factor at the T-Systems data centers in Germany from 1.85 to 1.54 between 2008 and 2016 (1.63 in 2015) due to ongoing data center consolidation measures. Applications from less efficient data centers are being migrated to new, highly efficiency data centers.



The DC11@2018 program for improving processes throughout our global data center landscape has been up and running since 2013. The project combines physical data center consolidation (i.e., reducing data center space and sites) with logical consolidation (i.e., virtualizing data center infrastructure). The objective of the DC11@2018 program is to consolidate global data center capacity at FMO (future mode of operation) data centers using the latest IT technology. We effectively completed all of the steps necessary in this process in 2016.

The target average PUE factor at all FMO data centers will be 1.4 once the program has been completed in late 2018 / early 2019. This requires a homogeneous IT landscape combined with optimum capacity utilization of data center infrastructure, IT hardware and the software running on the systems. We expect to see further significant reductions in CO_2 emissions as a result. For the year 2020, the latest program plans indicate accumulated reductions in CO_2 by up to 51 percent compared to 2012.

Our target PUE factor for our highly efficient data center in Biere is 1.3. By migrating data from outdated data centers to Biere, we were able to achieve a PUE factor of 1.46 by the end of 2016 and expect to record a PUE factor of 1.3 in Biere by late 2017.

PROGRESS IN OUR OFFICE BUILDINGS AND DATA CENTERS

Since 2016, our office building in Vianen has been supplied entirely with green energy (100 percent). Our offices in Heerlen and The Hague are currently in a negotiation phase. The other tenants in the building need to agree to green energy supply.

The main focus for our data centers in 2016 was the significant decrease of floorspace and energy consumption (13 percent less compared to 2015). This was achieved through our asset refresh program, decommissioning and data-center consolidation.

ENVIRONMENTALLY FRIENDLY DATA CENTERS IN AUSTRIA

Operating data centers requires a lot of energy and T-Systems Austria is dedicated to running its data centers in a maximally environmentally friendly approach. Mitigation makes our data centers in Gmünd, Linz and Vienna entirely carbon neutral. Mitigation means that resources are used absorb the same amount of CO_2 as that emitted by production of the necessary energy.

We are also actively engaged in initiativesto reduce energy consumption.We use a “cold/warm technique” in server cabinets to regulate temperature as efficiently as possible and this results in energy savings. In 2016, we achieved total energy reduction of 367,624 kWh. This yields a year-on-year reduction of 63 percent.

Our fire-extinguishing system has also been designed on environmental principles. Our data center at the T-Centerin Vienna has 168 fire extinguishersfilled with a mixture of nitrogen, argon and carbon dioxide for emergencies. The extinguishing agent is harmless to humans, leaves no residue, and is 100 percent environmentally neutral.

NEW MEASURES FOR MORE EFFICIENT NETWORKS

We launched the following projects in 2016 to reduce our energy consumption and improve the energy efficiency of our infrastructure:

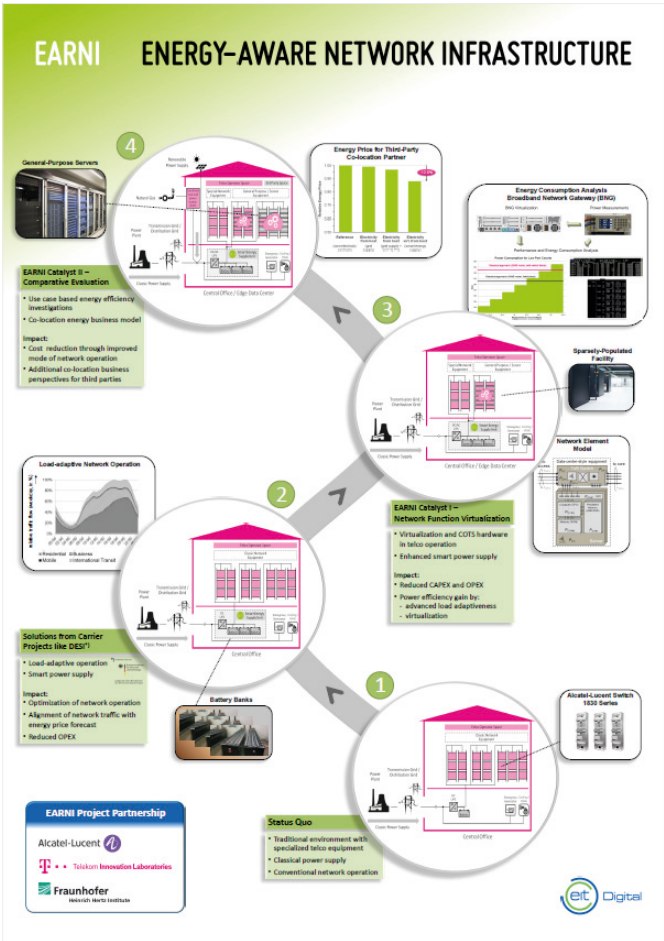
Advancement of Energy Dashboard
The Energy Dashboard is a web-based application that we use for monitoring the energy consumption of our fixed-network nodes. New functions were added to the app in 2016, helping us more effectively analyze stored data. We also further developed the user interface, making it easier to upload external data.

New intermediate meters help reduce electricity consumption
We installed roughly 1,500 calibrated intermediate meters in our offices and technology sites during the reporting period. The meters identify heavy consumption devices and point out additional areas where consumption can be reduced at our facilities.

Pilot test for energy-efficient climate control a success
In Nuremberg we are testing innovative control technology for our server cooling system, which uses several sensors to record room temperature directly at the servers. The result is a 15 percent reduction in electricity consumption since the existing cooling systems can be operated more effectively. We are planning to continue testing in 2017 with the aim of being able to estimate reduction potential during live operation.

COMPLETION OF RESEARCH PROJECT ON ENERGY-EFFICIENT NETWORKS

We are always expanding and optimizing our networks so that we can offer services that are demand-oriented and energy-efficient. Whenever technically feasible, we are increasingly employing system technology based on multipurpose hardware. We joined forces with Alcatel-Lucent and the Fraunhofer Heinrich Hertz Institute in 2015 to launch the Energy-Aware Network Infrastructure (EARNI) project. The aim of this project was to find out whether using new multipurpose systems has a favorable impact on network energy efficiency.



For the research project, we used an actual use case to calculate energy requirements and compared the results with conventional technology. Final results show that careful planning and network design enable improved energy efficiency of multipurpose systems compared to traditional network systems thanks to higher capacity utilization. The system also permits load-adaptive operation.

Multipurpose hardware also makes it possible to incorporate controllers to control local energy supply systems. This way CHP plants and photovoltaic systems can be used to provide power to the telecommunications network. The network system hardware can also be used to operate the controllers. The EARNI project also analyzed a relevant use case.

The research done within project EARNI was based on the previous projects LOLA and DESI, which examined operating concepts for the load-adaptive operation of networks.

The project results were presented in 2016 at Electronics Goes Green 2016+ in Berlin and at the European Conference on Optical Communication (ECOC) in Düsseldorf. More information can be found here.

ENERGY EFFICIENCY IN BUILDINGS

Our facility energy management activities focus on the two areas of heating energy and electricity consumption. We have defined sub-targets for each of these areas to help us attain our climate target in Germany. Progress is measured twice a year.
Two approaches help us achieve our sub-targets: We are reducing our office space as part of HR downsizing measures and are optimizing space usage by introducing new office concepts. We also identify needs for reduction in energy consumption by using specific indicators such as "kilowatt hours per square meter," "energy consumption at midnight" or "peak loads" to compare similar facilities. Power & Air Solutions is in charge of the energy management system, which is ISO 50001-certified.

Heat and hot water

We use approximately 522 GWh of heating energy throughout Germany each year, primarily by using gas and heating oil as well as district heating. That is the same amount of energy needed to provide around 100,000 newly built apartments with heat and hot water. We regularly assess the need for repairs at our properties and conduct feasibility analyses to reduce consumption. Keeping the available budget in mind, we focus on the most necessary and particularly cost-efficient measures, including:

- Optimizing heating systems
- Updating the heating system in line with the German Energy Saving Ordinance
- Using condensing boiler technology to replace old heating systems and pumps
- Recovery of waste heat produced by data centers
- Using CHP plants

Our real estate management departments are responsible for measurements, analyses and developing appropriate measures.

Electricity

Our employee workstations, lighting, and building technology, including pumps, ventilation, cooling and elevators, are responsible for the largest part of electricity consumption in our buildings. We focus our energy conservation measures on the following areas:

- Using LED lighting and motion detectors in underground parking structures and hallways
- Using state-of-the-art pumps and fans
- Switching off building technology outside working hours

We conducted comprehensive energy consumption reviews at our sites in 2014 and 2015 and then implemented reduction measures during the reporting period based on the results. Our ventilation systems, for example, have been running on more efficient motors since 2016.

TMUS ENERGY STRATEGY

T-Mobile's cross-functional energy team representing retail, corporate real estate, critical facilities, network engineering, procurement and sustainability meets several times annually to raise the profile of energy efficiency across the business. This year's energy audits resulted in a 43,000 MWh annual reduction.

A formal renewable energy plan was drafted in 2016 establishing short-term goals and guiding TMUS in its management of these efforts. The team engaged with leaders in the sustainability field in evaluating science-based targets and working toward longer-term goals. T-Mobile also submitted its first Carbon Disclosure report in 2016. Additionally, we completed an Analytic Platform of the energy intensity per cell site. The analytic engine was incorporated into the existing metric platform used by local/regional engineering teams to further energy efficiency in spite of ever increasing data consumption by T-Mobile's customers. Short term projects such as LED lighting and HVAC retrofits continued in earnest. Energy efficiency was incorporated into the criteria for new and expansion office and retail spaces within the TMUS footprint.

THE COMPANY SEEKS ENERGY SAVINGS

In 2016, T-Systems Mexico continued to reduce energy consumption by implementing a variety of different measures. One of the measures involved a change in our phone technology. We also followed up on all the measures we had already implemented during the previous year. These involved monitoring the air conditioning system to decrease power consumption at peak times, installing motion sensors in offices to give employees an individual air conditioning supply so that it is always off when no one is in the room, andreplacing fluorescent lamps with LEDs. The totality of these measures resulted in an energy reduction of 14.38 % in 2016.

RENEWABLE ENERGY

Renewable energy is key when it comes to reducing greenhouse gas emissions. In addition to reducing electricity consumption by improving energy efficiency, improving the energy mix behind electricity production can significantly improve our carbon footprint. That is why renewable energy is one of the four pillars in our new climate strategy. As part of this strategy we are currently devising concrete renewable energy targets and strategies. Our national companies in Greece, Hungary and the Netherlands are already pioneers in this field with 100 percent of their electricity coming from renewable sources.

NEW SOLAR POWER UNITS INSTALLED

We are increasingly relying on solar energy to power our technology sites. In 2014 we decided to equip 600 sites with photovoltaic units over the next several years. Our internal energy service provider, Power & Air Solutions, is responsible for installing the units.

In early 2016, we were operating solar power units at a total of 311 switching centers in Germany. These units are expected to reduce our carbon footprint by 1,510 metric tons of CO_2 each year. New units with up to 150 kWp were added over the course of the reporting period, which will lead to further reductions in CO_2 emissions of 77 metric tons in 2017.

MORE GREEN ENERGY AT EUROPEAN NATIONAL COMPANIES

We have encouraged our European national companies to work toward a share of renewable energy in total electricity consumption that is at least 10 percent above the national energy mix. Indeed, our national companies further increased their shares of electricity from renewable energy, coming to a total group-wide average of almost 33 percent by the end of 2016.

On average our group-wide share of electricity from renewable energies was 10 percent above national energy mixes*. To this end, our national companies also use renewable energy certificates (guarantees of origin img). Despite our efforts, however, we were unable to achieve our target values at some of our national companies. Other national companies such as Magyar Telekom, T-Mobile Netherlands and OTE in Greece are setting a great example and are already using 100 percent renewable energy to meet their electricity needs.

* In calculating the share of renewable energy in the electricity we consume, we take the country mix as a basis as no data is available regarding the share of renewable energy in the residual mix. 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.

SUSTAINABLE PRODUCTS

Our products and services contribute to sustainable development. Thanks to our solutions, devices such as set-top boxes can be replaced by digital solutions, conserving valuable resources and reducing CO_2 emissions. That makes sustainable products a key element in our integrated climate strategy.

Our goal is to continue to systematically record and increase the CO_2 reduction potential offered by our products. Our cloud solutions are an excellent example of how our products can help customers considerably reduce CO_2 emissions. Small and medium-sized enterprises (SMEs) that take advantage of cloud solutions can reduce CO_2 emissions by up to 21 metric tons each year on average. This is because, instead of being operated on the customer's premises, applications are shifted to efficient data centers, enabling customers to minimize their infrastructure.

Learn more about our sustainable ICT img solutions in the Customers & products section.

CIRCULAR ECONOMY

There are a lot of areas where digitization can help conserve valuable resources and protect the environment. One example is dematerialization. Companies that store their data in the cloud no longer need a hard drive. Doing away with your hard drive conserves natural resources, reduces electricity consumption and generates less waste.

The "sharing instead of owning" approach also contributes significantly to resource conservation. Numerous sharing economy offers such as car-sharing become practical solutions thanks to digitization. Our goal is to use our expertise to support and encourage effective sharing concepts.

In areas where services cannot entirely replace products, the product life cycle plays a key role in the efficient use of resources. Our rental model for routers and media receivers, for example, can extend the life cycle of these devices. Returned devices can then be reused by new customers after proper servicing. Efficient use of materials is important even during the product development stage and less waste is generated as a result.

Conserving resources is part of the solution. We also act responsibly in how we work with raw materials. It is important to reintroduce raw materials obtained from outdated products to the production process, which is why customers can return their outdated devices to us for proper recycling.

GOALS	MEASURES	MONITORING
› Improving resource efficiency	› Health, safety and environmental management system › International waste management framework	› Waste volumes › Used Cell-Phone Collection ESG KPI › Use of space

SAVING RESOURCES AND PROTECTING THE ENVIRONMENT

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 international standards OHSAS 18001 on occupational health and safety and ISO 14001 on environmental management.

We support cell-phone collection campaigns in order to recover valuable resources. For this purpose, we have introduced the Used Cell-Phone Collection ESGKPI, which compares the number of cell phones in circulation to the number of collected devices.

We regularly collect Group-wide data on the amount of waste we produce. Our International Waste Management Framework guarantees standardized guidelines for all Deutsche Telekom companies. Our national companies are required to use this framework as a basis for identifying their own measurable targets and then monitor target achievement. This approach makes it possible to flexibly address the specific requirements of each country and company without working with quantitative objectives.

Resource efficiency is also a priority at the workplace. We use recycled paper and energy-efficient multifunctional printers and encourage employees to use green office supplies. In order to reduce the amount of paper used throughout the Group, we ask our employees to have their salary statements sent to their "De-Mail" account instead of having a printout sent by post. Around 20 percent of employees have already canceled delivery by post.

WASTE REDUCTION AND RECYCLING

Our national companies are responsible for implementing our waste management strategy according to standardized Group-wide principles. We have not set a Group target for waste reduction. 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, the reduction of hazardous waste such as lead batteries having top priority.

Requirements for Group-wide copper cable recycling

Our activities are currently focused on disposing of the copper wires that have been the main component of telephone lines for decades. These are being replaced over the course of our fiber-optic roll-out. In January 2016, we introduced a Group-wide, mandatory policy requiring copper cable recycling. This policy provides a guideline to our national companies when it comes to recycling and disposal of used cables.

TESTING ON RECOVERY OF TANTALUM FROM ELECTRONIC SCRAP

With our switch-over to IP technology and dismantling analog infrastructure, we will be removing tons of old electronics over the next few years. We intend to recover precious metals such as gold and tantalum from the scrap.

The tantalum used to manufacture condensers is extracted from coltan, and is considered a conflict resource. For this reason we have been conducting a project together with the bifaUmweltinstitut environment institute since 2013. The goal is to develop the perfect method for disassembling and recycling tantalum condensers. Different manual and automated methods for disassembling tantalum condensers were tested. Based on the results, we opted for an automated method in 2016. The circuit boards will be disassembled using thermal treatment. The next step will be to introduce the method in live operation.

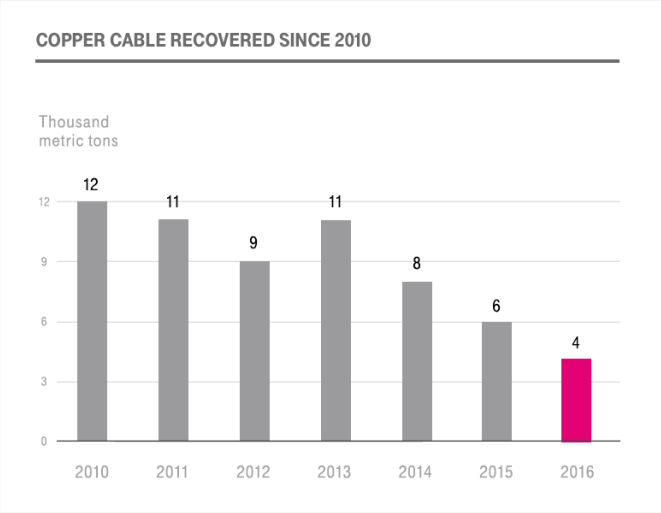
SALE AND REUSE OF ELECTRICAL AND ELECTRONIC EQUIPMENT

Since 2012, T-Systems Iberia has been handing over redundant electrical and electronic equipment to Kapema, a company committed to reselling this type of equipment. Employees at T-Systems are given top priority for the resale of any equipment. This scheme has greatly reduced the amount of electrical and electronic waste generated. During 2016, more than 500 computers were handed over to Kapema and this reduced overall waste by a total of 2,776 kg.

T-Systems Iberia also continued selling redundant electrical and electronic equipment from its data centers to a supplier who is required to use any suitable spares for maintaining the company's equipment. This supplier is turning redundant equipment into spares for carrying out repairs and the company is reducing the amount of waste generated at data centers. Cost savings are therefore being achieved in the fields of spare parts, storage, and waste management. In 2016, a reduction of 3,200 kg of electrical and electronic waste was achieved by means of this reutilization (by the end of the third quarter).

4,000 METRIC TONS OF COPPER CABLE RECYCLED

In 2016, Deutsche Telekom removed more than 4,000 metric tons of copper cable from duct systems in Germany alone. The cable is processed in accordance with environmental standards at certified waste disposal facilities and up to 90 percent of the material was recycled.



WASTE MANAGEMENT AT T-MOBILE NETHERLANDS

T-Mobile Netherlands collects glass, paper, chemical waste, cardboard and electronic waste separately. Digitalization and more aware product development has enabled us to decrease our paper and residual waste by 25 % over the past three years.

OTHER ENVIRONMENTAL TOPICS

We assume responsibility for creating a low-carbon society – at our company, at our customers and suppliers and through our social commitment. We focus on those areas where we can make the most impact. Other environmental topics are addressed as well, such as protecting biodiversity and responsible water consumption. Although the impact of our business activities on these areas is very limited, they are integral elements in our comprehensive environmental management activities.

PROTECTING BIODIVERSITY

Extinction continues to be a global problem. The consequences are difficult to predict. One major cause of extinction is the fact that more and more space is being taken up for industry, agriculture and transportation. In 2014, we conducted a study on the size of the space used for our business activities in Germany in order to effectively steer our efforts to help protect biodiversity. We also included worldwide upstream value chains in our analysis. The study's findings confirmed that the amount of space we use has relatively little impact on the environment. Our business activities primarily impact biodiversity at the source of our value chain, with impact at other stages being more limited. The study identified use of space along the entire value chain at a total of 1,730 square kilometers per year. That is around twice the size of Berlin. 14 percent of this is space characterized by highly above-average biodiversity according to the criteria specified by the non-profit organization, Conservation International.

Our influence on maintaining and improving habitats with high biodiversity is greater in areas close to our facilities. That is why we collaborate with competent partners on nature conservation efforts near us.

Renaturalizing habitats with high biodiversity

We have been supporting nature conservation projects initiated by the Deutsche Umwelthilfe (DUH) organization since 2000 with the proceeds from our used cell-phone collection activities. In 2016 we supported a project to protect endangered species on an old bed of the Weiße Elster river near Bad Köstritz with the objective of recreating habitats for animals and birds such as the kingfisher, oriole, western marsh harrier and otter. We also supported another nature conservation project - renaturalization of former mining areas in the Lusatia region. You can find more information at www.handysammelcenter.de.

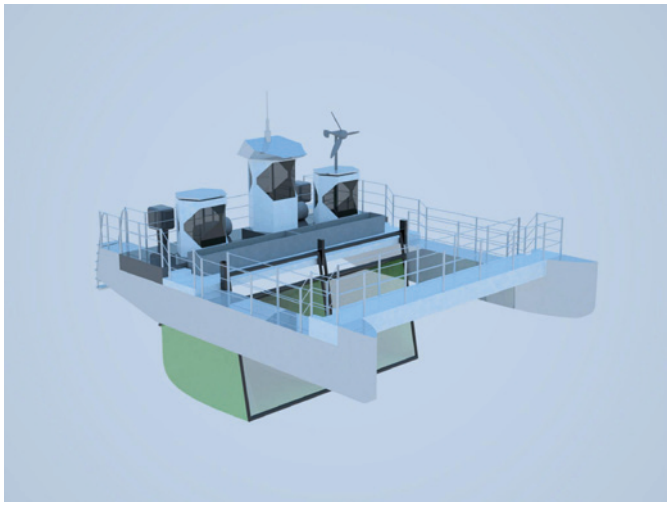
INITIATIVES FOR RESOURCE-EFFICIENCY AT THE WORKPLACE

We try to use as many green office supplies as possible in order to improve resource efficiency at the workplace, including paper bearing recognized environmental labels such as Blue Angel or Nordic Swan. 11 percent of the products contained in our office supplies catalog are classified as sustainable products. In 2016, 31 percent of the orders we placed were for green office supplies.

Different Deutsche Telekom locations in Bonn also launched two initiatives for reusing office supplies sustainably (spring cleaning and an exchange platform) as well as giveaways (sale to employees), all of which were well received by our employees.

PROJECT TO REDUCE PLASTIC WASTE IN OCEANS

We donated to the "Seekuh" project conducted by One Earth – One Ocean e.V. in 2016. The Seekuh is the world's first waste collection ship and will be used in coastal regions and at river deltas. Using a special net, the ship can fish up to two tons of garbage out of the ocean per trip. The ship can also conduct water analyses. The Seekuh was presented on the 35th German Maritime Shipping Day in Kiel in September 2016. The ship is scheduled to go into production after the testing phase has been completed.



WATER CONSUMPTION

We need water to live and it continues to grow scarcer. The World Health Organization estimated that more than one billion people worldwide do not have access to clean water. As a service provider, our water consumption is comparatively small compared to agriculture and the manufacturing industry. We almost exclusively use water within the scope of our office activities. According to our analyses, water consumption also plays a minor role along our supply chain. This particularly applies to the first stages of our supply chain, where we have the most influence. For that reason, water is not a main focal area in our CR management activities. Nevertheless, we use our Water Consumption KPI to record our annual water consumption, which we have been able to consistently reduce since 2012.

FACTS & FIGURES

● Positive development ● Insignificant change ● Negative development

Economic

	2013	2014	2015	2016
Sustainable Procurement ESG KPI (% of procurement volume reviewed according to sustainability criteria)	54	72	78	83
Socially Responsible Investment (SRI) ESG KPI (% T-Shares held by SRI investors)	20.6	22.7	23.0	21.7
Sustainability Revenue Quota ESG KPI[a] (% of revenue with products and services that offer sustainability benefits)		37.0	39.0	

[a] Due to the late availability of the underlying data, only the value for 2015 can be reported at the time of publication of the CR report.

Environmental

	2013	2014	2015	2016
Energy Intensity ESG KPI (energy consumption in MWh*1000 / total IP data volume in terabytes)				167[b]
Energy Consumption ESG KPI (energy consumption in thousands of MWh/revenue in billions of €)	121	120	108	98
Renewable Energy ESG KPI (share of renewable energy in total electricity consumption)			31	33
Carbon Intensity ESG KPI (CO_2 emissions in tCO_2*1000 / total IP data volume in terabytes)				70[b]
CO_2 Emissions ESG KPI (difference in emissions compared to the climate target base year 2008 in thousands of t CO_2)	632	593	497	322
Enablement Factor 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))		1.08	1.22	1.33[c]
Used Cell Phone Collection ESG KPI (cell phones collected in thousands / customers in millions)	17.7	16.4	30.0	39.7

[b] the value refers to the Group in Europe.
[c] the value refers to the DT Group in Germany.

● Positive development ● Insignificant change ● Negative development

Social

	2013	2014	2015	2016
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 €)		49	55	57
Beneficiaries ESG KPI (number of people involved in community activities and in target group that benefited from community activities in millions)		13	15	15
Media Literacy ESG KPI (% of people reached through programs addressing media literacy)		40	37	40
Social Commitment ESG KPI[d] (difference between the assessment of the importance of social commitment and Deutsche Telekom's social commitment activities (expressed in percentage points).)	+6	+14	-1	+4
Employee identification with CR commitment ESG KPI (employee identification with Deutsche Telekom's CR commitment in %)	69[e]		78[f]	

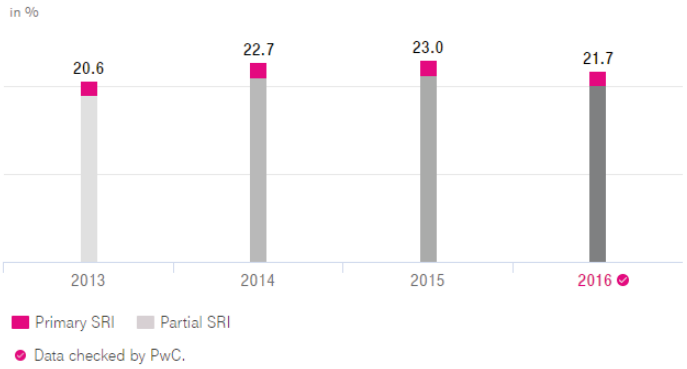
[d] We report this ESG KPI for the last time in 2016 - as our ESG KPI Media Literacy better reflects the relevance for Deutsche Telekom's Core Business
[e] The employee survey took place at the end of 2012 and is listed here for reasons of comparability.
[f] This value refers to the 2015 employee survey. The next survey is scheduled for 2017.

SOCIALLY RESPONSIBLE INVESTMENT

SOCIALLY RESPONSIBLE INVESTMENT (SRI) ESG KPI

Our efforts to achieve greater sustainability are also paying off with investors. At the end of 2016, around 20 percent of T-Shares were owned by investors who take SRI criteria at least partly into account in their investment decisions. Almost 2 percent of T-Shares were held by investors who give priority to SRI aspects when managing their funds.

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. As the basis of calculation is updated annually, year-on-year comparisons may be of limited value. (Source: Ipreo, based on Deutsche Telekom's shareholder structure as of Sept. 30, 2016)



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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.

LISTING OF THE T-SHARE

Sustainability ratings play a key role in SRI investment decisions. In line with our corporate responsibility strategy, we concentrate on specific rating agencies that we select on the basis of reputation, relevance and independence.

In 2016, the T-Share was again listed on leading sustainability indexes, including RobecoSAM's prominent DJSI World and DJSI Europe. Once more, our share was listed on the FTSE4Good and UN Global Compact 100 indexes. Rating agency "oekom" singled us out as the world's best telecommunications company in terms of ecological and social performance.

Rating agency	Indexes/ratings/ ranking	Successfully listed in index				
		2016●	2015	2014	2013	2012
RobecoSAM	DJSI World	✓	✓	✗	✗	✓
	DJSI Europe	✓	✓	✗	✗	✓
CDP	CDP A-List[a]	✓	✓	✓	✓	✗
oekom research AG	„Prime" (Sector Leader [b])	✓	✓	✓	✓	✓
Sustainalytics	STOXX Global ESG Leaders	✓	✓	✓	✓	✓
	iSTOXX 50 SD KPI	✓	✓	✓	✓	n.a.
	UN Global Compact	✓	✓	✓	✓	n.a.
FTSE Financial Times Stock Exchange	FTSE4Good	✓	✓	✓	✓	✓
MSCI	MSCI Global Climate	✗	✗	✗	✗	✗

✓ Successfully listed ✗ Not listed

[a] Deutsche Telekom is sector leader in the DACH (Germany, Austria, Switzerland) region.
[b] Based on oekom research CR Review 2016.
● Data verified by PwC. For detailed audit comments see "DT Group in Germany" and "T-Mobile USA".

You can find further information here.

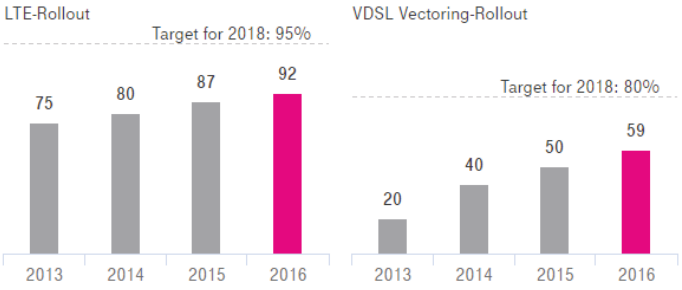
Reporting against standards

The KPI 1 is relevant for criterion 1 (Strategic Analysis, Strategy and Goals) of the German Sustainability Code.

NETWORK BUILDOUT

We again made significant investments in the broadband and fiber-optic buildout, our IP transformation, and our mobile infrastructure as part of our integrated network strategy.

We are building an IP-based network with high transmission bandwidths so that, in the future, we can offer our customers competitive high-speed lines, e.g., by migrating our VDSL network to vectoring technology. In addition, we are investing heavily to offer greater coverage and even higher speeds in rural areas as well. We are also using innovative products for this purpose – like our hybrid router, which combines the transmission bandwidths of fixed-network and mobile communications, thus enabling much higher transmission speeds.



Part of our network strategy is to also systematically build out our mobile networks with 4G/LTE technology to increase transmission rates in all our national companies. Thanks to investments in our 4G/LTE network, our customers enjoy better network coverage with fast mobile broadband. In 2016, we supplied 84 percent of the population of Germany with LTE. This puts us right on schedule to reach our goal of between 75 and 95 percent network coverage by 2018.

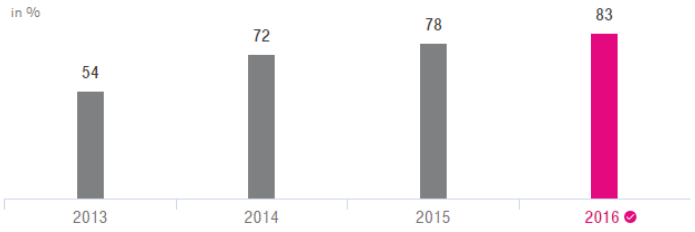
Through our interactive benchmarking tool, important facts and figures of our national companies can be analysed and compared.

SUPPLIERS

SUSTAINABLE PROCUREMENT ESG KPI

The Sustainable Procurement ESG KPI exceeded the prior-year figure by an even greater margin than forecast. The share of the procurement volume that has been risk-assessed already amounts to 83 percent. Over the next two years, we expect our Sustainable Procurement ESG KPI to remain stable at a high level.

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 rise slightly above the figure achieved in the reporting year.



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

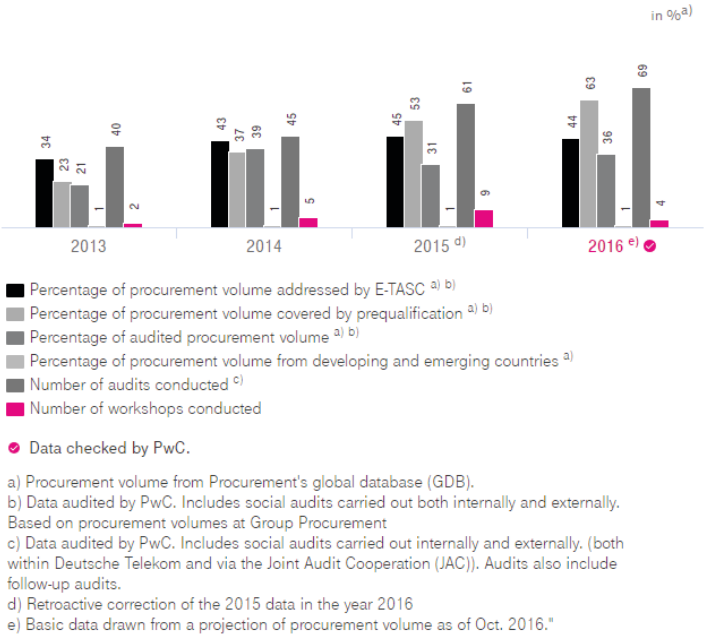
Data audited by PwC. Based on procurement volumes at Group Procurement. Values cannot be directly compared to the previous year.

Reporting against standards

The Sustainable Procurement ESG KPI 1 together with information about our strategic approach fully covers the G4-HR9 (Audit) and G4-HR10 (Suppliers and human rights) 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 Added 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).

SUPPLIER RELATIONSHIPS

The percentage of audited procurement volume increased significantly from 31 percent in the previous year to 36 percent in 2016. At the same time, the percentage of procurement volume covered by E-TASC dropped slightly from 45 percent to 44 percent. A supplier prequalification process via the Supplier Management Portal (SMP) took place for 63 percent of the procurement volume in 2015, compared with 53 percent in the previous year. Prequalification is mandatory for all suppliers for which we anticipate an order volume of more than 100,000 euros. In 2016, all suppliers whose qualifications had expired or were still pending or not yet completed were asked to complete the qualification once again. This allowed us to increase the number of qualified suppliers. The share of procurement volume obtained from developing and emerging markets remains steady at 1.0 percent.



a) Procurement volume from Procurement's global database (GDB).
b) Data audited by PwC. Includes social audits carried out both internally and externally. Based on procurement volumes at Group Procurement
c) Data audited by PwC. Includes social audits carried out internally and externally. (both within Deutsche Telekom and via the Joint Audit Cooperation (JAC)). Audits also include follow-up audits.
d) Retroactive correction of the 2015 data in the year 2016
e) Basic data drawn from a projection of procurement volume as of Oct. 2016."

Reporting against standards

The Sustainable Procurement ESG KPI [1] together with information about our strategic approach fully covers the G4-HR10 (Suppliers and human rights) 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 [1] Principles 1 (Supporting and respecting human rights), 2 (No complicity in human rights abuses) and 5 (Effective Abolition of Child Labor).

SUSTAINABLE PRODUCTS

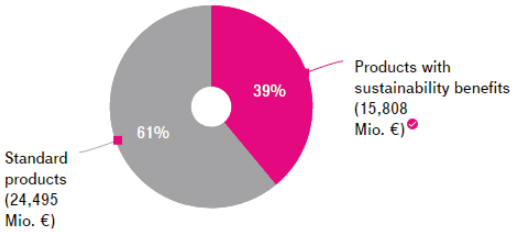
SUSTAINABILITY REVENUE QUOTA

ICT technologies play a key role in sustainable development. Potential benefits include the ability to reduce greenhouse gas emissions, make sparing use of resources and improve healthcare coverage. We commenced the analysis of our portfolio on the basis of sustainability aspects in 2014. The result for 2016 showed that 39 percent of our revenue was generated with products and services that offer sustainability benefits.

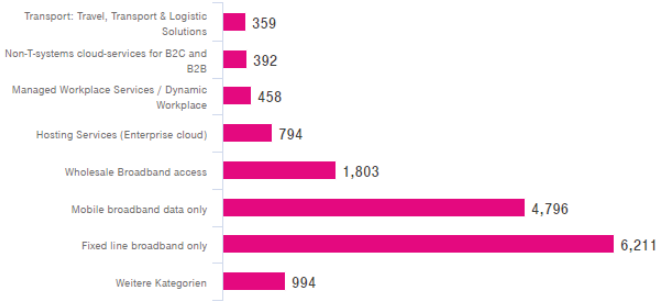
39 percent of the DT product and service portfolio offer sustainability benefits

39 percent of the DT product and service portfolio offer sustainability benefits

Share of revenue with products and services that offer sustainability benefits DT
(DTAG excl. US, 2015)



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



* We can only report the data for 2015 due to the late availability of the underlying data.

● Data checked by PwC.

Reporting against standards

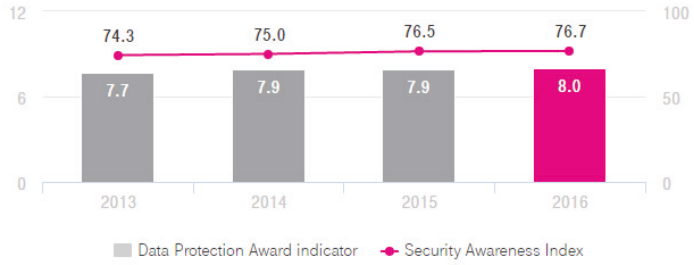
Specifying the Sustainability Revenue Quota ESG KPI [1] is relevant for GRI performance indicator G4-EN27 (Products and Services). The information is relevant for the EFFAS KPI V04-13 (Revenues from new products innovation). It is also relevant for criteria 3 (Objectives) and 10 (Innovation and Product Management) of the German Sustainability Code. It is also used for reporting on Global Compact [1] Principle 9 (Encourage the development and diffusion of environmentally friendly technologies).

DATA SECURITY AND PROTECTION

IT SECURITY & DATA PROTECTION

A random sample of 50,000 Telekom employees are surveyed on the topics of data protection and IT security each year. 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 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 employeesâ 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

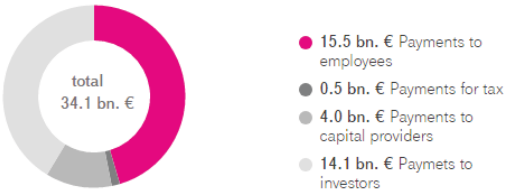
The information on the indicator "IT Security & Data Protection" is relevant for GRI indicator G4-PR8 (Breaches of customer privacy and losses of customer data). It is also used in our reporting on Global Compact Principle 1 (Protection of international human rights).

FINANCIAL PERFORMANCE INDICATORS

NET VALUE ADDED

Net added value increased slightly year over year from 31.6 billion euros to 32 billion euros. This year-on-year increase in net added value is primarily the result of increased payments to lenders, which can primarily be attributed to a reduction in new medium and long-term debt. Please refer to the section on "Financial position of Deutsche Telekom AG" in our current annual report for more information on cash flow from financing activities and details on financial liabilities.

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 1 , we fully cover the G4-EC1 (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. €

		2013	2014	2015	2016
Net revenue		60.1	62.7	69.2	73.1
EBITDA (adjusted for special factors)[a, b]		17.4	17.6	19.9	21.4
EBITDA margin (adjusted for special factors)[c]	in %	28.9	28.0	28.8	29.3
Net profit (loss)		0.9	2.9	3.3	2.7

[a] Deutsche Telekom defines EBITDA as profit/loss from operations before depreciation, amortization and impairment losses.
[b] EBITDA, EBITDA 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 31 et seq., or to Deutsche Telekom's Investor Relations website.
[c] Calculated on the basis of millions for the purpose of greater precision. Changes to percentages expressed as percentage points.

REVENUE DEVELOPMENT

In 2016 Deutsche Telekom generated Group revenue of 73.1 billion euros, reflecting growth of 3.9 billion euros, a significant increase year on year. The international share of Group revenue rose by 3.4 percentage points to 66.3 percent. Likewise, revenue per employee increased steadily in 2016 to 331,000 euros, translating into a growth rate of 8.2 percent.

in bn. €

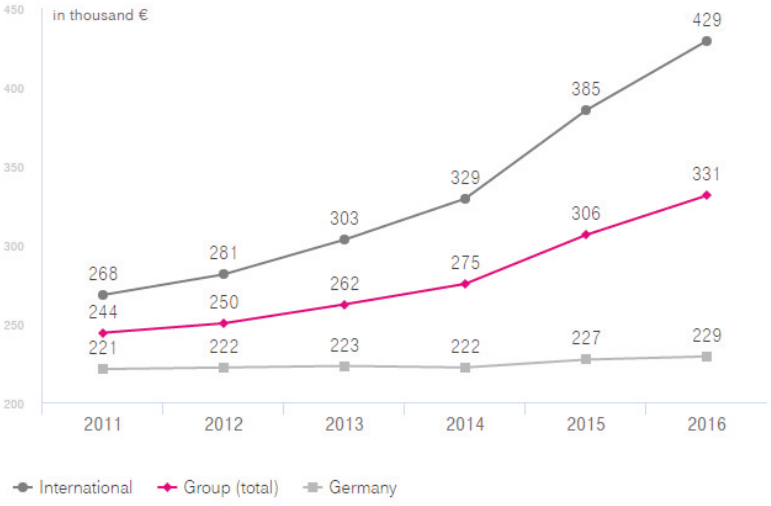
	2014	2015	2016	Change on 2015 (in bn/pp)
Net revenue Germany [a)]	25.7	25.7	24.7	- 1.0
Net revenue international [a)]	36.9	43.5	48.4	4.9
Net revenue Group (total)	62.7	69.2	73.1	3.9
International revenue as a percentage of Group revenue	58.9%	62.9%	66.3%	3,4 pp

[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.

REVENUE PER EMPLOYEE

In the year 2016, revenues per employee increased to EUR 331,000 groupwide – this represents a gain of 8.2 percent. The majority of this increase in revenues per employee can be traced back to outside Germany (+ 11.4 percent). In Germany, revenues per employee increased from around EUR 227,000 to around EUR 229,000.

You can find further information in the HR Factbook by the end of May.



FINANCIAL PERSONNEL INDICATORS

PERSONNEL COSTS AND PERSONNEL COST RATIO

By personnel costs we mean basic personnel costs (salaries) and incidental personnel expenses – where applicable including, or 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. This performance indicator has fallen continually Group-wide since 2012 from 23.2 to today's figure of 20.3 percent. The key driver of the Group's adjusted personnel cost ratio, which fell by 0.9 percentage points, is the significant rise in revenue. It more than compensated for the rise in personnel costs in the Group.

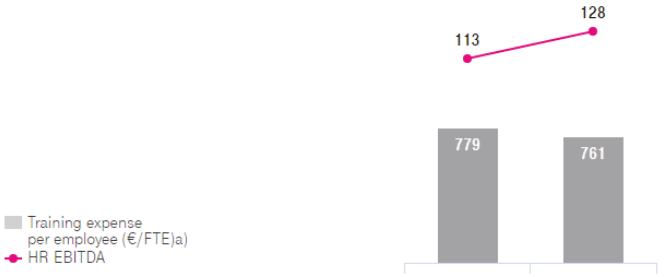
The disadvantage of the personnel cost ratio is that it ignores external personnel costs. Therefore the total workforce costs ratio is more meaningful for the management of personnel costs at Deutsche Telekom.

	2011	2012	2013	2014	2015	2016
Personnel costs in the Group	14.8	14.7	15.1	14.7	15.8	16.5
of which: Germany	9.2	9.2	9.4	9.1	9.4	9.8
Special factors	1.2	1.2	1.4	0.9	1.2	1.5
Personnel costs in the Group adjusted for special factors	13.6	13.5	13.7	13.8	14.6	14.8
Net revenue *	58.7	58.2	60.1	62.7	69.2	73.1
of which: Germany	27.2	26.7	26.3	25.7	25.7	25.3
Adjusted personnel cost ratio Group (total. in %)	23.1	23.2	22.7	22.0	21.2	20.3
Adjusted personnel cost ratio Germany (in %)	30.6	31.1	32.3	32.9	33.0	32.9

* 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.

HR EBITDA (RATIO)

The so-called „HR EBITDA“ puts into ratio the calculated earnings per employee with the investments in training per employee.



	2015	2016
EBITDA (m€ adjusted)	8,790	8,800
EBITDA per employee (€/FTE)	87,959	97,105
Training budget (m€)[a)]	141	132

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

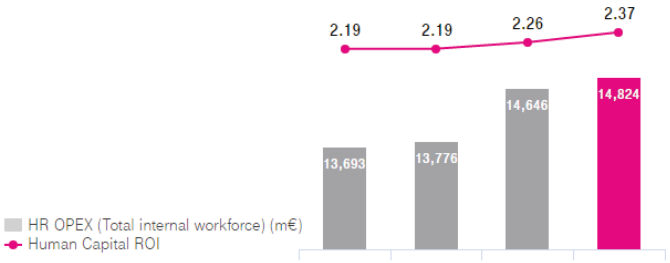
[a)] DT Group without T-Mobile US

Reporting against standards

This data is relevant for the G4-LA9 (Average hours of training per year per employee) and G4-LA10 (Skills management and lifelong learning) 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.

HR 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).



	2013	2014	2015	2016
Total Revenue (m€)	60,193	62,658	69,228	73,095
Total OPEX (m€ adjusted)	43,838	46,217	50,723	52,718
Internal Workforce Costs (IWC) (m€ adjusted)	13,693	13,776	14,646	14,824

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

Reporting against standards

This data is relevant for the G4-LA9 (Average hours of training per year per employee) and G4-LA10 (Skills management and lifelong learning) 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.

TOTAL WORKFORCE COSTS

In bn. €	2012	2013	2014	2015	2016
TWC[a)]	15.5	15.3	15.4	16.5	16.8
of which: Germany	9.4	9.3	9.2	9.2	9.1
IWC[b)] (PC[c)] adjusted)	8.3	8.5	8.5	8.5	8.3
EWC[d)] Leased and temporary workers	0.1	0.1	0.05	0.05	0.03
EWC[d)] Freelancers and consultants	1.0	0.8	0.7	0.7	0.7
of which: international	6	6	6.1	7.2	7.8
IWC[b)] (PC[c)] adjusted)	5.2	5.2	5.3	6.1	6.5
EWC[d)] Leased and temporary workers	0.3	0.2	0.3	0.4	0.5
EWC[d)] Freelancers and consultants	0.6	0.6	0.6	0.7	0.8

[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 QUOTE

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 quota describes the relationship between all personnel expenditure and revenue. This means: if the quota has fallen in comparison with the previous year, either revenue has remained constant while total workforce costs have gone down, or revenue has increased.

The quota has dropped continually since 2014 in the overall Group: from 24.6 percent in 2014 to 23 percent in 2016. It has also dropped internationally: from 16.6 percent in 2014 and 2015 to 16.2 percent in 2016. In Germany, by contrast, the quota has been constant at 35.9 percent since 2014.

in bn. €	PA[a] adjusted 2016	EWC[b] 2016	TWC[c] 2016	Revenue[d] 2016	TWQ[e] adjusted 2014	TWQ[e] adjusted 2015	TWQ[e] adjusted 2016
Germany	8.3	0.8	9.1	25.3	35.9%	35.9%	35.9%
International	6.5	1.3	7.8	47.8	16.6%	16.6%	16.2%
Group (total)	14.8	2.0	16.8	73.1	24.6%	23.8%	23.0%

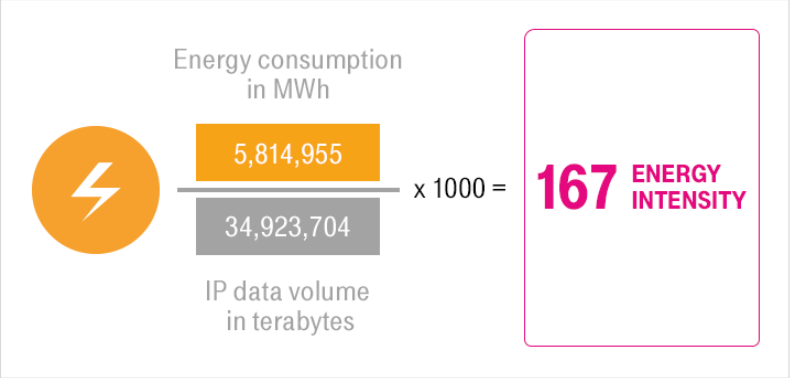
[a] Personnel cost
[b] External workforce cost: cost of leased and temporary staff + cost of freelancers and consultants
[c] Total workforce cost: external workforce cost + personnel cost adjusted for special factors
[d] As revenue allocation is separated into Germany/international from an HR perspective,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

ENERGY

ENERGY INTENSITY ESG KPI DEUTSCHE TELEKOM GROUP EU

The Energy Intensity ESG KPI was a new addition to the reporting this year. 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.

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).



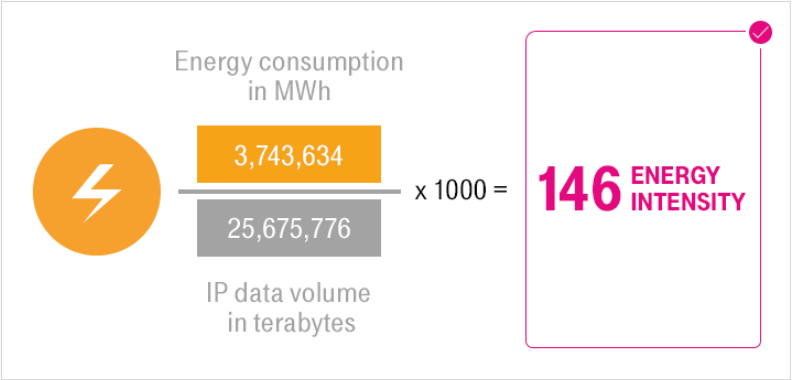
Reporting against standards

The Energy Intensity ESG KPI is relevant for the GRI indicator G4-EN5 (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

The Energy Intensity ESG KPI was a new addition to the reporting this year. 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.

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).



Data assured by PwC. Data is partly based on estimates, assumptions and extrapolatio

Reporting against standards

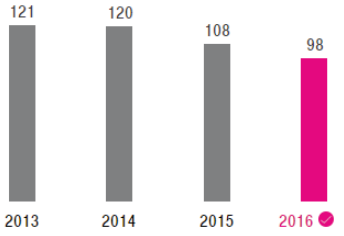
The Energy Intensity ESG KPI is relevant for the GRI indicator G4-EN5 (Energy Intensity). This information is relevant for EFFAS KPI E01-01 (Energy consumption, total). It is furthermore relevant for criterion 12 (Resource management) of the German Sustainability Codex. It is also used for reporting on the Global Compact Principles 7 (Precautionary approach) and 8 (Promoting environmental responsibility).

ENERGY CONSUMPTION ESG KPI [a]

Deutsche Telekom measures the Energy Consumption ESG KPI as the Monetary Power Efficiency Index (MPEI) in which developments in energy consumption (in thousands of MWh) are indicated in relation to revenues (in billions of euros).

The trend for this KPI was positive in 2016. It decreased slightly year-on-year as expected. Despite increasing revenue, energy consumption decreased throughout the Group in the reporting period. Given the unabated rapid growth in data traffic and ongoing network build-out, this result was achieved only through further gains in energy efficiency.

We anticipate a positive development in our Energy Consumption ESG KPI for the years 2017 and 2018, with a declining trend in 2017 and a further slight decrease in 2018. This development is the result of slight savings in electricity consumption coupled with a slight increase in revenue. We expect to achieve further reductions in electricity consumption above all as we migrate our networks in Germany to IP technology and merge T-Systems data centers in various regions. Most of these savings are likely to be counterbalanced by the expansion of T-Mobile US and the accompanying rise in electricity consumption.



	2013	2014	2015	2016 ✓
Revenue in bn. €	57.8	61.9	68.6	72.4
Energy in thousand MWh	6,992.9	7,424.0	7,401.6 [b]	7,107.1

Energy Consumption CR KPI: Ratio of energy consumption to relevant revenue, calculated as Monetary Power Efficiency Indicator.

✓ Data verified by PwC. For detailed audit comments see "DT Group in Germany" and "T-Mobile USA".

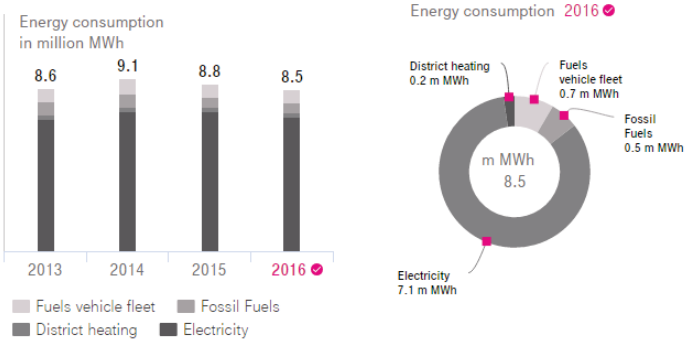
[a] Calculated on the basis of appropriate estimates and extrapolations.
[b] Electricity consumption for 2015 adjusted slightly retrospectively (previous figure: 7,421.5) with no impact on the ESG KPI
Energy Consumption ESG KPI Energy consumption in relation to relevant revenue, calculated as Monetary Power Efficiency Indicator (MPEI: Energy consumption in k MWh/revenue in billions of €).

Reporting against standards

By reporting our electricity consumption in relation to our revenues for the reporting period, we fully cover the G4-EN5 (Energy intensity) and the E01-02 (Energy consumption, specific) EFFAS indicator and we partially cover the E01-01 (Energy consumption, total) EFFAS indicator. This data is also relevant for criteria 7 (Rules and processes), 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).

TOTAL ENERGY CONSUMPTION

Total energy consumption decreased by 4 percent year over year. While energy consumption increased at T-Mobile Polska and T-Systems North America, T-Mobile US achieved a considerable decrease. For detailed comments on the figures for each individual company, please refer to the interactive benchmarking tool.



Data verified by PwC. For detailed audit comments see "DT Group in Germany" and "T-Mobile USA".

You will find more information on our climate protection measures here.

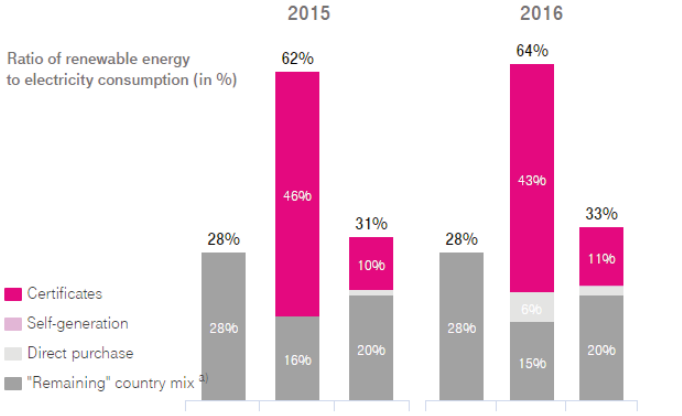
Reporting against standards

By reporting our energy consumption from primary energy sources, we partially cover the G4-EN3 (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 EN 29 (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).

RENEWABLE ENERGY ESG KPI

Due to the steadily increasing relevance and strong reference to the integrated climate strategy, the data on "Renewable energies" was reported for the first time in 2015 and listed for the first time as an ESG KPI in 2016. The KPI is calculated based on the share of renewable energy in total electricity consumption.

The share of energy from renewable sources used by Deutsche Telekom was 33 percent in 2016. The average share of renewable energy in the country mix in all countries where Deutsche Telekom is active was 23 percent. The share of renewable energy purchased through the country mix amounted to 20 percent ("remaining" country mix).



	2015			2016		
	D	EU [a]	Group	D	EU [b]	Group
Electricity from renewable energy (in GWh)	803	1.037	2.330	803	1.103	2.327
Total electricity consumption (in GWh)	2.841	1.681	7.421	2.840	1.720	7.107
Renewable Energy (ESG KPI in %)	28	62	31	28	64	33
Ren. energy in the national energy mix (in %) [c]	28	26	23	28	26	23

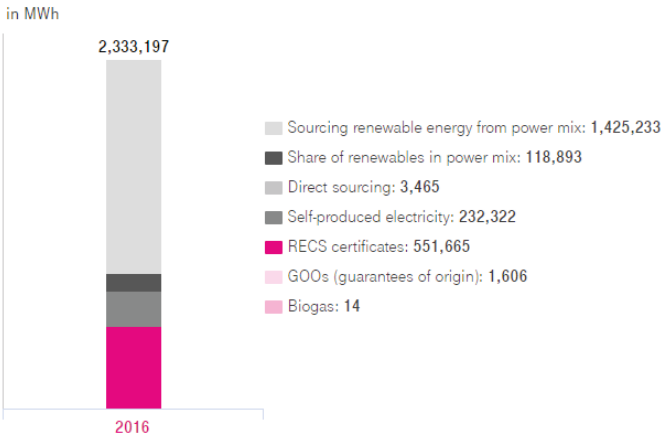
[a] The "remaining" country mix represents the remaining share of renewable energies from the national energy mix, after subtracting direct purchases, certificates, and self-generation.

[b] EU = National companies in Europe without Germany and T-Systems

[c] 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.

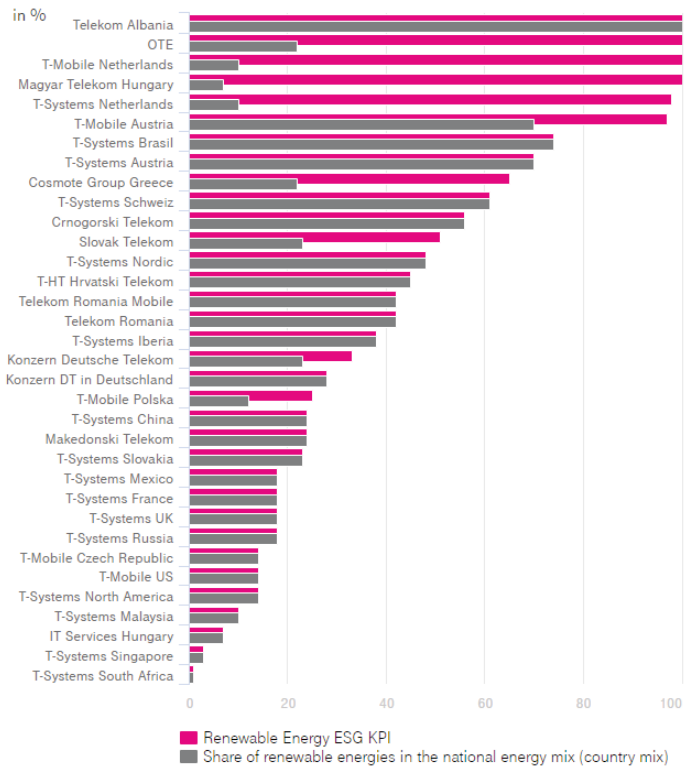
RENEWABLE ENERGY

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.



RENEWABLE ENERGY IN THE NATIONAL COMPANIES

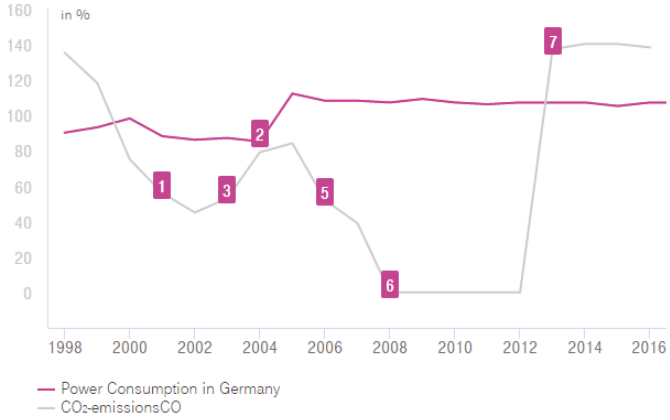
We reported on the Renewable Energy ESG KPI for the first time in 2016. It is calculated based on the share of renewable energy in total electricity consumption, and is compared here to the share of renewable energy in the national energy mix (country mix) for all national companies.



* 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

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.



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.

Reporting against standards

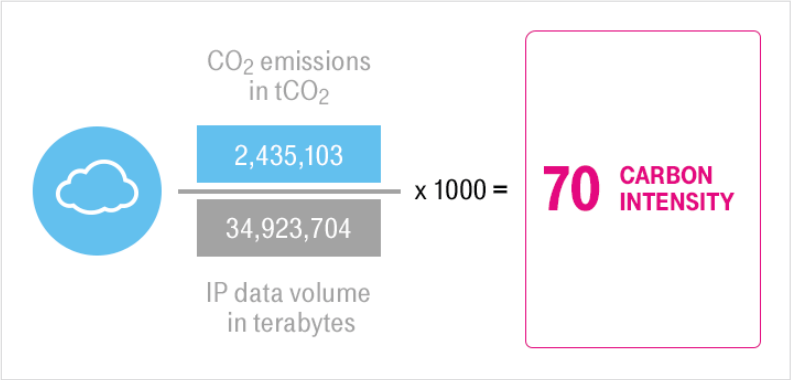
By providing this information, we fully cover the E16-05 (Alternative energy consumption) EFFAS indicator. This data is also relevant for criteria 3 (Strategic analysis, strategy and goals), 11 and 12 (Usage of natural resources) of the German Sustainability Code. It is also used for reporting on the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

CO_2 EMISSIONS

CARBON INTENSITY ESG KPI DEUTSCHE TELEKOM GROUP EU

The Carbon Intensity ESG KPI was a new addition to the reporting this year. In contrast to the existing CO_2 Emissions ESG KPI, the new ESG KPI shows the CO_2 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.

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).



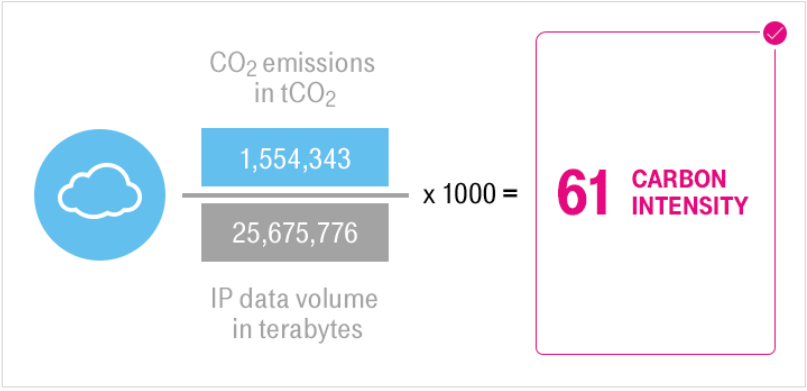
Reporting against standards

The Carbon Intensity ESG KPI is relevant for the GRI indicator G4-EN18 (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).

CARBON INTENSITY ESG KPI DT GROUP IN GERMANY

The Carbon Intensity ESG KPI was a new addition to the reporting this year. In contrast to the existing CO_2 Emissions ESG KPI, the new ESG KPI shows the CO_2 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.

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).



Data assured by PwC. Data is partly based on estimates, assumptions and extrapolations.

Reporting against standards

The Carbon Intensity ESG KPI is relevant for the GRI indicator G4-EN18 (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

CO_2 EMISSIONS ESG KPI

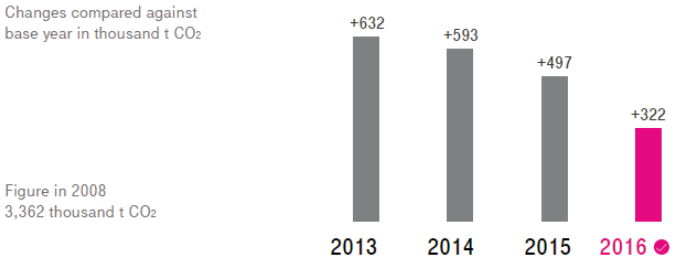
The CO_2 Emissions ESG KPI indicates the development of absolute as well as relative emissions compared to the base year 2008. The comparative value from the base year is 3,362 metric thousand tons of CO_2.

We had assumed there would be a slight decline in the CO_2 Emissions ESG KPI for 2016, which stands for a slight improvement. In fact, CO_2 emissions sank by 5 percent in the reporting period. This positive trend is mainly attributable to falling emissions from electricity consumption and from fuel consumption for our vehicle fleet.

Our electricity consumption is the main driver of our CO_2 emissions. We therefore also expect a slight downward trend in our CO_2 Emissions ESG KPI in the years 2017 and 2018. One of the goals we have set ourselves as part of our integrated climate strategy for the year 2020 is to reduce CO_2 emissions throughout the Group (excluding T-Mobile US) to 20 percent below the figure for the base year 2008. The gradual network changeover to IP will make a substantial contribution here.

For detailed comments on the figures for each national company, please refer to the interactive benchmarking tool.

We calculated our CO_2 emission values based on different energy and fuel consumption data. Calculation complied with the Greenhouse Gas (GHG) Protocol and was based on emission factors set forth by the International Energy Agency (IEA) and/or the GHG Protocol calculation tools. The total value reflects direct (Scope 1) and indirect (Scope 2) emissions. Since our CO_2 emissions are largely driven by our power consumption, the resulting positive trend is similar to the development described for the Energy Consumption ESG KPI.



	2013	2014	2015	2016 ●
CO_2-emissions in thousand t	3,816	3,912	3,859[a)]	3,684
Changes compared against 2008 in %	+20	+18	+15	+10

[a)] Retroactive, slight correction of CO2 emissions (formerly: 3,849) without effect on the ESG KPI.

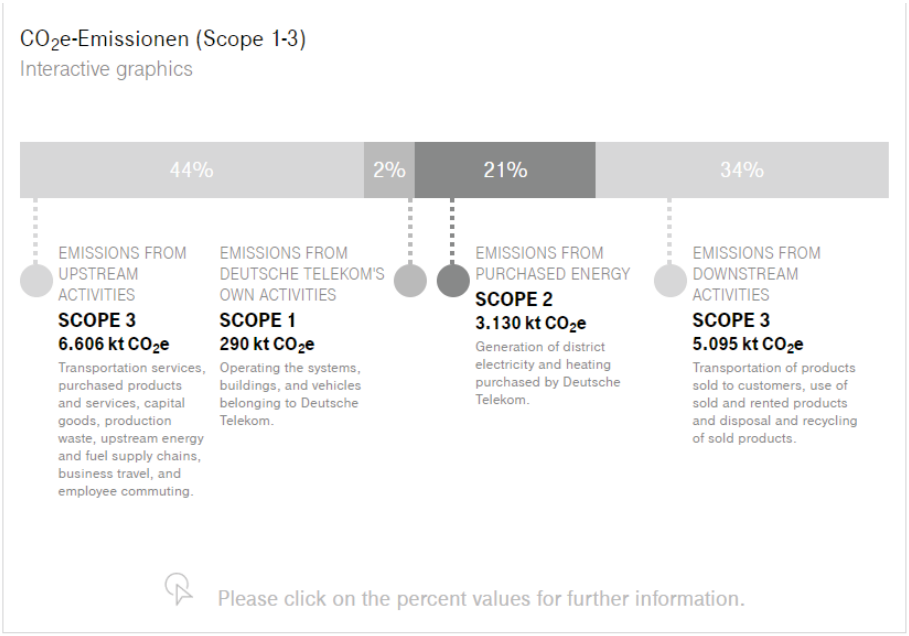
● Data verified by PwC. For detailed audit comments see "DT Group in Germany" and "T-Mobile USA".

Reporting against standards

By measuring progress based on our CO_2 Emissions ESG KPI [1], we report our CO_2 emissions in accordance with the Greenhouse Gas Protocol together with our self-defined CO_2 reduction goal, thereby complying with criterion 13 of the German Sustainability Code (Greenhouse gas emissions). By reporting this data, we fully cover the G4-EN15 (Direct GHG emissions), G4-EN16 (Energy indirect GHG emissions) and G4-EN17 (Other indirect GHG emissions) GRI indicators and partially cover the E02-01 (Scope 1-3 greenhouse gas emissions) EFFAS indicator. This data is also relevant for criteria 7 (Rules and processes), 11 and 12 (Usage of natural resources) and 13 (Greenhouse gas 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_2E EMISSIONS (SCOPE 1 - 3)

The 2016 CR report provides the first general overview of all CO_2 emissions by Deutsche Telekom (Scope 1-3). To ease comparisons, the Scope 1 and Scope 2 emissions were converted into metric kilotons of CO_2 equivalents. Emissions are presented along Deutsche Telekom's supply chain. This allows for an overview of where most of the emissions are produced.



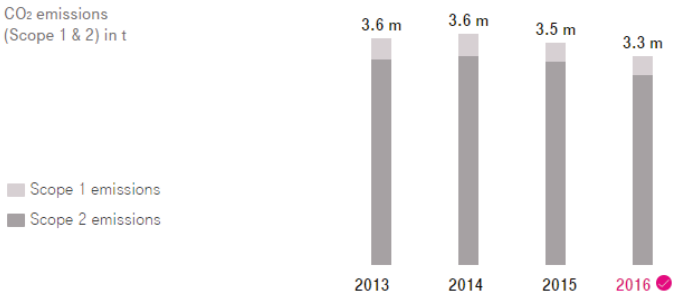
Reporting against standards

By measuring progress based on our CO_2 Emissions ESG KPI , we report our CO_2 emissions in accordance with the Greenhouse Gas Protocol together with our self-defined CO_2 reduction goal, thereby complying with criterion 13 of the German Sustainability Code (Greenhouse gas emissions). By reporting this data, we fully cover the G4-EN15 (Direct GHG emissions), G4-EN16 (Energy indirect GHG emissions) and G4-EN17 (Other indirect GHG emissions) GRI indicators and partially cover the E02-01 (Scope 1-3 greenhouse gas emissions) EFFAS indicator. This data is also relevant for criteria 7 (Rules and processes), 11 and 12 (Usage of natural resources) and 13 (Greenhouse gas 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-EMISSIONEN GESAMT (SCOPE 1 & 2)

Our CO_2 emissions are largely driven by our power consumption. The year-over-year decrease of 5 percent is largely due to the use of energy certificates (RECS, GOO) at Magyar Telekom in Hungary, T-Mobile Poland and Cosmote in Greece.

As last year, we distinguished between "location-based" and "market-based" methods in calculating the Scope 2 emissions img in the table below. The "location-based" method is based on emission factors for certain geographic locations; i.e., without taking a company's individual power mix into consideration. The "market-based" method on the other hand is based on the emissions actually generated by a power source. In this method, procuring renewable energy decreases the emission results. If the power source being used and thus the emission factor cannot be clearly determined, a residual factor is applied for calculation. This residual factor is sometimes considerably higher than the regional power mix factor.



	2013	2014	2015	2016 ●
CO_2 emissions (Scope 1) in t	336,641	341,509	299,476	289,190
CO_2 emissions (Scope 2) in t	3,214,352	3,271,761	3,183,298	2,981,253
Carbon emission reduction through renewable energy certificates (in metric tons)	286,207	266,744	381,989	413,236

Scope 2 GHG Protocol Guidance		
CO_2 emissions (Scope 2 "location-based") in t	3,583,260	3,406,027
CO_2 emissions (Scope 2 "market-based") in t	4,074,862	3,878,960

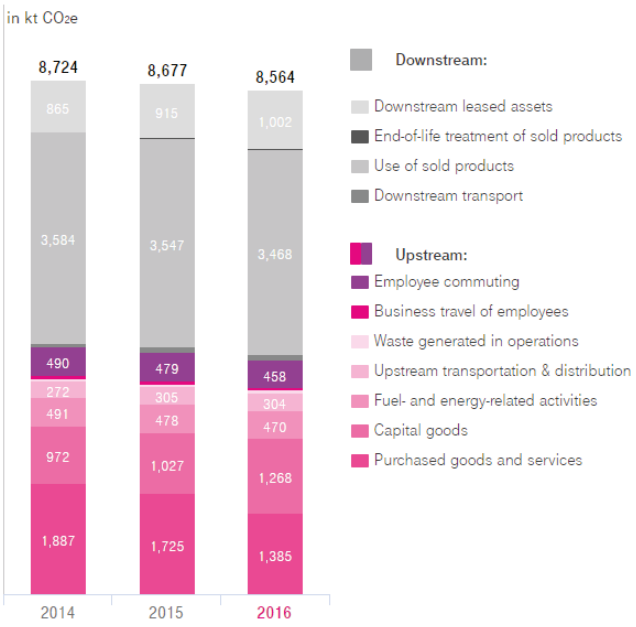
● Data verified by PwC. For detailed audit comments see "DT Group in Germany" and "T-Mobile USA".

Reporting against standards

By reporting our direct and indirect CO_2 emissions (Scope 1 & 2) in accordance with the Greenhouse Gas Protocol, we fully cover the G4-EN15 (Direct GHG emissions) and G4-EN16 (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 EMISSIONS (SCOPE 3) DEUTSCHE TELEKOM IN EUROPE*

The majority of our total emissions can be classified as Scope 3 emissions img. This includes emissions generated by business trips, commuting, our supply chain and the use of products and services. We have been recording Scope 3 emissions at DT Group in Germany since 2013. We are reporting our Scope 3 emissions for the EU here for the first time. The basic data used to calculate Scope 3 emissions is covered in the benchmarking tool. You will find more information on recording Scope 3 emissions along the value chain here.



* DT Group in Germany plus European fixed /mobile network operators

Reporting against standards

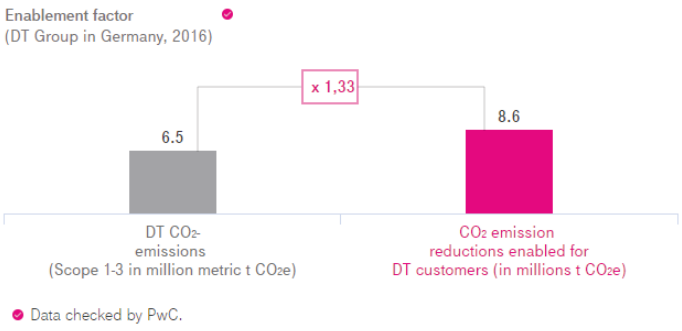
By reporting this data, we fully cover the G4-EN17 (Other indirect GHG emissions) and the E02-01 (Total Scope 1-3 greenhouse gas emissions) EFFAS indicator. This data is also relevant for criteria 11 and 12 (Usage of natural resources) and 13 (GHG emissions) of the German Sustainability Code. It is also used for reporting on the Global Compact principles 7 (Precautionary approach) and 8 (Promoting environmental responsibility).

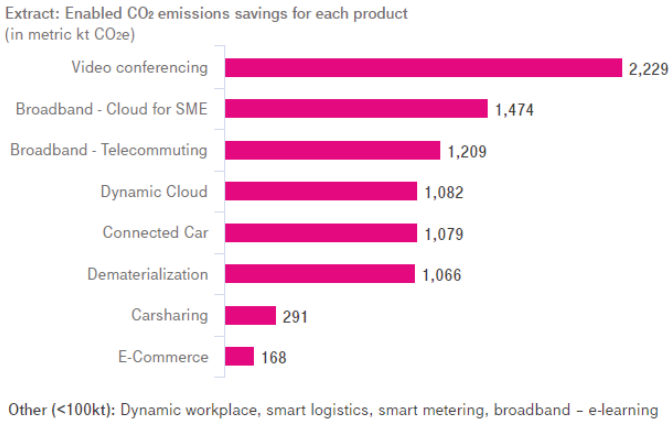
ENABLEMENT FACTOR

ENABLEMENT FACTOR FOR DT GROUP IN GERMANY

In addition to calculating our own carbon footprint, in 2016 we are also calculating for the first time the amount of CO_2 emissions that our customers can avoid producing by using our products and services. The ratio between these two figures – the "enablement factor" – allows us to assess our overall performance when it comes to climate protection. The savings achieved by our customers in Germany in 2016 were 33 percent higher than our own CO_2 emissions (an enablement factor of 1.33 : 1).

Enablement Factor ESG [i] KPI: CO_2 emission reductions enabled by the use of DT products and services





Other (<100kt): Dynamic workplace, smart logistics, smart metering, broadband – e-learning

You can find further information about the Enablement Factor ESG KPI here.

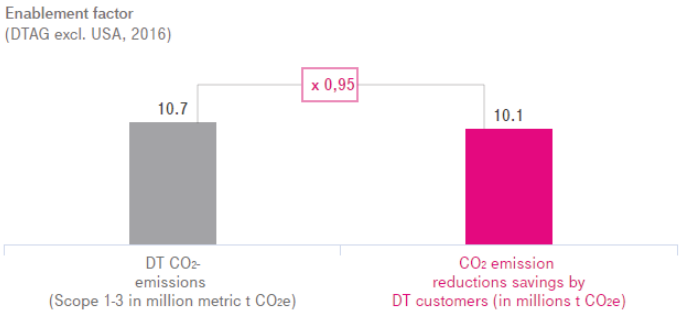
Reporting against standards

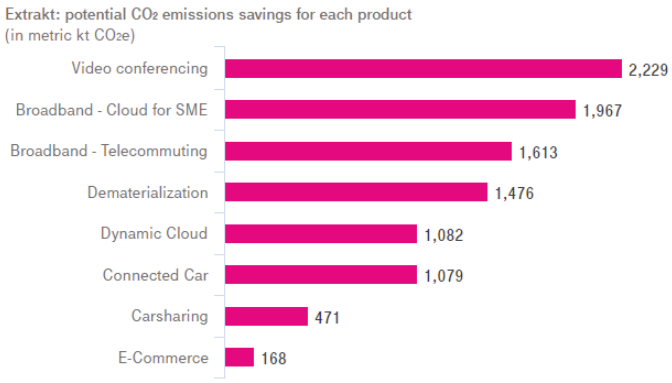
Information on the enablement factor is relevant for GRI Indicator G4-EN19 (Reduction of Greenhouse Gas Emissions). The information is relevant for the EFFAS KPI [i] S13-01 (Intermodality). It is furthermore relevant for criterion 13 (Climate-relevant emissions and objectives) of the German Sustainability Codex. It is also used for reporting on the Global Compact [i] principles 7 (Precautionary approach) and 8 (Promoting environmental responsibility).

ENABLEMENT FACTOR FOR DEUTSCHE TELEKOM GROUP IN EUROPE

In addition to calculating our own carbon footprint, in 2016 we are also calculating for the first time the amount of CO_2 emissions that our customers can avoid producing by using our products and services. The ratio between these two figures – the "enablement factor" – allows us to assess our overall performance when it comes to climate protection. The reduction potential of our customers throughout Europe (including Germany) in 2016 was not quite as high as our own CO_2 emissions, resulting in an enablement factor of 0.95.

Enablement Factor ESG KPI: CO_2 emission reductions enabled by the use of DT products and services





Other (<100kt): Dynamic workplace, smart logistics, smart metering, broadband – e-learning

You can find further information about the Enablement Factor ESG KPI here.

Reporting against standards

Information on the enablement factor is relevant for GRI Indicator G4-EN19 (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).

MOBILITY

NUMBER OF VEHICLES

The total number of vehicles at our company decreased year over year by around 1 percent. The DT Group in Germany, Magyar Telekom Hungary and Telekom Romania, in particular, were able to reduce the number of vehicles in their fleets. For detailed comments on the figures for each individual company, please refer to the interactive benchmarking tool.

We were able to significantly increase the total number of vehicles with alternative drives in our fleet by around 23 percent from the previous year. We continue to focus on alternative and fuel-efficient engines - which of course must also be financially viable - when purchasing new company cars and service vehicles. You will find more information on Deutsche Telekom's climate friendly fleet management policies here.

	2013	2014	2015	2016
Total number	41,618	43,661	42,186	41,666
Number of vehicles with diesel engines	33,538	35,352	35,369	34,941
Number of vehicles with gas engines	7,903	8,051	6,551	6,399
Number of alternative fuel vehicles	177	258	266	326
Number of company cars	14,670	13,714	12,504	12,161
Number of service vehicles	26,948	29,947	29,682	29,505

We were able to significantly increase the total number of vehicles with alternative drives in our fleet by around 23 percent from the previous year. We continue to focus on alternative and fuel-efficient engines - which of course must also be financially viable - when purchasing new company cars and service vehicles. You will find more information on Deutsche Telekom's climate friendly fleet management policies here.

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. By reporting our vehicle data, we fully cover the G4-EN30 (Environmental impact of transport) GRI indicator. This data is also relevant for criterion 11 (Usage of natural resources) of the German Sustainability Code.

FUEL CONSUMPTION

Overall fuel consumption of diesel as well as gas-powered company cars decreased by around 6 percent. Particularly DT Group in Germany, Magyar Telekom (Hungary) and Telekom Romania were able to substantially reduce fuel consumption. For detailed comments on the figures for each individual company, please refer to the interactive benchmarking tool.

in liter	2013	2014	2015	2016
Fuel consumption (total)	73,580,929	76,384,782	71,926,080	67,275,502
Fuel consumption by diesel-powered vehicles	55,816,139	58,134,595	54,646,907	50,584,286
Fuel consumption by gasoline-powered vehicles	17,373,845	17,864,399	16,705,590	16,253,752
Fuel consumption by vehicles with alternative drives	390,945	385,788	196,583	141,464
Fuel consumption by company cars	31,514,921	31,001,743	25,935,470	23,736,510
Fuel consumption by service vehicles	42,066,008	45,383,039	45,990,610	43,538,992

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

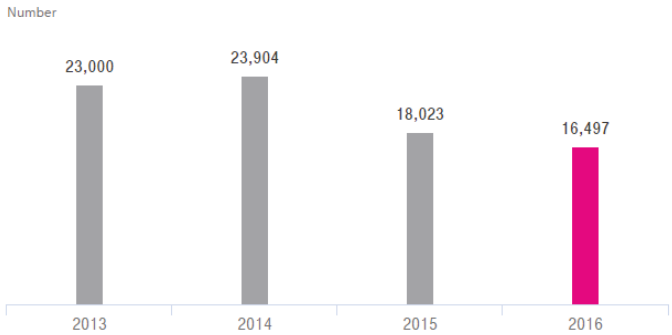
Reporting against standards

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. By reporting our vehicle data, we fully cover the G4-EN30 (Environmental impact of transport) GRI indicator. This data is also relevant for criterion 11 (Usage of natural resources) of the German Sustainability Code.

JOB TICKET

In 2016, 16,497 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 in part to relocations.

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).

USED CELL-PHONE COLLECTION AND WASTE VOLUME

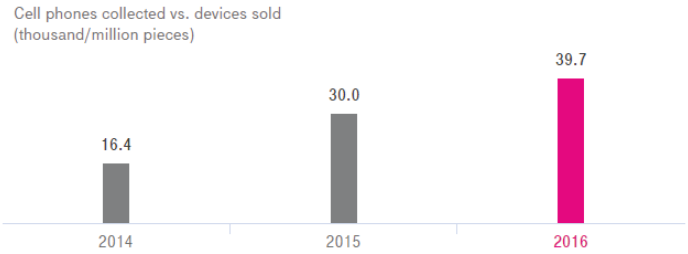
USED CELL-PHONE COLLECTION ESG KPI [a)]

We are reporting the Used Cell-phone Collection 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. Around 465 thousand mobile devices were collected throughout the Group (not including TMUS) in 2016, a significant increase compared to the previous year. This increase was driven above all by measures taken by our national company in Hungary. At the same time, the number of devices brought into circulation in the majority of our subsidiaries dropped slightly.

TMUS is not included in the Group's ESG KPI; just under 4 million mobile devices were collected there alone.

The Used Cell-Phone Collection 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.



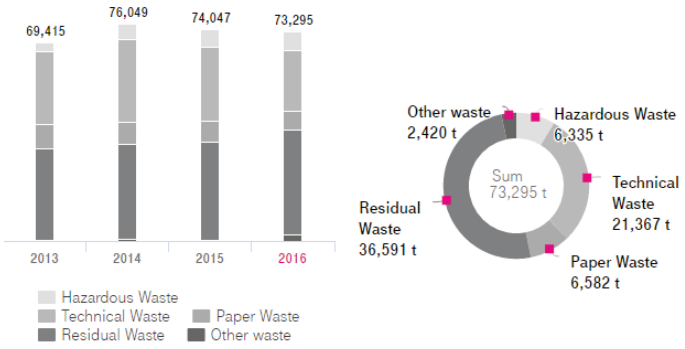
a) The Group value includes companies that have submitted the data necessary to calculate the KPI (currently e.g. without T-Mobile US, Crnogorski Telekom, Maktel and Telekom Albania). T-Systems is not relevant.

Reporting against standards

By reporting the Used Cell-Phone Collection ESG KPI as an indicator of progress achieved in the resource-efficient and environmentally friendly use of products, we fully cover the G4-EN27 (Initiatives to mitigate environmental impacts) GRI performance indicator. By reporting this data we also 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 GENERATION

The amount of waste produced throughout the Group was reduced by 1 percent in comparison with 2015. The reduction can primarily be attributed to the reduction of technical waste. The amount of technical waste fluctuates from year to year as the result of projects that are conducted at irregular intervals. For detailed comments on the figures for each individual company, please refer to the interactive benchmarking tool.



You can find further information on our waste management policies here.

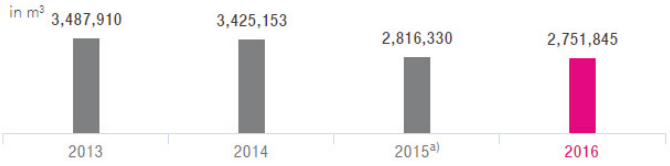
Reporting against standards

By reporting the amount of waste we generate, we partially cover the G4-EN23 (Total weight of waste by type and disposal method) GRI indicator and the E04-01 (Total waste in tonnes) EFFAS indicator. This data is also relevant for criterion 11 (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).

OTHER ENVIRONMENTAL DATA

WATER CONSUMPTION

Water consumption throughout the Group dropped by 2 percent. This development can be particularly attributed to reduced consumption at the DT Group in Germany and at Makedonski Telekom. The value for 2015 was corrected compared to the information published in the previous year's report. For detailed comments on the figures for each individual company, please refer to the interactive benchmarking tool.

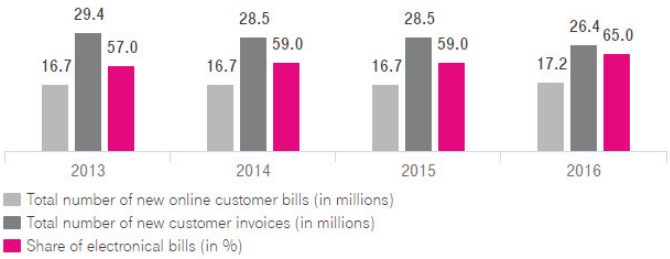


Reporting against standards

By reporting our water consumption we fully cover the E28-01 (Total water consumption) EFFAS indicator. This data is also relevant for criterion 11 (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).

ONLINE CUSTOMER BILLS

More than 17 million online bills were sent out in 2016. This is the equivalent of over 60 percent of all bills and credit notes for fixed-line and mobile customers in Germany. The data was collected using a more precise calculation method in 2016.

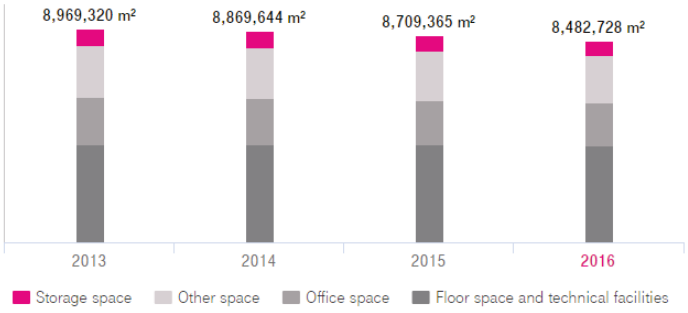


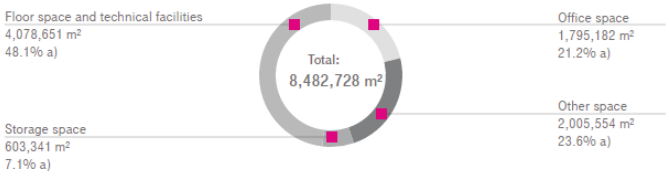
Reporting against standards

By reporting data on the number of online customer bills, we fully cover the G4-EN27 (Initiatives to mitigate environmental impact) GRI indicator and partially cover the V04-13 (Percentage of services or products for increasing eco-efficiency of own products) 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).

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 8,483 square meters of space being used.





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).

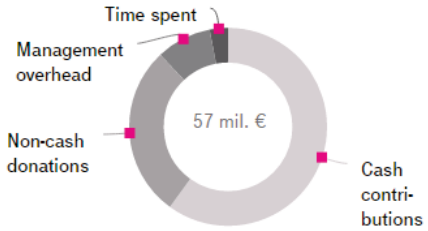
SOCIAL INVOLVEMENT

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.

ESG KPI "Community Investment" (Input Split)57 mil. €



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

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 benefited from such activities.

The 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.

ESG KPI "Beneficiaries" 15 mil. persons
ESG KPI "Media literacy" 40%

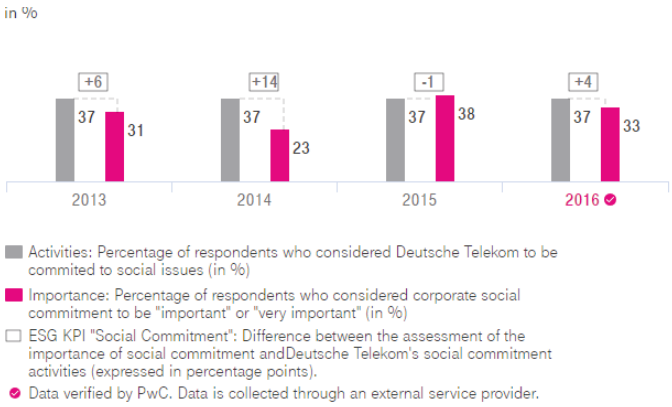
Data audited by PwC. For detailed assurance comments see "DT Group in Germany" and "T-Mobile USA".

SOCIAL COMMITMENT ESG KPI DT GROUP IN GERMANY

As shown below, we measure our performance in society with the Social Commitment ESG KPI. The trend in the Social Commitment ESG KPI reflects a decreasing trend in the German public's growing expectations of our Companies social commitment, whereas Deutsche Telekom's performance receives the same rating as the previous year.

We report this ESG KPI for the last time in 2016 - as our ESG KPI Media Literacy better reflects the relevance for Deutsche Telekom's Core Business.

We use an exclusive telephone survey of 2,000 people from the German residential population (customers and non-customers) con-ducted by TNS Infratest to measure our Social Commitment ESG KPI. The following questions were asked to determine the importance of social commitment: "How important is it to you that companies are active in the community?" In order to rate the performance of the Deutsche Telekom Group in Germany, TNS Infratest read the names of several companies to those surveyed and asked them to indicate whether those companies were involved in the community by answering "yes" or "no."



Reporting against standards

This data is relevant for criteria 18 (Community) and 7 (Rules and processes) of the German Sustainability Code.

ENGAGEMENT@TELEKOM

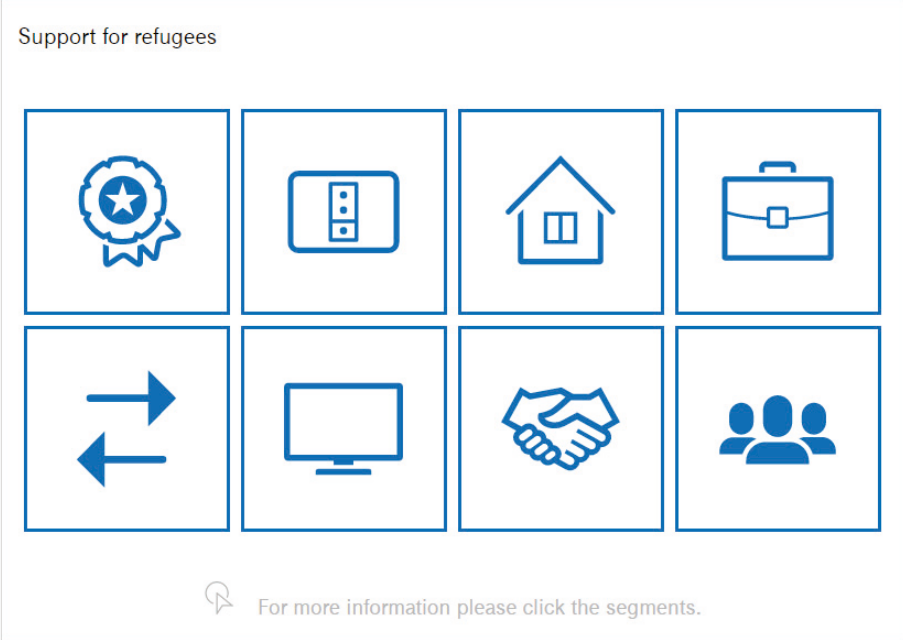
Employees at the national companies show their commitment to society in many different ways. This commitment (corporate volunteering) frequently focuses on helping people who are not yet able to help themselves - children and young people in need. Corporate volunteering is very popular at almost all of our national companies. Core data is collected within the context of international implementation of engagement@telekom.

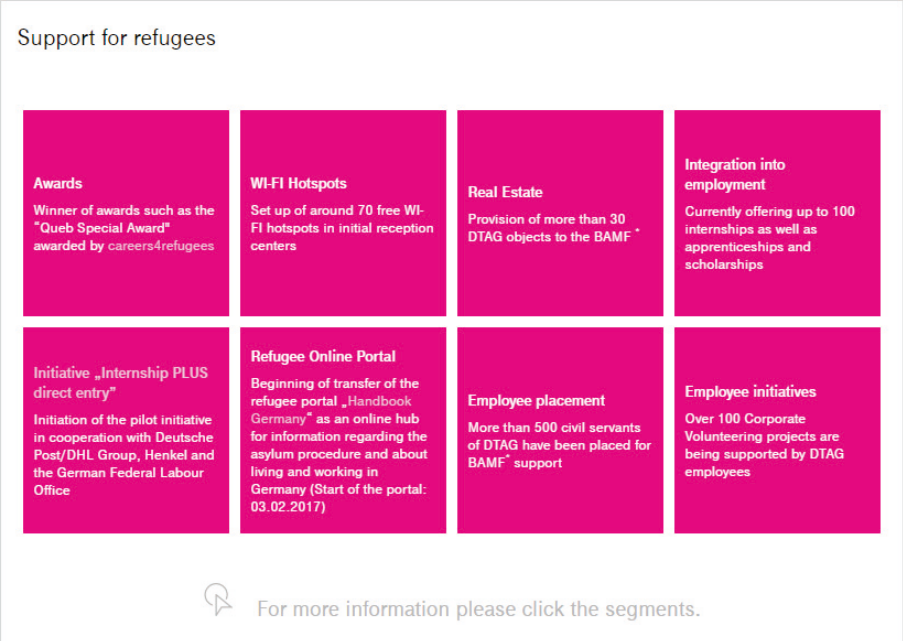
Number	2013	2014	2015	2016
Number of volunteering projects	219	168	274	284
Number of volunteers (employees)	16,847	25,211	31,355	27,693
Working hours	91,096	54,621	49,970	45,116

SUPPORT FOR REFUGEES

In view of the massive challenges involved in aid work for refugees, our Board of Management set up its own task force in August 2015. It pools our various aid programs in Germany to ensure that support can be provided faster and with less red tape. In 2016, up to 100 intern positions and about the same number of apprentice positions have been filled with refugees. Deutsche Telekom employees also initiated over 100 corporate volunteering projects. Further information is available here.

* German Federal Office for Migration and Refugees



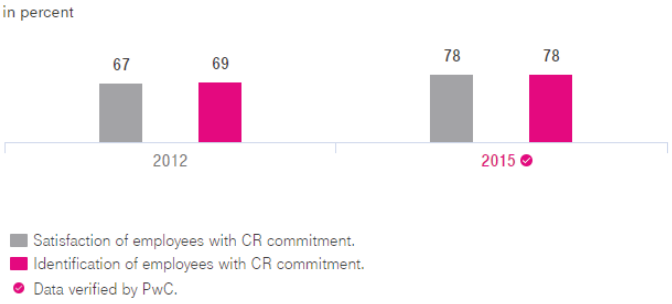


EMPLOYEE SATISFACTION

EMPLOYEE IDENTIFICATION WITH CR COMMITMENT ESG KPI

We use the Employee Identification with CR Commitment ESG KPI to assess how well our employee's identify and how satisfied they are with our CR activities. The calculation is based on an employee survey that is conducted at the national companies (without T-Mobile US) every two to three years. This KPI serves as the basis when defining future targets.

The 2015 survey indicated a considerable increase in employee identification and satisfaction with regard to our CR activities.



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 [1] Principles 3 (Freedom of association) and 6 (Elimination of discrimination).

SATISFACTION AND COMMITMENT INDEX

Satisfaction among management staff has improved continually in recent years and has stabilized at a high level throughout the Group. The commitment index for managers lies at a very good 4.5 on a scale of 1 to 5. Managers act in accordance with our our leadership principles "Collaborate," "Innovate" and "Empower to perform" as well as our Guiding Principles, which are binding for all our managers.

	2013	2014	2015	2016
Germany	86%	86%	87%	88%
International	81%	82%	85%	86%
Group (total)	**84%**	**84%**	**87%**	**87%**
Engagement-Index (Commitment-Index), scale of 1 to 5[b)]	4.4	4.4 [a)]	4.5	4.5

[a)] from prior year's MAB
[b)] Divergences from previous reports are due to the fact that the commitment index referred all employees up to the year 2014.

PULS-CHECK

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 accomplish this. The main feedback tools which the Group uses to assess employee satisfaction include the employee survey, which is carried out every two years, and the semi-annual pulse survey, containing the 11 questions from the employee survey shown above.

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 potential customers 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 the interests of the Group's success.
Workload/quality = In my team, the workload and quality requirements are consistent with one another.
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 my professional development.
Processes = Processes and procedures allow me to effectively meet my (internal and/ or external) customers' needs.
Recognition = Considering all my efforts and achievements, I feel that I have received the appropriate amount of recognition at work.
Guiding Principles = I feel that the Guiding Principles are reflected in my day-to-day work.

Reporting against standards

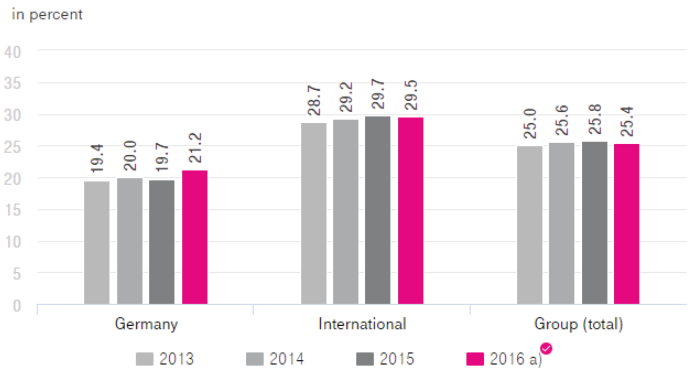
This data is relevant for criteria 7 (Rules and processes) and 14 (Employee rights and diversity) of the German Sustainability Code. It is also used for reporting on the Global Compact [1] principles 3 (Freedom of association) and 6 (Elimination of discrimination).

DIVERSITY

WOMEN IN MIDDLE AND UPPER MANAGEMENT

In 2016, as well, we continued pursuing the goal of achieving 30 percent women in management positions. We continue to support this goal through the "Fair Share" initiative. In Germany, the percentage of women in mid- and upper-level management increased from 19.7 percent to 21.2 percent. Group-wide, however, the value has slightly decreased, dropping from 25.8 to 25.4 percent.In the supervisory boards, the percentage of women among employee and employer representatives in Germany totals 34.8 percent.

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 - while only 9 out of 58 members were women in December of 2015, this number grew to 16 of 54 members in 2016.



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 here and in the HR Factbook starting mid-May.

Reporting against standards

By reporting the percentage of women in middle and upper management, we fully cover the G4-LA12 (Composition of governance bodies and breakdown of 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 1 principle 6 (Elimination of discrimination).

WOMEN IN TOTAL WORKFORCE

- **35%** Percentage of women in total workforce
- **65%** Percentage of men in total workforce

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 2016 Deutsche Telekom again raised this figure by 0.2 percentage points.

in %	2011	2012	2013	2014	2015	2016 [a]
Germany	6.7	7.1	7.6	7.5	7.6	7.8
Europe			2.5	2.8	2.1	2.4
Systems Solutions	3.8	4.1	4.2	4.6	4.8	45.2
Group Headquarters and Group Services	8.1	7.6	5.6	8.7	9.3	9.7
Group (total) in Germany	**6.3**	**6.4**	**6.4**	**7.0**	**7.2**	**7.5**

[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

You can find further information here and in the HR Factbook starting mid-May.

Reporting against standards

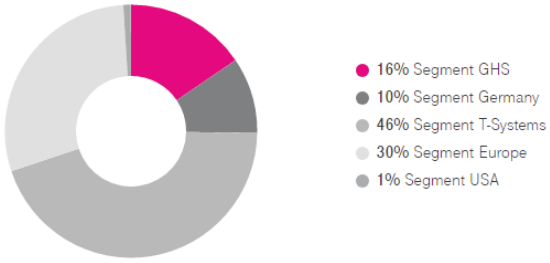
By reporting this data, we partially cover the G4-LA12 (Composition of governance bodies and breakdown of employees) GRI indicator. This data is also relevant for criterion 15 (Diversity and health) of the German Sustainability Code. It is also used for reporting on the Global Compact [1] principle 6 (Elimination of discrimination).

HUMAN RIGHTS

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 Social Charter. 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 the report, all 103 fully consolidated companies of Deutsche Telekom state whether they comply with the principles of the Social Charter. The report shows no violations of our Social Charter for January to December 2016.

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. You can find further information here.



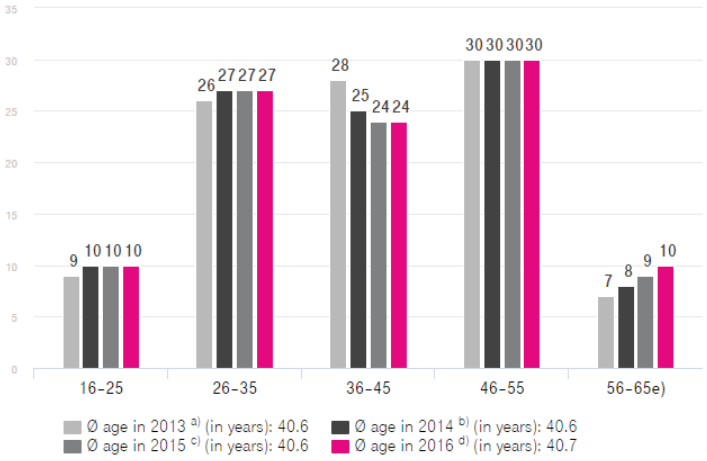
Reporting against standards

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 still 40.7 years. The average age in Germany is rising but is balanced out by the average age at international level (36.3 years).



a) does not include data for: T-Systems North America, T-Systems Canada, Data Migration Consulting AG, IT Services Hungary, Szolgáltató Kft., C&B International and Scout International.
b) does not include data for: Deutsche Telekom North America, T-Systems North America, T-Systems Belgium, T-Systems Japan, T-Systems Canada, T-Systems China, C&B International, Deutsche Telekom International Finance B.V. and ICSS- & GTS-Companies.
c) does not include data for: emetriq GmbH, DT Capital Partners Management GmbH, Satellic NV , DT North America, DT International Finance B.V., C&B International Limited, OTE Plc, GTS Central European Holdings B.V., GTS Telecom S.R.L., C&B Services India Private Limited and ICSS-Companies.
d) does not include data for: Deutsche Telekom Capital Partners Management GmbH, Detecon

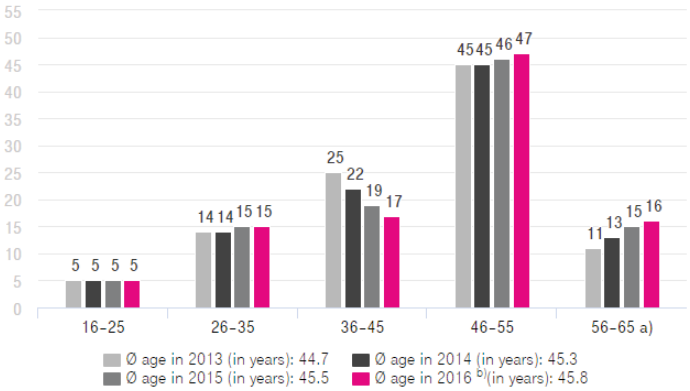
You can find further information here and in the HR Factbook by the end of May.

Reporting against standards

By reporting on this data, we partially cover the G4-LA12 (Composition of governance bodies and breakdown of 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 DT GROUP IN GERMANY

As a result of demographic change and low fluctuation, the proportion of employees over 55 years of age increased from 9 to 16 percent. One advantage of this is that many experienced employees with a wealth of know-how work for Deutsche Telekom.



a) incl. > 65 years
b) 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

You can find further information here.

Reporting against standards

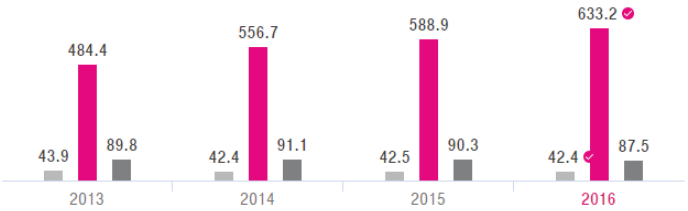
By reporting on this data, we partially cover the G4-LA12 (Composition of governance bodies and breakdown of employees) GRI indicator and fully cover the S03 -01 (Age structure/distribution) EFFAS indicator. This data is also relevant for criterion 15 (Diversity and health) of the German Sustainability 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.

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.

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.



Number of participants in Telekom Pension Fund (total) in thousands a)
Telekom Pension Fund assests (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.

Verified by PwC: only number of participants in Telekom Pension Fund and Telekom Pension Fund assets.

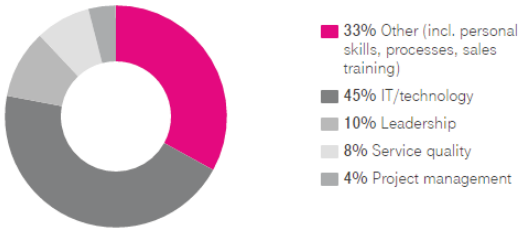
Reporting against standards

By reporting this data we fully cover the G4-EC3 (Coverage of the organization's defined benefit plan obligations) GRI indicator.

TRAINING AND DEVELOPMENT

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.



Seminars: **28,819**
Participants: **245,804**
Participant days: **378,058**
Ø number of training days per participant: **1.5**; per employee: **3.6**
Number of web-based training courses carried out (content usages on internal e-learning platform): **7**

You can find further information here and in the HR Factbook starting mid-May. Group data will be available starting in the 2017 reporting year.

Reporting against standards

By reporting this data we fully cover the G4-LA9 (Average hours of training per year per employee) and G4-LA10 (Skills management and lifelong learning) 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 MANAGEMENT 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.

The number of participants in Talent Space dropped in 2016, as did the number of participants in the Management Development Program (German-speaking) and the Leadership Development Program (English-speaking).

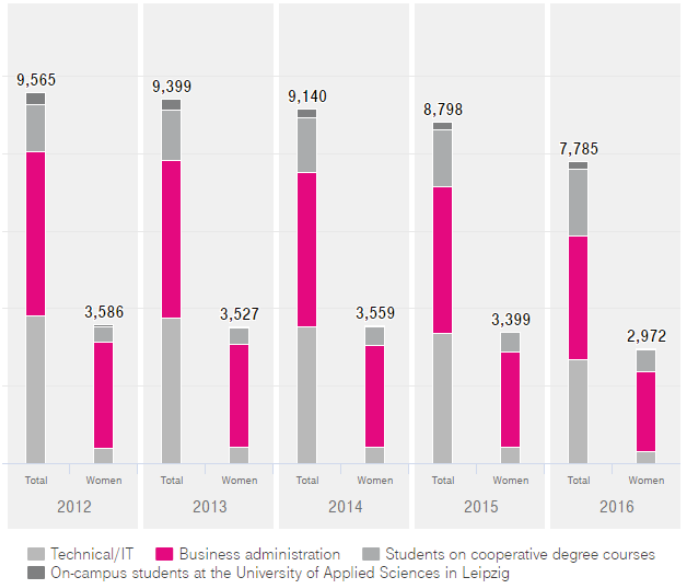
You can find further information in the HR Factbook starting mid-May.

		2013	2014	2015	2016
Participants Trainee-Programm Start up![a]	total	31	30	31	18
Participants Trainee-Programm Start up![a]	of which women	35%	36%	45%	28%
Participants Talent Space[b]	total		161	300	253
Participants Talent Space[b]	of which women		29%	32%	35%
Participants FEP[c]/ LDP[d]	total	491	487	473	359
Participants FEP[c]/ LDP[d]	of which women	37%	39%	40%	42%

[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 June). Replaces previous program available since 2010. No comparison possible
[c] National German-language Management Development Program
[d] Leadership Development Program

APPRENTICES AND TRAINING PROGRAMS DEUTSCHE TELEKOM GROUP IN GERMANY

Around 20 young people began vocational training or a cooperative course of study on a part-time basis again in 2016. For many of them this is the only way to combine training or their first job with the challenges of family life. 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.



Examples for commercial training programs: office communications administrators, retail sales or dialog marketing assistants, industrial business administrators
Examples for cooperative study programs: Bachelor in Business Administration, Communications and Information Technology, Business Information Systems.

You can find further information here.

Reporting against standards

By reporting this data we partially cover the G4-LA9 (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 HEALTH

HEALTH RATE

The health rate at Deutsche Telekom in Germany remained constant at a high level over the course of the year at approximately 94 percent.

	2011	2012	2013	2014	2015	2016
Germany	93.5	93.6	93.4	93.8	93.3	93.1
Europe	97.7	97.5	96.8	96.9	96.7	97.0
Systems Solutions	96.3	96.3	96.3	96.4	96.5	96.5
Group Headquarters and Group Services	94.4	94.5	93.4	93.8	93.3	92.8
Group national	**94.1**	**94.2**	**93.9**	**94.4**	**94.0**	**93.8**

You can find further information here.

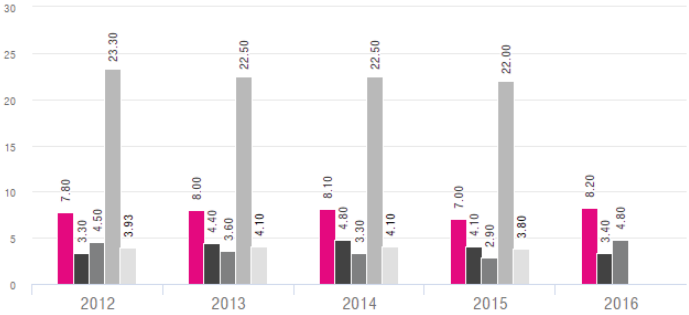
Reporting against standards

In combination with data on work-related accidents, the health rate data partially covers the G4-LA6 (Rates of injury, occupational diseases, lost days, and absenteeism) GRI performance indicator. This data is also relevant for criterion 15 (Diversity and health) of the German Sustainability Code.

OCCUPATIONAL ACCIDENTS

The number of all accidents at work and on the way to or from work increased slightly in comparison to 2015.

You can find further information in the HR Factbook starting by the end of May.



a) Accidents from 2016 have not yet been included in the statistics published to date.

HEADCOUNT AND PART-TIME WORK

WORKFORCE DEVELOPMENT WORLDWIDE

The Group's headcount decreased slightly by 3.1 percent compared with the year 2015. Employee figures were down in all segments except the United States. Employees in the U.S. segment rose slightly by 1.3 percent. New staff were recruited for the retail segment as well as for customer service and HR administration. In our Europe and Systems Solutions business, the employee base decreased as a result of efficiency improvements and personnel restructuring measures. Employee numbers in the Group Headquarters & Group Services segment were down 11.8 percent year on year.

	2011[a)]	2012	2013	2014	2015	2016
Germany	69,574	67,497	66,725	68,754	68,638	66,142
USA	32,868	30,288	37,071	39,683	44,229	44,820
Europe	58,794	57,937	53,265	51,982	49,638	48,883
Systems Solutions	52,170	52,106	49,540	47,762	45,990	43,724
Group Headquarters and Group Services	21,726	21,858	21,995	19,631	16,747	14,772
Group (total)	235,132	229,686	228,596	227,811	225,243	218,341

[a)] Figures deviate from previous reporting due to restatements. These restatements result from organizational changes within the Group.

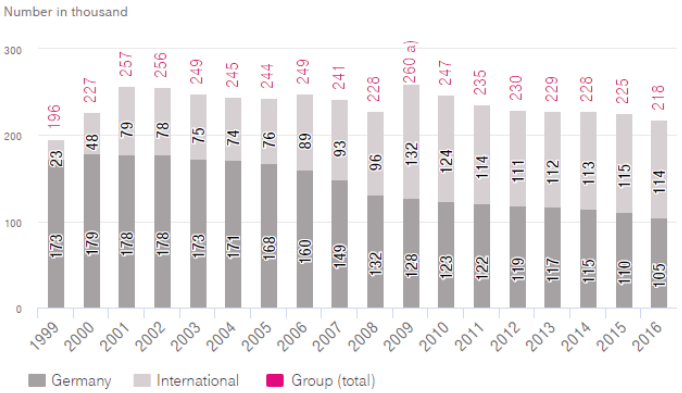
You can find further information in the HR Factbook by the end of May.

Reporting against standards

In combination with additional headcount data, the data on the trend in employee numbers worldwide fully covers the G4-LA1 (Employee turnover) GRI indicator. It also partially covers the S01-01 (Percentage of FTE leaving p.a.) EFFAS indicator.

DEUTSCHE TELEKOM WORKFORCE 1999-2016

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 fluctuations in some places. Whereas 91.4 percent of company employees were working in Germany in 1998, the rate has leveled at around 50 percent since 2009. The figure for 2016 was 48 percent.



a) 2009 figures include 32,900 Full-time Equivalent at OTE.

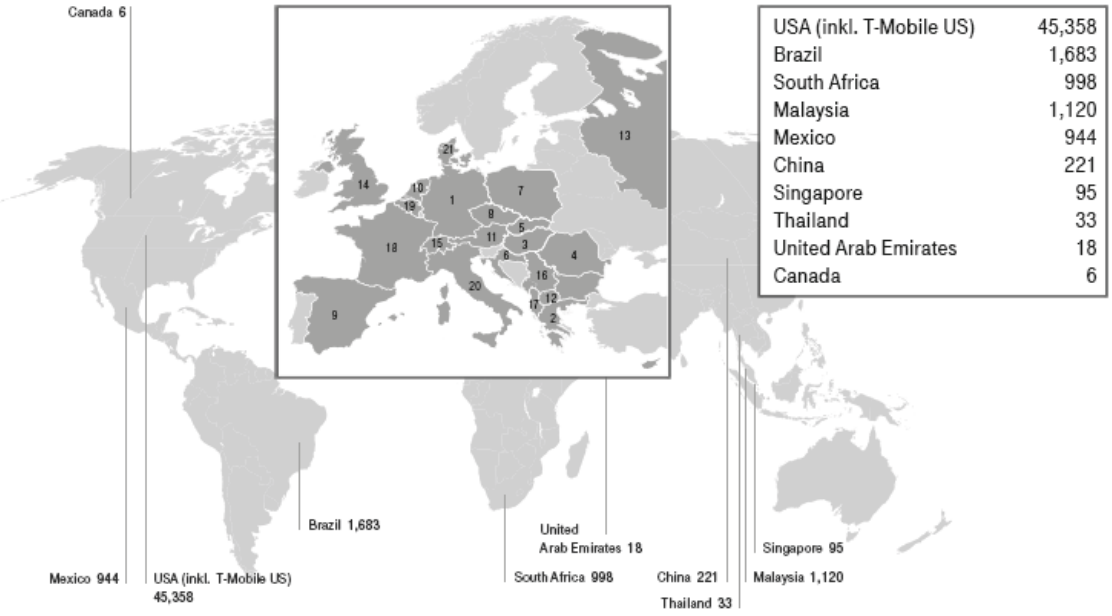
You can find further information in the HR Factbook by the end of May.

Reporting against standards

This data is relevant for criterion 15 (Diversity and health) of the German Sustainability Code.

NUMBER OF EMPLOYEES BY COUNTRY

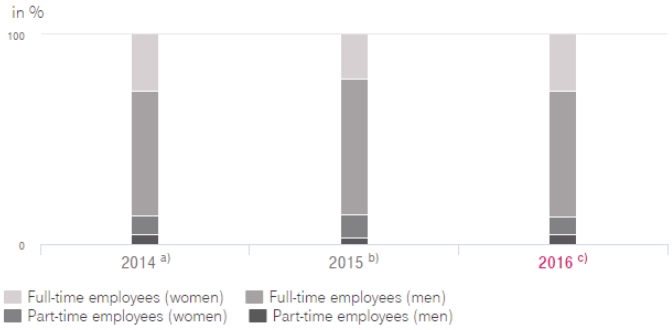
1	Germany	104,662
2	Greece	12,674
3	Hungary	12,272
4	Romania	7,681
5	Slovakia	7,623
6	Croatia	4,427
7	Poland	4,165
8	Czech Republic	3,312
9	Spain	2,568
10	Netherlands	1,745
11	Austria	1,903
12	Macedonia	1,019
13	Russia	1,167
14	United Kingdom	637
15	Switzerland	612
16	Montenegro	534
17	Albania	416
18	France	229
19	Belgium	144
20	Italy	28
21	Denmark	48



USA (inkl. T-Mobile US)	45,358
Brazil	1,683
South Africa	998
Malaysia	1,120
Mexico	944
China	221
Singapore	95
Thailand	33
United Arab Emirates	18
Canada	6

You can find further information in the HR Factbook starting by the end of May.

PART-TIME EMPLOYEES DEUTSCHE TELEKOM GROUP



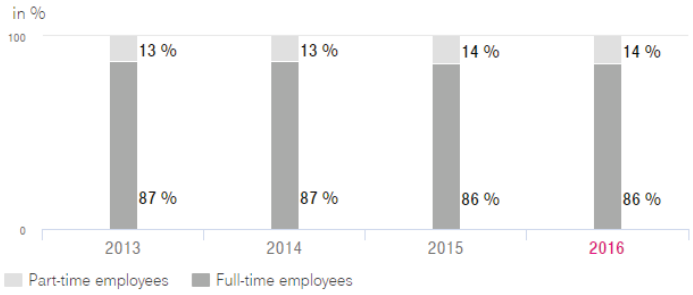
a): No data included for Magyar Telekom, OTE International Investments Limited, C&B and Scout24 International2014.
b): No data included for Deutsche Telekom North America, Deutsche Telekom International Finance B.V., C&B International, DeTeFleet, ICSS- and GTS-Companies.
c): No data included for emetriq 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

Reporting against standards

By reporting this data, we partially cover the G4-10 GRI (Total workforce) indicator.

PART-TIME EMPLOYEES DEUTSCHE TELEKOM GROUP IN GERMANY

The percentage of part-time employees was around 14 percent in 2016, maintaining at a constant level.



You can find further information here and in the HR Factbook starting mid-May.

Reporting against standards

By reporting this data, we partially cover the G4-10 (Total workforce) 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 [1] principles 3 (Freedom of association and the right to collective bargaining) and 6 (Elimination of discrimination).

FLUCTUATION

FLUCTUATION RATE

The fluctuation rate in Germany increased for the first time, after experiencing continuous reduction since 2012. In 2016 it was 1.37 percent. At the international level it has dropped by more than one percentage point in comparison to 2015. It has also increased slightly at Group level due to the increase in Germany, and was 4.01 percent in 2016.

in %	2014	2015	2016
Germany	1.42	1.28	1.37
International [a)]	8.57	9.25	8.14
Group (total)[a)]	4.21	4.39	4.01

[a)] excluding USA

You can find further information in the HR Factbook starting mid-May.

Reporting against standards

In combination with additional data on the number of employees, the data on the fluctuation rate fully covers the G4-LA1 (Employee turnover) GRI indicator.

STAFF RECONSTRUCTING

PROPORTION OF CIVIL SERVANTS IN GROUP WORKFORCE

The proportion of civil servants employed in the company fell once again in 2016. 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.

	2011	2012	2013	2014	2015	2016
Active civil servants	23,516	21,958	20,523	19,881	18,483	15,999
Civil servants on temporary leave from civil servant status[a)]	1,537	1,430	1,412	1,340	1,220	889
Civil servants at affiliated companies	15,774	14,836	14,179	13,260	12,292	10,827
Civil servants (total)	**40,828**	**38,224**	**36,114**	**34,482**	**31,995**	**27,716**
Number of non-civil servants in Germany	80,736	80,616	80,529	80,267	78,360	76,946
Total number of employees in Germany	**121,564**	**118,840**	**116,643**	**114,749**	**110,354**	**104,662**
Percentage of civil servants in Germany (in %)	33.6	32.2	30.96	30.05	28.99	26.48

[a)] Civil servants whose status as such is currently suspended. They have temporarily switched to an employee relationship not covered by collective agreements.

You can find further information here and in the HR Factbook starting mid-May.

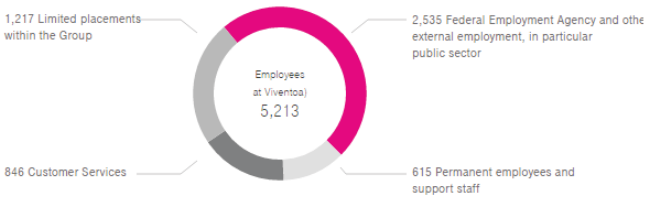
Reporting against standards

In combination with additional headcount data, the data on the percentage of civil servants in the workforce fully covers the G4-LA1 (Employee turnover) GRI indicator.

VIVENTO WORKFORCE

Personnel service provider Telekom Placement Services continued to support the Group in its workforce restructuring efforts in the year 2016. Since its creation, Telekom Placement Services has opened up new professional prospects for more than 48,000 employees – increasingly in the public sector such as, for instance, at BAMF, the Federal Office for Migration and Refugees. 400 civil servants were seconded to BAMF in the reporting year to provide support for refugee relief work, including the processing of asylum claims. In fact, Deutsche Telekom employees are now working at more than 50 percent of the BAMF offices throughout Germany.

In addition, in 2016 we were once again able to offer internal employment options to employees in units with surplus staff. In the reporting year alone, over 1,200 employees had been transferred to new positions inside the Group by December 31, 2016.



Number of employees who have been transfered to the public sector via vivento: **418**
Staff transfers to Vivento since its foundation: **53,496**
Staff who have left Vivento since its foundation: **48,283**
a) All figures calculated on the basis of precise details. Since figures are rounded, totals may differ.

Reporting against standards

In combination with additional headcount data, the data on the trend in employee numbers at Vivento fully covers the G4-LA1 (Employee turnover) GRI indicator.

TOOLS FOR SOCIALLY RESPONSIBLE STAFF RESTRUCTURING DEUTSCHE TELEKOM GROUP IN GERMANY

We continued our efforts to engage in socially acceptable staff restructuring in 2015. We use internationally proven tools giving employees the option to voluntarily leave the company as part of this process. This is the first year we are reporting Group-wide numbers.

	2012 [a]	2013	2014	2015	2016
Early retirement (civil servants)	2,266	1,618	927	1,235	3,868
(in germany)	2,266	1,618	927	1,219	3,849
Early retirement (non-civil servants)	253	30	41	29	47
(in germany)	3	27	27	29	47
Severance payments	2,847	3,618	3,738	4,436	3,903
(in germany)	955	1,316	826	1,448	726
Partial retirement (start of passive phase)	1,418	711	332	1,345	1,393
(in germany)	1,417	711	332	1,345	1,393
Other socially responsible tools	1,921	2,490	618	136	119
(in germany)	120	241	471	11	<6
Transfers to public authorities (final)[b]				711	409
(in germany)				711	409

[a] Worldwide data collection since 2012
[b] 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 here and in the HR Factbook starting mid-May.

Reporting against standards

This data is relevant for criteria 6 (Rules and Processes) and 14 (Employment Rights) of the German Sustainability Code.

IDEAS MANAGEMENT

GENIAL@TELEKOM. IDEAS MANAGEMENT

Employees have the chance to submit their own ideas and, in doing so, to actively shape their workplaces. Costs reductions of €168.5 million in 2016 played a key role in keeping Deutsche Telekom competitive. In addition, workforce commitment enables the Group to position itself as a more innovative and more competitive enterprise. An incentive for idea generators: Deutsche Telekom awards attractive bonuses for successful suggestions. One idea submitted in 2016 deserves special mention: it enabled us to reduce our mast replacement rate from 14 percent to 10 percent, thereby making a significant contribution to conserving resources and reducing cost. Deutsche Telekom employees ideas also earn external accolades: for instance, one employee idea won the "DeutscherIdeenPreis 2016" award presented by the German Institute for Business Management (dib).

	2012	2013	2014	2015	2016
Ideas submitted	13,043	12,146	13,231	13,728	10,125
Savings in millions of €	104	83	107	147	169

Reporting against standards

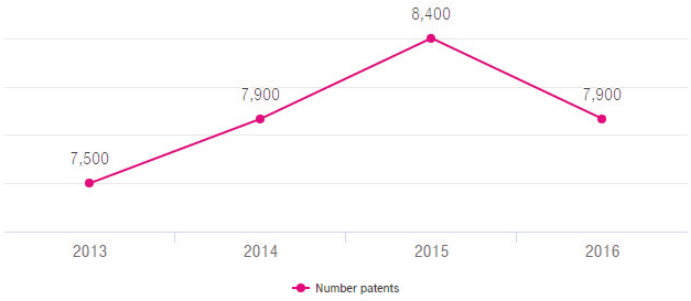
Employee involvement is encouraged via the genial@telekom ideas management platform. This data is relevant for criterion 14 (Employee rights) of the German Sustainability Code.

PORTFOLIO OF INTELLECTUAL PROPERTY RIGHTS

275 patents were registered during the reporting period. By the end of 2016, we owned around 7,900 intellectual property rights (IPRs), fewer than in the previous year. 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.

IMPRINT

Adress:
Deutsche Telekom AG
Friedrich-Ebert-Allee 140
53113 Bonn, Germany
District Court of Bonn HRB 6794,
Registered Office Bonn
VAT ID No. DE 123475223

E-Mail: impressum [at] telekom.de
Telefon: 0228/ 181-0

Contact:
Please use our contact forms for questions about the company or products and services provided by our business areas.

Regulatory authority:
Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway
Tulpenfeld 4, 53113 Bonn, Germany

Authorized representatives:
Timotheus Höttges
Reinhard Clemens
Niek Jan van Damme
Thomas Dannenfeldt
Srini Gopalan
Dr. Christian P. Illek
Dr. Thomas Kremer
Claudia Nemat

Regulatory authority:
Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway
Tulpenfeld 4, 53113 Bonn, Germany

Responsible:
Deutsche Telekom AG
Birgit Klesper
Senior Vice President Group Transformational Change & Corporate Responsibility
Friedrich-Ebert-Allee 140
53113 Bonn

Further information on Deutsche Telekom's corporate responsibility activities can be found at:
http://www.telekom.com/corporate-responsibility
and
http://www.annualreport.telekom.com

Concept/research/design/programming:
Deutsche Telekom AG
Stakeholder Reporting GmbH, Hamburg
yoocon GmbH, Berlin
1000°DIGITAL GmbH, Leipzig

Photos:
Frank Bauer
Pictureworld, Deutsche Telekom

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