

Welcome to your CDP Climate Change Questionnaire 2023

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Deutsche Telekom provides fixed network/broadband, mobile communications, Internet, and IPTV products and services for consumers, and information and communication technology (ICT) solutions for business and corporate customers.

Deutsche Telekom is present in more than 50 countries. With a staff of some 206,800 (Dec 31, 2022) employees throughout the world, we generated revenue of 114.4 billion Euros in the 2022 financial year, 78 percent of it outside Germany. Telekom continuously drives its international growth strategy forward through acquisitions in markets in which it has a presence, joint ventures and the targeted expansion of broadband infrastructure.

Climate change is the biggest ecological challenge of our time. Our objective is to be a leader in the field of environmental and climate protection at international level, playing an active role in finding ways to reduce global carbon emissions. As a result, we develop ICT-based products and services that improve our own resource efficiency as well as enable our customers to play their own part in sustainable development. We use an effective environmental management system in our continuing efforts to minimize the ecological impact of our business activities. In between we also committed to Science Based Targets which are published on the website of the Science Based Targets Initiative (<https://sciencebasedtargets.org/companies-taking-action/>). Science Based Targets were also approved by the DT Group companies T-Mobile US and Magyar Telekom. Deutsche Telekom aims to reach carbon neutrality by 2040 the latest. On the way to this target, the Board of Management decided in March 2023 to set a new interim target for 2030 to reduce scope 1-3 emissions by 55% against 2020.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.

Reporting year

Start date

Januar 1, 2022

End date

Dezember 31, 2022

Indicate if you are providing emissions data for past reporting years

No

C0.3

(C0.3) Select the countries/areas in which you operate.

Austria
Brazil
China
Croatia
Czechia
Denmark
France
Germany
Greece
Hungary
India
Mexico

Montenegro
Netherlands
North Macedonia
Poland
Romania
Russian Federation
Singapore
Slovakia
Spain
Switzerland
United Kingdom of Great Britain and Northern Ireland
United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

EUR

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Financial control

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	DE0005557508

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual or committee	Responsibilities for climate-related issues
Board Chair	The Chief Executive Officer (CEO) is personally in charge of climate-related issues and the superior responsibility for the whole DT Group, together with the whole Board of Management regarding the Climate Change Strategy and individual Board Members regarding their area of responsibility according to DT's UN Global Compact Commitment. The CEO leads the Board of Management of Group Deutsche Telekom. Since January 1st 2022, the Group Corporate Responsibility Team belongs directly to the CEO area. As sustainability and climate change are important topics for DT, the tasks above are assigned for the CEO as the first representative of Deutsche Telekom. The CEO made climate change to one of the sustainability topics where DT aims for leadership. He also directed the Board of Management towards a more ambitious carbon neutrality targets (2025 for scope 1&2 and 2040 for the whole value chain), decided by the Board of Management in March 2021. He also drove the decision to set up the "green" transformation program "Green Magenta" (former "We care for our planet") which includes in between 11 internal and external oriented workstreams to make

	Deutsche Telekom more sustainable.
Chief Financial Officer (CFO)	As Procurement belongs to Finance the CFO is responsible for the implementation of sustainable supply chain management processes within the DT organization, including the management of climate change related risks in our supply chains. Procurement also introduced a new supplier code of conduct increasing the sustainability requirements for DT suppliers. He is also responsible for the "Green Car Policy", green buildings and the SRI Investors. The tasks described above are assigned to the CFO as purchases have a big impact for the financial performance of the company as purchases represent a high percentage of the revenues. The CFO is also responsible for the risk and opportunity management processes within Deutsche Telekom, including climate change related risks and opportunities. As part of the "Green Magenta" program the CFO decided to prepare the emission of a "Sustainability linked Bond" in 2020.
Other C-Suite Officer	The CHRO (Chief Human Resource Officer) is responsible for the group wide QHSE Management System, including the environmental management according to DIN ISO 14001. The CHRO was also responsible for the update of DT Green Car Policy. From 2023 onwards all new benefit cars in Germany need to be electric vehicles.
Chief Technology Officer (CTO)	The Group CTO is responsible for energy efficient technology and for sustainable innovation. Due to our energy consumption of more than 13TWh last year and the increasing customer and policy requirements with respect to speed, bandwidth and transported data volume, energy efficient technology is extremely important. Sustainable innovation leads the path to offer more sustainable and/or energy and carbon saving products and solutions to our customers and by this also to increase the enabling potential of DT. The tasks above are assigned to the CTO as technology plays an important part to drive the sustainability agenda in general and also within Deutsche Telekom. Technological innovation is essential to tackle climate change without neglecting the social aspects of sustainability.

	There have been set up different internal products initiated to drive down the DT electricity and consumption and to save energy related costs. The CTO of DT also supported the decision of the German Government to phase out coal power plants as a member of the "Kohlekommission" in 2020.
Other C-Suite Officer	The Board Member Germany is responsible for the implementation of the UN Global Compact principle in the German organization and for energy efficient technology. This task is assigned to the Board member responsible for Germany as the German telecommunication networks consume around one third of the electricity consumption of DT Group. Under his responsibility in DT in Germany introduced the "we care" label in Germany (in between "Green Magenta" and "Good Magenta" label, starting with the offer of refurbished smart phones. By this the product lifetime is extended and the annual carbon footprint reduced. Decisions in 2022 among others include new renewable electricity production, making the sustainable fairphone available for employees, new sustainable B2B offers, working on device and network circularity (target full circularity for devices and network components by 2030).
Chief Procurement Officer (CPO)	We have been working to improve sustainability throughout our supply chain for many years. We derive our sustainability strategy in procurement from our CR strategy; it is anchored in the purchasing processes used throughout our Group. The heads of the CR and Procurement departments are jointly responsible for implementing sustainable procurement practices. The CPO of DT is responsible for sustainable procurement within DT. The procurement department is the direct interface to the suppliers of DT and therefore has the power to drive supplier sustainability performance and by doing so to also increase the resilience of DT supply chains. The Sustainable Procurement Group (SPG) supports the group-wide implementation of sustainability within Procurement departments and processes.

	The SPG is running under the lead of Procurement and getting consultancy support from CR department. Procurement is also constantly working on the better consideration of sustainability criteria in purchasing decisions. Procurement is also important to achieve the scope 3 emission reduction target of DT three third of DT scope 3 emission are from purchasing activities. Under his responsibility DT increased the supplier requirements within the new supplier code of conduct, published on May 22nd 2022. Suppliers are now obliged to "disclose complete, consistent, accurate and verified by 3rd party scope 1, 2 and 3 greenhouse gas (GHG) emissions data and/or components required to calculate GHG emissions data, via the Carbon Disclosure Program (CDP) or an alternative method that DTAG will provide. If requested by DTAG, Suppliers must provide plans to reduce greenhouse gas (GHG) emissions in alignment with DTAG's requirements" (currently scope 1-3, - 55% against 2020 by 2023). Suppliers are also obliges to "minimize negative impacts on Biodiversity and Deforestation, climate change and water scarcity."
Other C-Suite Officer	The Board Member for T-Systems is responsible for the T-Systems Corporate Responsibility and Sustainable IT solutions. As an IT-provider T-Systems lives up to its responsibility for "green " and sustainable IT infrastructure, for external as well as for DT internal services. T-Systems also contributes to the "enabling" impact of Deutsche Telekom as well as their clients - by innovative digitization services, energy efficient cloud- & infrastructure services and sustainability consulting services. T-Systems drove the data center consolidation, energy efficiency improvements and joined the Climate Neutral Data Center Pact. The board member initiated a T-Systems wide initiative "susTain" to fully contribute to DT group commitments and incorporate environmental sustainability across the T-Systems organization. T-Systems also massively restricted the order of new fossil fuel driven business cars to few exceptional cases, setting electric vehicles (no PHEV) as the standard, starting from May 1st 2022. As a significant contribution to DT's scope 3 emission reduction target, the DT partnering and vendor management departments initiated various supplier workshops addressing major relevant sustainability topics; e.g. resource and energy efficiency, circular economy and carbon management. We collaborate as partners with our suppliers to make sure they are able to meet our high sustainability criteria and standards. Within our multi-award-winning supplier development program (SDP) for strategically important suppliers, we have worked with the selected suppliers since 2014 to develop solutions for issues such as environmental protection, working hours reduction and health protection.

	The SDP is nowadays running as a volunteering initiative of Telco Operators and currently composed of DT, Telefonica, and Swisscom. We are aiming to allocate the SDP as a broader industry approach under the umbrella of the Joint Audit Cooperation: www.jac-initiative.com In this way, we are seeking to further enhance the sustainability of ICT supply chains and to support the development of more innovative and sustainable ICT products.
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C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	Reviewing and guiding annual budgets Overseeing major capital expenditures Overseeing acquisitions, mergers, and divestitures Reviewing innovation/R&D priorities Overseeing and guiding employee incentives Reviewing and guiding strategy	The Board is responsible for deciding on climate change targets (latest decision on new interim climate target for 2030 in March 2023) and regularly informed on the progress in the development and implementation of the respective transition measures to achieve these targets as well as on the achievement of these targets. The Board is also regularly informed on relevant risks and opportunities including climate change related risks and opportunities. The Board also decides single measures that are important with respect to the transformation, as e.g. on the "green" car policy which has an important impact on the scope 1 emissions (in 2022 the Board decided on the full electrification of the business vehicle fleet in Germany). The board also decides on network modernization and expansion strategies that mainly impact the electricity consumption and on the renewable electricity strategy that has a huge impact on the

	Overseeing and guiding the development of a transition plan Monitoring the implementation of a transition plan Overseeing and guiding scenario analysis Overseeing the setting of corporate targets Monitoring progress towards corporate targets Overseeing and guiding public policy engagement Overseeing value chain engagement Reviewing and guiding the risk management process	scope 2 emissions of Deutsche Telekom. The 2022 decision on sustainable sourcing provides instruments to better include sustainability and climate change into procurement decisions, supporting scope 3 emission reductions. Other business parameters as costs and revenues are also influenced by climate change and/or related policy frameworks. Examples on the cost side are costs for energy or costs caused due to climate change related extreme weather events as e.g. storms or floods. Examples on the revenue side are changes in revenues from sustainable products and services depending on policy measures but also from changes in the customer behaviour. For the Boards oversight with respect to climate change the Board annually receives and discusses the Climate Target Board Report that provides the status of climate target achievement and the necessary actions to achieve our climate targets. The board also receives quarterly updates including forecasts on all steering relevant figures (energy consumptions, CO2 emissions and circularity figures).
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C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues
Row 1	Yes	Two DT Board members have scientific background (Master degree in theoretic physics & PhD in chemistry) which qualifies them to understand the scientific background of climate change topics. Another board member has successfully driven the sustainability strategy of its prior employer.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Position or committee

Chief Sustainability Officer (CSO)

Climate-related responsibilities of this position

Developing a climate transition plan

Implementing a climate transition plan

Integrating climate-related issues into the strategy

Conducting climate-related scenario analysis

Setting climate-related corporate targets

Monitoring progress against climate-related corporate targets

Managing public policy engagement that may impact the climate

Coverage of responsibilities

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

The Chief Sustainability Officer (CSO) belongs to the CEO area and is heading the Group Corporate Responsibility Department. The CSO is responsible for:

- Development of the DT CR strategy, DT CR-Policy, and the company specific CR-program. This includes all climate change related topics as

climate change is one of the three main action areas of the DT CR strategy and by this also of the Group Strategy

- Preparing the decisions to be made by the Group CR Board and the Group Board of Management
- Coordination and monitoring of the implementation of Deutsche Telekom CR policies in all relevant departments as e.g. procurement (e.g. DT Supplier Development Program, which we now transfer into an industry initiative), marketing (e.g. working together with Blauer Engel (Blue Angel) initiative on labelling products and services in Germany, communication, policy & regulation, technology (e.g. energy efficient network design) etc.
- Development of DT CR indicators, especially the DT ESG KPIs and monitoring of target achievements as well as the ESG targets for Board remuneration
- Support of the CR Managers Network and the CR Board
- Monitoring climate related topics e.g. by:
 - Observing the political and regulatory environment (in cooperation and coordination with Group Public and Regulatory Affairs)
 - Permanent benchmarking with main competing telecommunication service providers as e.g. Telefonica, British Telecom, Swisscom etc.
 - Working in industry associations as e.g. GeSI (Global e-Sustainability Initiative) for the ICT sector or Econsense with other German DAX companies
 - Intensive stakeholder dialogues, as e.g. NGO dialogues, e.g. with the WWF (World Wildlife Fund), academia etc.
 - DT internal reports on climate change topics (e.g. Dashboard solution for management level)
- Rationale: Climate Change is a major CR topic, being one of three identified CR action areas. Out of this reason the responsibility lies with the DTCSO.

Position or committee

Chief Procurement Officer (CPO)

Climate-related responsibilities of this position

Managing value chain engagement on climate-related issues

Assessing climate-related risks and opportunities

Managing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

Finance - CFO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

More frequently than quarterly

Please explain

Addressing the sustainability approach of DT towards the suppliers (using various instruments to increase supply chain sustainability as e.g. Supplier Code of Conduct, sustainability assessments as e.g. Ecovadis, CDP Supply Chain Program, Joint Audit Corporation, Supplier Development Program etc.)

- Establishing sustainable supply chains to avoid sustainability related risks (e.g. cost increases, supply chain interruptions, reputational risks etc.)
- Drive the development of the sustainable supply chain approach within a designated project team
- Rationale: Procurement manages the DT supplier base and has the responsibility to do this in a sustainable way.

Position or committee

Corporate responsibility committee

Climate-related responsibilities of this position

Managing annual budgets for climate mitigation activities
Developing a climate transition plan
Implementing a climate transition plan
Setting climate-related corporate targets
Monitoring progress against climate-related corporate targets

Assessing climate-related risks and opportunities

Managing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

The DT CR Board (Corporate Responsibility Committee) is the central consultancy and recommendation body of DT. The CR Board is led by the CSO and includes the heads of the most relevant corporate functions as e.g. Corporate Communications, Public and Regulatory Affairs, Brand Management, Products and Innovation, Corporate Office, Corporate Strategy, Procurement, Corporate Office T-Systems etc. The CR Board of DT is according to its terms of reference mainly responsible for:

- Recommendations to the Executive Board regarding measures for the implementation of the CR strategy within DT,
- Recommendations regarding targets and KPIs for the group-wide CR-program,
- Ensuring the interlinking of the DT CR strategy, group strategy, brand strategy and the corporate values,
- Supporting the anchoring of employee related CR topics for DT within the respective organizational units and affiliates,
- Consulting on the development of DT CR strategy.
- Regular reporting on the implementation progress of the decided processes and/or programs for CR in the relevant areas of responsibility (e.g. sustainable procurement strategy), including appropriate monitoring of measures in the relevant areas.
- Rationale: As CR, including climate change, needs to be implemented in all relevant group functions (e.g. sustainable supply by procurement) the CR Board, representing the heads of various business functions below Board Level, is needed to ensure that CR topics, including climate change, are taking into account in all group functions (e.g. sustainability included in the design criteria for the product development, sustainability to be considered within the offer scoring process etc.).

Position or committee

Other, please specify

Sustainable Procurement Working Group

Climate-related responsibilities of this position

Implementing a climate transition plan

Monitoring progress against climate-related corporate targets

Managing value chain engagement on climate-related issues

Assessing climate-related risks and opportunities

Managing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

Finance - CFO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

In the framework of our working group "Sustainable Procurement Group," which has been internationally oriented since 2021, procurement staff consult with each other, nationally and internationally, regarding sustainability issues.

Position or committee

Other, please specify

Human Resource Leadership Team (HRLT)

Climate-related responsibilities of this position

Providing climate-related employee incentives

Coverage of responsibilities

Reporting line

Other, please specify

CHRO (Chief Human Resource Officer)

Frequency of reporting to the board on climate-related issues via this reporting line

More frequently than quarterly

Please explain

The HRLT is the main decision body within group DT on HR related topics.

Position or committee

Other, please specify

Capex Board & Product Innovation Board (PIP)

Climate-related responsibilities of this position

Managing major capital and/or operational expenditures related to low-carbon products or services (including R&D)

Coverage of responsibilities

Reporting line

Finance - CFO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

More frequently than quarterly

Please explain

The Corporate Innovation Fund (CIF) is a financing option for Group-wide innovations with strategic priority. The financing process is based on a venture capital approach. Topics must be submitted by a member of the PIB (Portfolio Innovation Board). Innovations must correspond to a defined scope to qualify for the Innovation Fund. The topics must be pitched to the PIB for a funding decision. ESG criteria are anchored in CIF template.

The Capex Board is the main decision body with respect to major capex decisions, as e.g introduction of new network technologies. Sustainability criteria are included in the evaluation process with a 20% weight, mainly related to supplier emission transparency, supplier SBTis and net zero targets and emission intensities. Currently product related assessment criteria including LCAs, energy efficiency and circularity aspects are added to the assessment.

Position or committee

Other, please specify

Mergers and Aquisitions (M&A)and Deutsche Telekom Captial Partners (DTCP)

Climate-related responsibilities of this position

Managing climate-related acquisitions, mergers, and divestitures

Coverage of responsibilities

Reporting line

Other, please specify

Board Area Group Development

Frequency of reporting to the board on climate-related issues via this reporting line

As important matters arise

Please explain

For mergers and acquisitions due diligence process incorporates consideration of all material aspects of business conduct including ESG.

DTCP was spun out of Deutsche Telekom in 2015. With Deutsche Telekom as an anchor investor, DTCP retains a close partnership and supports T.Capital, the corporate venture capital arm of Deutsche Telekom. DTCP aims to build a sustainable future by accelerating digital transformation.

DTCP takes investments that promote inclusive and sustainable economic growth, create employment opportunities and decent work for all. We continue to expand our infrastructure investment business in private markets to increasingly focus on laying the foundations for a prosperous economy.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive

Board/Executive board

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Board approval of climate transition plan
Achievement of climate transition plan KPI
Progress towards a climate-related target
Reduction in absolute emissions

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

The target was to limit group scope 1&2 emissions to 243 kt CO₂e in 2022. In 2022 the scope 1&2 emissions of Deutsche Telekom could be reduced to 233 kt CO₂e which leads to a target achievement of 120%.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

By applying the target of reducing CO₂ emissions, the Board of Management is to be motivated to sustainably anchor the use of green electricity, to optimize consumption levels in buildings, and to successively switch the Group's vehicle fleet from fossil fuels to emission-free or low-emission engine types.

Entitled to incentive

Board/Executive board

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Board approval of climate transition plan

Reduction in total energy consumption

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

The target was to reduce group energy consumption in 2022 to 13,402 GWh. In 2022 the group energy consumption was reduced to 13,253 GWh which leads to a target achievement of 113%.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

The aim of the reduced energy consumption target is to incentivize the members of the Board of Management to behave in a way that will ensure that energy consumption that is harmful to the environment is at least reduced in the medium term (2024 compared with 2020, excluding T-Mobile US). This target supports the implementation of programs and investments in energy-saving measures for all energy sources while, at the same time, implementing optimizations and innovations in terms of the future infrastructure and the use of innovative technology components.

Entitled to incentive

Board/Executive board

Type of incentive

Monetary reward

Incentive(s)

Shares

Performance indicator(s)

Other (please specify)

Employee and customer satisfaction

Incentive plan(s) this incentive is linked to

Long-Term Incentive Plan

Further details of incentive(s)

Variable remuneration arising from the achievement of long-term objectives (LTI) is based on the four equally weighted factors:

- Return on capital employed (ROCE)
- Earnings per share (EPS)
- Customer satisfaction
- Employee satisfaction

Achieving multiple-year corporate targets derived from medium-term planning

- Acts as incentive for implementation of the long-term corporate strategy
- Stakeholder interests taken into account
- Synchronizes the interests of members of the Board of Management with those of shareholders
- Retention effect for the member of the Board of Management

Based on phantom shares over the term of the plan

- Taking into account actual payments of dividends
- Possible achievement of the target parameters: 0 % - 150 %
- Maximum payment limited to 200 %

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

Climate change and sustainability become increasingly important for customers & employees keeping the satisfaction on high levels requires credible commitment and action with respect to the mitigation of climate change.

Entitled to incentive

Executive officer

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Achievement of climate transition plan KPI

Progress towards a climate-related target

Reduction in absolute emissions

Reduction in total energy consumption

Incentive plan(s) this incentive is linked to

This position does not have an incentive plan

Further details of incentive(s)

All executives of Deutsche Telekom get a bonus based on the achievement of company targets including the reduction of scope 1 and 2 emissions according to the achievement of DT climate targets and the reduction of DT energy consumption.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

All executives (except sales) benefit from the reduction of scope 1 and 2 emissions and electricity consumption. This provides a clear incentive to contribute to carbon emissions and energy consumption reductions within their area of responsibility. The link to the remuneration of the Board also supports to engage in the reduction of energy consumption and carbon emissions. A building manager e.g. is incentivized to reduce office space or to improve building energy efficiency, a fleet manager is incentivized to drive the electrification of the fleet.

Entitled to incentive

All employees

Type of incentive

Monetary reward

Incentive(s)

Profit share

Performance indicator(s)

Reduction in absolute emissions

Energy efficiency improvement

Reduction in total energy consumption

Increased investment in low-carbon R&D

Increased engagement with suppliers on climate-related issues

Increased engagement with customers on climate-related issues

Incentive plan(s) this incentive is linked to

This position does not have an incentive plan

Further details of incentive(s)

DT has an idea management which is open for all employees to provide ideas for improvement. The reward of ideas is not limited to ideas which help DT to reduce cost or to gain additional revenues. It is also possible to provide ideas for the improvement of DT sustainability which can be rewarded, e.g. by a recognition premium. If ideas contribute to energy savings and by this save money depending on the savings a monetary recognition of the idea up to 150,000 € is possible.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

The employee reward scheme provides benefits for employees that use their creativity to find ideas to make the company better and more successful including ideas to reduce energy consumption (related to cost savings), win or hold customers by superior sustainability (increasing brand value and revenues), invest into new sustainable products and services (providing new revenues). The ideas management can also contribute to increase employer loyalty and satisfaction (positive impact on motivation and productivity).

Entitled to incentive

Other, please specify

Employees receiving payment over and above standard salary

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Achievement of climate transition plan KPI

Progress towards a climate-related target

Reduction in absolute emissions

Reduction in total energy consumption

Incentive plan(s) this incentive is linked to

This position does not have an incentive plan

Further details of incentive(s)

Employees receiving payment over and above standard salary of Deutsche Telekom (except sales) get a bonus based on the achievement of company targets including the reduction of scope 1 and 2 emissions according to the achievement of DT climate targets and the reduction of DT energy consumption.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

Employees receiving payment over and above standard salary benefit from the reduction of scope 1 and 2 emissions and electricity consumption. This provides a clear incentive to contribute to carbon emissions and energy consumption reductions within their area of responsibility. The link to the remuneration of the Board also supports to engage in the reduction of energy consumption and carbon emissions.

Entitled to incentive

Other, please specify
Business car drivers

Type of incentive

Monetary reward

Incentive(s)

Other, please specify
Bonus for selecting cars with lower carbon emissions

Performance indicator(s)

Reduction in emissions intensity

Incentive plan(s) this incentive is linked to

Not part of an existing incentive plan

Further details of incentive(s)

Since April 2010 with the introduction of the "Green Car Policy" there is a bonus/malus system in place in order to motivate employees to choose low emission cars. In addition, the green mobility option offers a free ticket for the German Rail System (Bahncard 100) instead of a company car. The selection of electronic cars is also possible. From 2023 onwards only electric vehicles can be ordered as new business cars.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

The bonus and malus system provided a bonus for employees entitled for a company car, if they select a car with lower carbon emissions per km, than the reference value for the respective category. The bonus can be used to get better equipped car within the budget limits.

Entitled to incentive

Chief Procurement Officer (CPO)

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Achievement of climate transition plan KPI

Progress towards a climate-related target

Reduction in absolute emissions

Reduction in total energy consumption

Incentive plan(s) this incentive is linked to

This position does not have an incentive plan

Further details of incentive(s)

All executives, including the CPO, benefit from the reduction of scope 1 and 2 emissions and electricity consumption. This provides a clear incentive to contribute to carbon emissions and energy consumption reductions within their area of responsibility. The link to the remuneration of the Board also supports to engage in the reduction of energy consumption and carbon emissions.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

In this way the CPO is e.g. incentivized to reduce network electricity consumption by consideration of energy consumption and energy efficiency within the procurement process.

Entitled to incentive

Chief Sustainability Officer (CSO)

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Achievement of climate transition plan KPI

Progress towards a climate-related target

Reduction in absolute emissions

Reduction in total energy consumption

Incentive plan(s) this incentive is linked to

This position does not have an incentive plan

Further details of incentive(s)

All executives, including the CSO, benefit from the reduction of scope 1 and 2 emissions and electricity consumption. This provides a clear incentive to contribute to carbon emissions and energy consumption reductions within their area of responsibility. The link to the remuneration of the Board also supports to engage in the reduction of energy consumption and carbon emissions.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

The CSO has the role to develop DT CR and climate strategy, the DT CR-Policy and the company specific CR-program. This includes all climate change related topics as climate change is one of the three main action areas of the DT CR strategy and by this also of the Group Strategy. The CSO is preparing all climate related decisions to be made by the Group CR Board and the Group Board of Management. The CSO is also responsible for the coordination and monitoring of the implementation of Deutsche Telekom CR policies in all relevant departments as e.g. procurement (e.g. DT Supplier Development Program, which we now transfer into an industry initiative), marketing (e.g. working together with Blauer Engel (Blue Angel) initiative on labelling products and services in Germany, communication, policy & regulation, technology (e.g. energy efficient network design) etc. The CSO also drives the development of DT CR indicators, especially the DT ESG KPIs and monitoring of target achievements as well as the ESG targets for Board remuneration. All these activities are fundamental to achieve the payment related targets on carbon emission reductions and the reduction of electricity consumption.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	1	Budgets are planned on an annual basis. So, one year can be considered as short term.
Medium-term	1	4	Our midterm financial planning concerns the following year and 3 further years. So, in 2020 we planned from 2021 to 2024. Therefore, planning for more than one up to 4 years can be considered as medium-term planning.
Long-term	4	35	The maximum depreciation period for telecommunication line networks is 35 years. This maximal period for financial impact of investments in our core business is taken as maximum time horizon for long-term planning.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

Risks and opportunities are classified according to their EBITDA AL impact (as far as respective information available).

- Small risks are defined as risks with less than 200 mio. € financial impact. Risks are considered as
- Medium risks are defined as risks between 200 mio. € and 500 mio. €
- Large risks are defined as risks between 500 mio. € and 1,000 mio. €
- Very large risks are defined as risks above 1,000 mio. €

According to this 200 mio. € can be defined as a substantive financial impact. A strategic impact on the business is a development that changes future business prospects and requires adjustments in terms of investments, prices and/or the product and service portfolio. The risks are assessed on a quarterly basis. Qualitative risks can also be reported to Group Risk Governance. Beside the classification by impact the risks are also classified according to the probability of occurrence. They are ranked from very low (probability of occurrence <5%) over low (probability of occurrence 5% - 25%), medium (probability from 25% to 50%) to high (probability of occurrence >50%). (DT Annual Report 2021, page 145 f.)

Risks from sustainability and social responsibility are overall classified as medium.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

At DT climate related risks are identified on company and asset level:

Our quarterly group-wide Risk Management Processs (RMP) covers strategic, operational, financial, and reputational risks as well as the corresponding opportunities. We aim to identify these risks and opportunities early on, monitor and manage them in accordance with the desired risk profile. Therefore, we use internal and external information.

The RMP provides methods and systems to identify and assess risks and opportunities in operations and in the up- and downstream value chain. Our RMP also ensures a standardized and independent reporting across DT Group in accordance with the ISO 31000 risk management standard.

The responsibility for the reporting of group risks and opportunities lies at the relevant business units. Climate change related risks and opportunities are within the responsibility of Group Corporate Responsibility (GCR). The GCR risk management approach has been aligned with the TCFD recommendations, defining risks and opportunities in various climate-scenarios using short-, medium- and long-term time horizons. In workshops with experts from technology, procurement, strategy and risk management, the main climate-related opportunities and risks were defined and evaluated by financial impact (on EBITDA AL basis) and the probability of occurrence. In the process, we consider the possible consequences for our business operations and for our up- and downstream value chain, from the physical impacts of progressing climate change. To cover risks from supply chains all material groups undergo a dedicated sustainability risk analysis. We also regular assess supplier risks, e.g. by using Ecovadis. In addition, we analysed the impacts resulting from political, technological, and social developments tied to the initiated transition toward a low-carbon economy.

We analysed identified risks and opportunities in detail regarding their probability and potential financial impact, e.g. by using scenario analysis. We then decided on actions to be taken, e.g., in order to reduce risks or seize opportunities. The respective risk owner implements, monitors, and evaluates the associated measures. The steps are repeatedly traversed as required and modified to reflect the latest developments and decisions. While the RMP focusses on risks after existing risk reductions on a two-year time horizon, we also annually assess the long-term impacts on climate change including internal & external stakeholders.

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

Risks at the asset level are assessed at the asset class level, as the risks cannot be broken down to single assets. E.g. there is a certain risk

that infrastructure as base stations will be affected by extreme weather events. We calculate the risk based on the overall asset value and the expected probability (e.g. damage of 1% of our assets).

Example for a transition risk "carbon tax":

Identification of risks: Applying the RMP, GCR does market research and is working in national and international organizations (e.g. GeSI, Ecosense etc.) to identify risks in relevant markets (Germany, Europe, US). Based on this, we expect increasing carbon prices: Germany, e.g. introduced a carbon price of 25€/t for 2021 increasing to 55 €/t in 2025. Some countries even have higher carbon prices.

To assess the financial impact, we decided on an expected carbon price of 45 € per ton impacting our operations and supply chains. We are expecting this price to further increase in the next years. 0.233 mio. tons of carbon emissions in operations and 8.8 mio tons in the supply chain result (purchases & transports) sum up in 9.03 mio. tons. Multiplied with 45 € per ton the impact is 406 mio. €. We expect that only half of these costs can be shifted to suppliers and/or customers. 203 mio. € is considered as medium impact, while the probability is high on medium term, classifying the risk as "medium" (not on a 2-year time horizon).

We responded by reducing this risk as far as reasonably possible. First approach for DT to manage climate change related risks is avoidance. Therefore, we shift the electricity consumption to electricity from renewables. Example: Investment in wind parks at TM US for 100% electricity from renewables by 2021. We reduce non avoidable risks as far as reasonably possible. E.g. with respect to the energy consumption we invested around 21 mio. € into energy efficiency measures in 2021. Complying with the EU Broadband Code of Conduct and optimized network planning also helped to reduce network energy consumption. We involve our suppliers into risk reduction via the use of the CDP Supply Chain Program and our Supplier Development Program.

Results of our risk management measures: DT reduced its carbon emissions in 2022 by 126,687 t of CO₂e due to energy efficiency measures.

Example for the physical risk "increasing extreme weather events"

Identification: Climate change drives increases in the occurrence and severity of extreme weather events as e.g. storms and floods, as the recent floods in Western Germany. The flood in July 2021 damaged e.g. 300 cellular base stations, 120 of them suffered major damages. Wireless service for 250,000 people was temporarily disrupted and ca. 103,000 fixed network accesses have been destroyed.

With Munich RE we analysed the physical climate risks for Germany by in detail, by calculating the probabilities of infrastructure damages

based on sample of 500 randomly selected sites currently, 2050 and 2100. This scenario analysis showed currently for 7.4% of the sites high flood risks. In 2050 this will be 11.6%. Other physical risks are less likely. If we calculate the infrastructure repairs with 0.5% of the value of the infrastructure, the financial impact is 329 mio. €, which is considered large impact. In combination the risk is medium (but not on a 2-year time horizon).

We address such risks by avoiding or minimizing them. In Germany e.g. most communication lines are below ground and by this protected against extreme weather events. For managing emergencies as e.g. floods our internal "Group Policy on Continuity and Situation Management" defines responsibilities, processes, and measures. Our networks infrastructure is also planned and set up to be protected from storm conditions, changes in temperature, and high winds. Alternative routing, emergency power supplies and insurances reduce risks from infrastructure damages.

For managing climate change related opportunities DT addresses sustainability criteria as energy efficiency within the product design processes. DT accesses its main products on positive sustainability impacts incl. emission reductions, as e.g. virtual meetings or cloud solutions.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	They are relevant due to the need to comply with regulation. Therefore DT (in Germany) uses the WEKRA data base which is assessed by CR specialists to track changes in the regulatory environment. DT also uses its internal (e.g. policy and regulatory affairs) for assessing and evaluating the impact of existing regulations, like GeSI, BITKOM etc. (If we take for example the risk of increased operational costs due to product efficiency regulations and standards). Taking the risks of increased costs for energy is one example how DT is impacted by this risk in German Energy Law on Renewable Energies (EEG) that has a significant impact on the costs for electricity to run our networks. DT is affected by the regulation of the German electricity market as DT consumes around 2.3 TWh of electricity only in Germany, which represents around 0.5% of the national electricity consumption. The costs for electricity are highly dependent on regulatory components as EEG contribution (3.72 cent/Kwh till July 2022), concession levy (1.64 cent/Kwh), electricity taxes (2.05 cent/Kwh) and other

		prorated contributions. Only for Germany 1 cent additional regulation related increase in electricity costs leads to an additional OPEX of 23 mio. €.
Emerging regulation	Relevant, always included	Emerging regulation is included whenever it is relevant and can be anticipated. DT is also aware of upcoming regulations by actively working within various industry associations as e.g. GeSI (Global E-Sustainability Initiative), Ecosense or Bitkom and intensive stakeholder dialogues with NGOs as e.g. the World Wildlife Fund (WWF). We also have an office in Brussels that deals with the upcoming EU legislations. Taking the risk of increased operational costs due to increased input prices as e.g. electricity (DT consumes or for network infrastructure components or terminals, out of the discussions in industry associations and the dialogue with NGOs DT came to the conclusion that the introduction of a carbon price of around 45 € per ton of carbon emissions can be expected after 2021. The risk affects DT as DT is still responsible for carbon emissions from operations and from the purchases (e.g. network equipment and consumer devices). The risk can be evaluated by multiplying the carbon emissions from the expected energy consumption and the upstream supply chain emissions with the price of 45 € per ton of carbon emissions. The possibilities to shift these costs to our value chain partners as suppliers and customers have to be taken into consideration. The impact can be high. Taking 9.03 mio. tons of carbon emissions in the upstream value chain and in our own operations 45 € per ton of carbon emissions adds up to 406 mio. € per year. Assuming based on expert estimation that half of the financial impact can be transferred to the suppliers and customers the remaining financial impact is around 203 mio. €. (45€ per t)
Technology	Relevant, always included	DT accesses technology changes by the group technology radar, summarizing the most recent technological trends and their potential impact on DT at an early stage. Beside exhibitions like the mobile World Congress in Barcelona or the IFA in Berlin and various start up activities as well as the participation in industry associations help to early recognize climate related technology developments, relevant for DT. GCR closely cooperates with different internal technology departments but also via its CR networks to identify major climate change relevant technology developments and to evaluate them on their potential business impact. DT included climate related risks from technology as they could be seen in the development and rollout of new more powerful and energy consuming telecommunication technologies as e.g. 5G or FTTH. Based on the assessment of all available knowledge provided from internal and external sources we decided technology risks to be relevant, e.g. reflecting increasing discussions on overall growing electricity consumption of ICT equipment. At the same time, our business model is highly dependent on technological trends and changes, which we therefore monitor

		closely. With respect to climate change for DT, our networks are 100% operated with electricity from renewables. Thus, we consider ourselves prepared for arising changes and consider technology rather an opportunity than a risk. For example, the development of new technologies enabling carbon emission reduction opportunities for our customers provides various opportunities for both, us and our customers.
Legal	Relevant, always included	Due to the need to comply with regulations and to avoid litigations DT is also assessing potential risks from legal litigations, as e.g. lawsuits against DT related to the contribution to climate change or neglecting climate related responsibilities. TM US, which contributes around two third to DT overall revenues , is regularly involved in a number of legal proceedings before various state and federal courts, the FCC, the FTC, other federal agencies, and state and local regulatory agencies, including state attorneys general. Such legal proceedings can be complex, costly, and highly disruptive to our business operations by diverting the attention and energy of management and other key personnel. We have a group legal department and legal departments in various group companies which actively manage risk the company faces from potential legal action. For example, we examine our potential exposure to litigation from outages or disruptions in our mobile networks caused by climate-related factors. We see various litigations against big companies according to climate change, but these litigations focus on companies from emission industries as e.g. energy. Due to the limited contribution of DT with 233,062 t CO₂e for scope 1&2 (nearly 94% less than 2017) we are currently not seeing DT at risk. With respect to scope 3 emission the current targets by 2030 (25% per customer against 2017) may be considered as not ambitious enough, but they are SBTi approved. In March 2023 DT introduced a new climate target to decrease scope 1-3 emissions by 50% against 2020 by 2030. The target is on the way to be approved by the SBTi. (Same target already SBTi approved for TM US)

		As around three quarter of DT scope 3 emissions are caused by suppliers, which are often big corporates as well and have more influence on these emissions a litigation against DT seems unlikely as well. Only with respect to the small share of OEM equipment sold or leased to customers DT has high influence with respect to the main scope 3 categories. Beside this we are already working on more ambitious scope 3 targets, which limits the financial impact from a highly unlikely litigation to the costs for the necessary legal expenses. We are looking at the developments with respect to these risks via our participation in various workings groups of industry associations like e.g. GeSI (Global Enabling Sustainability Initiative) or Econsense and due to our Policy and Regulatory Affairs department.
Market	Relevant, always included	Although the telecommunication services business model is overall quite robust, DT business, financial condition, and operating results are sensitive to changes in general economic conditions, including energy costs, interest rates and other macro-economic factors. Difficult, or worsening, general economic conditions could have an adverse effect on our business, financial condition, and operating results. Due to various assessment, as e.g. various external and internal market studies (e.g. the GeSI SMART and SMARTer studies, GeSI "Digital with Purpose", the Fair-Trade Study, an internal survey on the perspectives for a green mobile tariff the DT), we see telecommunication markets moving towards sustainability. This causes risks in case competitors are better in addressing the increasing customer needs for sustainable ICT products and services that support the mitigation and/or adaptation of climate change. This led to the development of a DT specific approach on sustainable products and services, developed together with a consultancy based on various high level interviews with the DT internal management (below board level). DT has identified 35 different sustainable products and services, that contribute to sustainable revenues of more than 16 billion € 2022 (without TM US). To qualify as a sustainable product a product must have a significant sustainability advantage, as e.g. relevant carbon emission reductions, audio-, web and videoconferencing solutions that support the reduction of (business) travel, solutions that support reductions in the energy consumption like connected cars or reduce traffic like our smart

		parking solution. Beside this the products also have to undergo a risk assessment to qualify as sustainable products. DT also started to market sustainable products and solutions under its own "Green magenta" label. As, according to market studies, 15-30 % of our customers belong to the LoHaS (Lifestyle of Health and Sustainability). This puts up to 34.3 billion € of revenues under risk, in case DT competitors are more able to satisfy customer needs for sustainable telecommunication services.
Reputation	Relevant, always included	Our reputation is relevant position DT as a premium brand. For products like telecommunication services like internet access DT products are not very different from products of our competitors. The brand reputation is therefore extremely important for customers to decide for DT products and services. If DT is related to negative climate impact e.g. by products that consume more energy than the products of our competitors or to steady network failures due to not climate change adjusted network planning this will have negative impact on DT's reputation (e.g. no longer winner of connect network test in Germany) and by this to market share, revenues, and profits. Corporate Social Responsibility and Sustainability are important aspects of what makes T-Mobile the Un-Carrier in the USA . The brand strength of TM US is vital to our business success. If the company neglects its social or environmental responsibilities it could face negative consequences from customers, employees, and other key stakeholders. For example, we review the potential impact of stakeholder concern and negative stakeholder feedback. As a result of this, we are working to improve our transparency in several ways, including reporting on our external website that provides relevant ESG (Environment, Social, and Governance) data/metrics that are important to our key stakeholders and publishing an annual CR Report aligned to GRI and SASB. The financial impact is huge. As it is extremely difficult to estimate the negative financial impact from reputational damages, we did no calculation of the financial impact although we know, that a huge financial impact is possible. As most of the potential risks are related to our supply chains DT takes great efforts to manage these risks within the sustainable supply chain management process. Suppliers need to accept the DT Supplier Code of Conduct. Suppliers of strategic relevance also need to answer the E-TASC/Envirodis questionnaire and to participate within the CDP Supply Chain Program. Additionally, we do social audits of suppliers together with other telecommunication service providers in the JAC (Join Audit Cooperation) initiative. DT also invests in supplier development in terms of sustainability including climate change and

		energy efficiency issues. We know that reputational risks can have a huge business impact, but this impact cannot be forecasted, and we do not provide a respective figure in our Annual Report.
Acute physical	Relevant, always included	We assess risks from acute physical weather events by analysing the relevant literature on the impacts of climate change as e.g. the IPCC reports and through intensive dialogue with NGOs like the WWF but also by discussions with other companies, including e.g. reinsurers. Due to our assessment this risk is relevant and has influence on our ability to provide a functioning network, which is extremely crucial to our business. There is the risk of disruption in our production capacity due to extreme weather events as demonstrated by the flood in Germany last year that damaged 300 base stations and destroyed 103 000 fixed network accesses. For example, in 2022 our Emergency Management (EM) team in the US was deployed at 28 events across the United States ranging from hurricanes, fires, power shutoffs, and other events. The total spend for 2022 was approximately \$43.5M. As it is difficult to define what part of physical extreme weather-related infrastructure damages is related to climate change and the occurrence of such events is extremely limited to be forecasted the assessment financial impact of acute physical risks is extremely difficult. DT tries to avoid interruption of telecommunication services by network planning as e.g. multiway connections that avoid network failures in case of (climate change related) extreme weather impacts on a single network component. As the risk is a statistical risk, we calculate this risk based on expert assumptions on the overall effect on our infrastructure related assets. In 2020, we analysed - on an initial exemplary basis - 500 Deutsche Telekom AG sites in Germany with regard to their physical climate risks. This climate risk analysis was prepared using the "Climate Change Edition" of the "Location Risk Intelligence" software from reinsurer Munich Re. The analysis comprises eight indices (see graphic). We consider the risk exposure for the respective locations in two climate scenarios of the Intergovernmental Panel on Climate Change (IPCC): a business-as-usual scenario (RCP 4.5), in which the global temperature increase will be more than two degrees, and a four-degree scenario (RCP 8.5). In addition to the climate scenarios, we also examine the risk exposure in different time frames: current, for the year 2050, and for 2100. (See DT CR-Report 2022, page 90 ff) The analysis shows for our German sites

		increasing climate change related physical risks within the next three decades.
Chronic physical	Relevant, always included	We assess risks from chronic physical weather events by analysing the relevant literature on the impacts of climate change as e.g. the IPCC reports and through intensive dialogue with NGOs as like WWF but also by discussions with other companies, including e.g. reinsurers. Although changes in precipitation patterns and extreme variability in weather patterns, rising mean temperatures and rising sea levels have due to our areas of operation, no significant direct short-term impact on DT. One example is the analysis of the impact of temperatures above 20 °C on the energy consumption of base stations in Hungary, showing relevant increases in energy costs due to higher temperatures. Therefore, energy efficiency is extremely important. Within the ESG criteria, the energy consumption of Dt is relevant for the Board remuneration. In 2020, we analysed - on an initial exemplary basis - 500 Deutsche Telekom AG sites in Germany with regard to their physical climate risks. This climate risk analysis was prepared using the "Climate Change Edition" of the "Location Risk Intelligence" software from reinsurer Munich Re. The analysis comprises eight indices (see graphic). These developments are extremely relevant when it comes to investment decisions. The financial impact can be assessed based on the expert evaluation of statistical data and scenarios as e.g. provided by the IEA or the IPCC. DT e.g. investigated possibilities to build new data centers in northern Europe as e.g. Norway or Sweden instead of Germany (although DT did not follow this approach as many customers preferred their data to be handled in Germany protected by the strong German data protection laws.) Also for the planning of base stations the probability of climate related down time risks have to be taken into consideration as network availability is crucial for our business, as demonstrated in the disastrous floods in Western Germany last summer. When planning a base station, the ultimate goal is to optimize mobile network coverage. Most critical is power supply. We try to ensure uninterrupted power supply for most critical sites via mobile and fixed diesel generators and batteries. This helps usually for some hours. If one base station is out of operation traffic can be re-routed through other base stations.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Emerging regulation

Carbon pricing mechanisms

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

The COP 21 Agreement from Paris in December 2015, a successor of the Kyoto Protocol, is now internationally agreed upon. Although many questions on the concrete regulation politics still remain unclear, especially after the new Government in the US decided to withdraw from the Paris Agreement, DT expects increased costs for carbon emissions caused by energy consumption. We believe that this is absolutely necessary in order to achieve the reduction in the combustion of fossil fuels required to reach the targets from the Paris agreement.

In concrete, we are expecting a carbon tax, to be introduced in the next years, where there is no such tax today and to further increase, where carbon taxes are already introduced. In Germany, where we made 22% of our annual revenues in 2022, the carbon tax was 30 € (as the year before) and will further increase to 55 € per ton of carbon in 2025 (Sweden and Switzerland already introduced taxes above this level). Especially in Germany, there is recently much more focus on climate politics (e.g. Fridays for future, parents for future, scientists for future, more than 20% of the votes for the Green Party at the EU Parliament election and nearly 15% in the last general election etc.). As there are beside our own scope 1 and 2 emissions of 0.233 mio. tons of carbon emissions around 8.8 mio. of carbon emissions in our supply chains we expect that a carbon tax will not only increase our energy bill but also the costs for purchased goods as e.g. smart phones or tablets and services and for capital goods as network infrastructure components although DT may due to its market position be able to shift at least parts of these costs to its suppliers.

All risks are assessed on a gross basis (before measures and arising opportunities) and therefore differ from other DT risk reporting such as in the annual report .

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

88.000.000

Potential financial impact figure – maximum (currency)

264.000.000

Explanation of financial impact figure

According to our scope 3 calculations there are 8.6 mio. tons of carbon emissions in our supply chains. 8.8 mio. tons times 45 € per ton results in roughly 396 mio. € additional costs in our supply chains. As there is competition between the suppliers and as the main competitors are also affected, these costs may be partly shifted to the suppliers and/or the customers, but this depends on competitor and supplier strategies. We estimate that only 50% of these costs can be shifted and 198 mio. € of costs remain at DT. All risks are assessed on a gross basis (before measures and arising opportunities) and therefore differ from other DT risk reporting such as in the annual report. The range is calculated from 30 € per ton of carbon and 67% of the costs that can be shifted towards our suppliers ($8.8 \text{ mio} * 30€ * 1/3 = 88 \text{ mio} €$) on the low end and a price of 60 € per ton of carbon and only 33% that can be shifted towards our suppliers on the high end ($8.8 \text{ mio} * 60€ * 2/3 = 264 \text{ mio} €$).

Cost of response to risk

150.000

Description of response and explanation of cost calculation

The following case study describes our response to the risk of an increasing price for carbon due to emerging regulation.

Situation:

Regulatory risks with respect to increasing carbon taxes mainly arise from 8.8 mio t of carbon emissions from DT supply chains (as carbon emissions from energy consumption could be reduced by purchasing 100% electricity from renewables).

Task: Addressing supply chain emission reductions to DT suppliers.

Actions:

1. Suppliers must always adhere to our new Supplier Code of Conduct.

This includes our ambitious CR targets and requirements as full and verified emission transparency (scope 1-3) and plans to reduce carbon emissions in accordance with DT targets.

2. Increasing supplier awareness by expanding invitations to the CDP supply chain program from 99 in 2013 to 445 suppliers in 2022.

3. Develop supplier capabilities by our supplier development program.
4. Increasing respective supplier requirements in our supplier code of conduct and in the bid evaluation process. As part of tenders, we assign a maximum 20 percent weighting to sustainability performance as part of the supplier selection process. (DT CR Report 2022, p. 58)

Results:

1. Sustainability is taken into account throughout the procurement process, right from the onboarding process with the new supplier code of conduct 2022,
2. 2022 DT suppliers responding to the CDP Supply Chain Program also achieved 164mio. metric tons of carbon emission reductions (more than 3 times the reductions from 2020) and saved by this 3 billion US\$ (3 times the savings from 2021)
3. 115 out of 269 answering suppliers decreased their scope 1 & 2 emissions by other emission reduction activities and 95 by increasing use of renewable energy.
4. Due to our Supplier Development Program, the participating suppliers have reduced their carbon emissions in 2022 by 8,366 metric tons, by energy efficiency improvements as e.g. by switching to LED lighting, recycling of packaging and the increased use of recycled plastics for several products .

We estimate costs of management at around 0.15 mio. €. The costs are calculated as follows: Supplier development program costs for DT: around 0.05 mio. €. The participation in the CDP supply chain program costs are around 0.1 mio. € per year including the membership fee and additionally necessary internal resources. No additional costs for the application of sustainability criteria within the procurement process.

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Emerging regulation

Mandates on and regulation of existing products and services

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

For DT the EU Energy Efficiency Directive targets to set common minimum standards on energy efficiency for devices / equipment is also a risk. The German government sees this guideline as the main driver to increase energy efficiency and cut emissions, especially with respect to the difficulties to reach the EU 55% reduction target till 2030 and the German carbon reductions target which to 65% emission reductions against 1990 by 2030. The USA also increased its commitments aiming for 50% emission reduction against 2005 by 2030. These targets mean that the speed of carbon emissions reductions need to significantly increase against the last decades.

DT as telecommunication company with lots of operations in Germany and other European countries can be especially affected by such European legislation, especially taking into consideration the specific concerns related to the increase of electricity consumption from data centres and from the increasing number of ICT devices in the European households. Due to the revenue contribution of TM US driven by organic growth and by the merger between Sprint & TM US, the regulation in the US is also extremely important for DT.

As a consequence of increasing regulation on device electricity efficiency, DT may have to pay higher procurement prices for CPE (Customer Premises Equipment) as the suppliers will try to shift higher costs for product development and production to their customers. End-user devices are the procurement categories with the biggest speed volume. To provide an example, a more energy efficient power supply unit, increasing the average efficiency in operations by 4% costs around 1.5 €.

How far DT is able to shift the possibly for such devices higher costs to its customers is not sure as this depends on the reaction of DT competitors in the markets. If the competitors decide not to increase prices as a consequence of higher costs for energy DT will also have to cover the additional energy costs. Increased prices and services (offer of higher data volume subscription plans) may be a possibility limit financial damages for DT.

All risks are assessed on a gross basis (before measures and arising opportunities) and therefore differ from other DT risk reporting such as in the annual report.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

50.000.000

Potential financial impact figure – maximum (currency)

300.000.000

Explanation of financial impact figure

In case the costs for purchases of devices, telecommunication network infrastructure and IT hardware rise by 1% due to higher energy efficiency requirements, estimating that half of the additional cost can be transferred to customers, additional costs of more than 150 mio. € per annum are possible, even if half of the cost can be transferred to our suppliers within this procurement categories ($30 \text{ bn. €} \cdot 1\% \cdot 50\% = 150 \text{ mio. €}$). For network equipment, savings due to lower energy consumption could compensate higher prices for network equipment. This is not the case for end user devices where customers benefit from lower energy costs.

For the calculation of the impact we assume a minimum average price increase of 0.5% for CPE and telecommunication network equipment of which two third can be shifted towards our suppliers. The maximum impact is estimated to 1.5% average price increase of which only 33% can be shifted towards our suppliers.

Assuming a purchasing volume of around 30 billion € in total for devices, telecommunication network infrastructure and IT hardware, 0.5% price increase lead to costs of 50 mio. € in case two thirds of the costs can be shifted towards our suppliers ($30 \text{ bn. €} \cdot 0.5\% \cdot 2/3 = 50 \text{ mio. €}$). An energy efficiency related price increase of 1.5% would lead to additional costs of 300 mio € in case only one third of the costs can be shifted towards our suppliers ($30 \text{ bn. €} \cdot 1.5\% \cdot 1/3 = 300 \text{ mio. €}$).

All risks are assessed on a gross basis (before measures and arising opportunities) and therefore differ from other DT risk reporting such as in the annual report.

Cost of response to risk

200.000

Description of response and explanation of cost calculation

The management method to reduce this risk is the inclusion of the increased energy efficiency requirements in our product specifications and/or increased consideration of energy efficiency in the offer evaluation in our procurement processes.

The provided figure on the financial impact includes the costs from higher equipment prices for network infrastructure products (if affected) and higher costs for telecommunication devices that cannot be transferred to our customers.

Another management strategy is the sales of labelled energy efficient products and services to our customers. Therefore, the following case study:

Situation:

Risk of increasing costs for telecommunication products due to increasing energy efficiency requirements based on increasing energy consumption for telecommunication infrastructure and equipment.

Task:

Limit or even decrease energy consumption necessary of telecommunication equipment.

Action:

Increasing product energy efficiency. E.g. the new DT Smart 4 router consumes nearly 10% less under full load and in addition provides a sleep mode to reduce energy consumption, when there is no traffic. To increase customer awareness DT in Germany uses its "Green Magenta" label (former "We care"). In 2022 we also launched the new TV box G7 in Hungary and Macedonia, consuming 61% less electricity than the TV box G6. The Launch in Germany was 2023.

Result: Stabilization of sales and lease as well as contribution to increasing the number of broadband customers and revenues in the German Market 2022.

DT beside other products and services provides refurbished smart phones to its customers. Other products with the "Green Magenta" label are the new routers "Speedport Smart 4 and Speedport Smart 4 Plus. The housing of these routers consists of 90% recycled plastics and the packaging is totally free from plastics.

With respect to network equipment DT reduces the risks of additional costs due to regulations that drive energy efficiency standards and by this product costs by requiring from our suppliers to comply with the EU Broadband Code of Conduct.

The costs of management are estimated at 0.2 mio. €. The figure includes internal costs for overall two full time employee equivalents dealing with the BMU for the development of "Blauer Engel" criteria for telecommunication specific products and services and for working at the support of the development and reporting to the EU Broadband Code of Conduct (2 employees * 0.1 mio. € = 0.2 mio. €).

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Emerging regulation

Mandates on and regulation of existing products and services

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

Due to the complexity of EU - but also national legislation, it is sometimes difficult to forecast the future direction of legislations, including climate change related regulations. DT, e.g. already consumes 0.5% of the national electricity consumption in Germany for the telecommunication network infrastructure, including the expansion of mobile networks, fiber to the home and data center. Additionally, there are concerns on the increasing energy consumption by increasing numbers of customer devices. Concerns on this energy consumption of the industry in markets, that are extremely relevant for Deutsche Telekom, as especially in the German home market by creating high uncertainties regarding future sector specific regulations in Europe.

These regulations may increase the operating costs by higher costs for energy and or energy consumption related carbon emissions but also higher costs for network equipment due to higher energy efficiency requirements and may additionally have an adverse effect on the future demand for telecommunication services. All of these possible negative impacts on future profitability cannot be expected to be without impact, especially with respect to long term investments. These increased uncertainties may result in an uptake of company specific risk perception and the interest rates DT has to pay on its debts. Due to the current debt level of 142 billion € this is extremely relevant for DT.

The EZB guiding interest rate rose from 0% beginning of 2022 to 2.5% in December 2022 and 4% currently. The US FED increased the guiding interest rate from 0.25% beginning of 2022 to 4.5% in December 2022 and 5% currently.

All risks are assessed on a gross basis (before measures and arising opportunities) and therefore differ from other DT risk reporting such as in

the annual report. This risk relates to a time horizon of more than 2 years.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

142.000.000

Potential financial impact figure – maximum (currency)

71.000.000

Explanation of financial impact figure

With debts of 142 billion € an interest rate increase of 0.1% results in additional costs of around 142 mio. € per annum ($142 \text{ bn. €} \cdot 0,1\% = 142 \text{ mio. €}$). If due to the described risks, the interest rate increases by 0.5% The annual financial impact will be 710 mio. € ($142 \text{ bn. €} \cdot 0,5\% = 710 \text{ mio. €}$).

Cost of response to risk

0

Description of response and explanation of cost calculation

The respective management method to reduce the risk is the reduction of our debts: One of the three pillars of DT's financial strategy is to provide security for providers of debt capital: Deutsche Telekom seeks to have undisputed access to the debt capital markets at any time. Solid balance sheet ratios are meant to guarantee this access. Therefore, Deutsche Telekom sets itself the following comfort zone targets/ratios: Rating: A-/BBB; Ratio net debt/adj. EBITDA: 2.25 - 2.75x; Equity ratio: 25 - 35%; Liquidity reserve covering maturities of coming 24 months (DT annual report 2022, p. 48).

DT response to the risk includes the sustainability linked bond as described within the following example:

Situation: With respect to risks for increasing operating costs, credits may get more expensive.

Task: Decreasing the risks of increasing costs for capital.

Action: Preparation of a sustainability-linked bond

Result: From 2021 Deutsche Telekom is able to place bonds related to our group-wide climate target on the capital market for the first time. We have set up the related debt issuance program and framework documentation. Bond targets are related to Scope 1+2 Emissions (at least 90% reduction 2017-2025 by own efforts) and to Scope3 emissions per customer (at least 25% reduction 2017-2025)
<https://www.telekom.com/de/investor-relations/fremdkapital/anleihen-und-debt-issuance-programme>

Despite that we improve attractiveness of DT shares for Sustainable Investment (SRI): We see a growing number of SRI related inquiries as well as dedicated analyst research reports as well as an increasing interest in PRI and CDP. Therefore, CR and IR departments together conduct SRI roadshows. As a consequence, the ESG KPI Sustainable Investment (SRI); measures percentage of Telekom shares held by SRI/ESG-oriented investors increased to 31% in 2022. Mainstream investors also started to establish sustainable criteria within their investment strategies, as e.g. climate change.

The cost of response to the risk is 0 €, as there is no incremental cost to this climate related risk mitigation response because issuing green bonds, SRI roadshows and participating in sustainability rankings e.g. is part of the normal cost doing business for IR and CR.

Comment

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Flood (coastal, fluvial, pluvial, groundwater)

Primary potential financial impact

Increased capital expenditures

Company-specific description

Local damages of our telecommunication network infrastructure as consequence of extreme weather events like storms are possible. One example was the flood last summer in Germany. Areas in the German Länder (states) of Rhineland-Palatinate and North Rhine-Westphalia were especially hard hit. Cities and villages suffered heavy damage, and many residents lost their homes. The telecommunications infrastructure was also heavily damaged. A total of 300 base stations in Deutsche Telekom's mobile network went offline as a result of the storm. 103,000 fixed-network lines have also been damaged in the flood disaster.

For example, in 2022 the Emergency Management (EM) team of TM US was deployed at 28 events across the United States ranging from hurricanes, fires, power shutoffs, and other events. The total spend for 2022 was approximately around 41mio. €.

Such extreme weather results may result in local network break downs. Precautionary measures or the repair of caused damages result in higher costs for DT, the network breakdowns may also damage the reputation of DT as reliable network service provider with negative impact on brand reputation and revenues.

All risks are assessed on a gross basis (before measures and arising opportunities) and therefore differ from other DT risk reporting such as in the annual report. This risk relates to a time horizon of more than 2 years.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

164.250.000

Potential financial impact figure – maximum (currency)

492.750.000

Explanation of financial impact figure

If DT telecommunication infrastructure gets damaged due to extreme weather events, as described in the examples above, it may cause higher costs. Damages of 100 mio. € or more are easily possible. If 1% of our infrastructure is affected and the costs for repair are around 50% of the value of the damaged infrastructure, the damages are 328.5 mio. €. (65.7 billion € assets in property, plant, and equipment according to annual report 2022, page 171 * 1% * 50% = 164.25 mio. €).

The provided range is based on 0.5% damaged infrastructure at the low end (65.7 billion € assets in property, plant, and equipment * 0.5% * 50% = 164.25 mio. €) and 1.5% of damaged infrastructure on the high end (65.7 billion € assets in property, plant, and equipment * 1.5% * 50% = 492.75 mio. €).

Beside this, negative impacts on DT reputation (reputational costs) are likely and, due to the impacts on our revenues, potentially high, however their extent is difficult predict. Reputational damages are therefore only reported on a qualitative basis.

All risks are assessed on a gross basis (before measures and arising opportunities) and therefore differ from other DT risk reporting such as in the annual report.

Cost of response to risk

0

Description of response and explanation of cost calculation

Management of this risk is based on several pillars:

(a) The telecommunication networks of Deutsche Telekom are built flexible. Example: By using ring structures DT avoids, as far as reasonably possible, that the breakdown of a single network component has an impact on the services provided to our customers. In the interconnecting networks, the switching centres are connected to several other switching centres to ensure the availability of alternative connections. For the German fixed network cable below ground also helps to decrease the risks of infrastructure damages due to extreme weather events. When planning a base station, the ultimate goal is to optimize mobile network coverage. Most critical is power supply. We try to ensure uninterrupted power supply for most critical sites via mobile and fixed diesel generators and batteries. This helps usually for some hours. If one base station is out of operation traffic can be re-routed through other base stations.

These measures supported DT in providing des most reliable telecommunication networks in Germany, especially on medium and longer term. In 2022 DT defended its top position in the "connect test" due to strong performance in voice and data. Beside high voice quality , DT convinced by high connection establishment and achieved full points in the data tests.

(b) Insurances cover the risks of damages in buildings and the network infrastructure of Deutsche Telekom especially on short and medium term.

(c) For the reputational risks we have a professional communication department and a respective marketing budget to ensure proper short term reactions to network failures and to avoid additional short, medium and long term losses by reputational damages.

There are no additional costs for the consideration of network resilience in the planning of our telecommunication networks as these considerations are part of the regular networking planning process. The insurance costs are not available due to confidentiality reasons.

Comment

Identifier

Risk 5

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Reputation

Increased stakeholder concern or negative stakeholder feedback

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

According to the "Brand Finance Global 500", Deutsche Telekom reached a brand value of 62.9 billion US-Dollar or 59.9 billion € (Brand Finance Global 500 2022 report). By this, DT is the most valuable brand in the European telco sector. In the last four years DT brand value increased by more than 50%.

As a premium brand DT bears a risk in the case of inactivity with respect to its own scope 1 and 2 and increasingly scope 3 emissions, because customers increasingly expect companies to work on reducing their emissions. Up to 30% of customers in Germany e.g. belong to the LoHaS (Lifestyle of Health and Sustainability). Sustainability including climate change engagement is expected especially from premium brands.

Additional potential risks are related to the global dimension of DT's supply chain. If DT loses its reputation with respect to climate change issues, this may probably lower the demand for DT products and services from our customers and thus decrease DT revenues and profits.

This risk relates to a time horizon of more than 2 years.

Time horizon

Medium-term

Likelihood

Unlikely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

571.000.000

Potential financial impact figure – maximum (currency)

1.713.000.000

Explanation of financial impact figure

Problems to decrease DT's own emissions and problems in the global supply chains bear the risk of reputational damages and a related loss of customer trust. It is realistic to assume that this will lower the customer demand for our products and services. Negative impacts on DT reputation (reputational costs), such as lower revenues or a decrease in brand value are potentially very high, however their extent is difficult to predict. The estimation of the financial impact is based on loss in revenue with the assumption of 0.5% in revenues on the low side (114,197 mio. € * 0.5% = 571 mio. €) and 1.5% in revenues (114,197 mio. € * 1.5% = 1,713 mio. €) on the high side.

The impact of the lower revenues on the profit is depending on the margin.

All risks are assessed on a gross basis (before measures and arising opportunities) and therefore differ from other DT risk reporting such as in the annual report. This risk relates to a time horizon of more than 2 years.

Cost of response to risk

11.600.000

Description of response and explanation of cost calculation

We manage climate related reputational risks by the implementation of our integrated DT climate strategy including Science Based Targets. We reduce carbon emissions, use 100% electricity from renewables (increasingly PPAs), continuously improve energy efficiency and promote sustainable products and services.

One example for actions to avoid reputational risks is the promotion of sustainable products:

Situation: An increasing number of customers, e.g. the group of LoHaS (Lifestyle of Health and Sustainability) requires sustainable telecommunication services but does not see respective offers in the market. This may negatively impact the reputation of DT and destroy trust into the DT brand.

Target: Increasing the sustainability profile of DT by offering and communicating sustainable products and services.

Action: Development and introduction of the "Green Magenta" label (former "We care"), starting with selling refurbished smartphones to increase the product lifetime. (3/4 of the carbon impact of mobile devices lies in the production phase, making product lifetime increases a good

lever to decrease emissions). Other labelled products are the new routers "Smart 4" & "Smart 4 Plus". The housing consists of 90% recycled plastic and the packaging is 100% plastic free.

Result: Improved customer sustainability awareness of DT brand demonstrated by market research.

Other major sustainability measures are, e.g.:

Scope 1&2 emissions 2022 are 90.7% below 2020 level by using to 100% electricity from renewables fleet reduction and electrification and building optimization.

Plastics free packaging

Limiting energy consumption and increasing energy efficiency (Commitment to the EU Broadband Code of Conduct and consideration of energy consumption in procurement as part of TCO approach. For the implementation the purchasers have been trained in the TCO methodology.)

Sustainable supply chain management, incl. supplier development, also reducing reputational risks.

Keeping our reputation, reflected in an increased brand value, was key for growing revenues in Germany in the last years despite the impact of covid 19.

Additional costs related to the measures are 1.6 mio. € : 0.1 mio. € for the TCO qualification of purchasers, 1 mio. € costs for the application of the TCO methodology and around 0.5 mio. € costs for sustainable supply chain management, including supplier development, 10 mio. € costs of new integrated climate change strategy.

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

With the COP 21 agreement of Paris there is a binding international agreement to mitigate climate change and to keep global warming to 2 or even 1.5 degrees. To achieve this, measures to limit the combustion of fossil fuels seem unavoidable. As described above in 2.3a, this may lead to the introduction of carbon taxes in most of the countries. In the medium to long term, we expect a carbon price range of 30-60 € per ton. On

longer terms, even higher prices are likely. Sweden has a currently carbon tax of around 115 € per ton and in Switzerland the carbon tax is around 86 € per ton of carbon emissions (depending on the exchange). The president of the German federal environmental agency (UBA) calculated in 2019 environmental damages of 180 € per ton of carbon emissions.

Of course, there are also other measures possible like emission certificates, but the impact will be more or less the same. In consequence, energy will get more expensive, which we experience currently also as a consequence of the Russian war against Ukraine. The increase in energy costs, even the expectation of increasing energy costs will make DT energy saving services and products as e.g. smart home services that contribute to energy savings at home or connected cars more attractive for our customers. This will increase the sales prospects for DT services that help customers reduce energy consumption and related carbon emissions. As DT already offers a wide range of solutions that enable energy savings for its customers DT is well prepared to benefit from this opportunity. The GeSI SMARTer 2030 report estimates the revenue potential of carbon reducing ICT products and services only for the ICT sector at 1.8 trillion US\$ by 2030. As DT revenues are more than 2% of the global ICT sector revenues the related opportunities are huge.

Due to a broad offering of energy and carbon saving solutions as e.g. modern cloud data centers, low carbon mobility management or broadband internet, that enables working from home DT is well prepared to participate from these opportunities. The high sustainability profile of DT (CDP A-List, Robeco SAM, MSCI, Oekom listing etc.) additionally supports DT in benefiting from these opportunities.

This opportunity relates to a time horizon of more than 2 years.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

405.525.000

Potential financial impact figure – maximum (currency)

1.216.575.000

Explanation of financial impact figure

Revenues from sustainable products and services at DTAG excl. US have been 16.221 billion € in 2022 (CR Report 2022, p. 62). Based on expert estimation we expect at least 5% higher sales with sustainable products resulting in 811 mio. € higher revenues. Due to structural changes, there was a slight decrease in sustainable revenues compared to last year. Out of our "Green Magenta" transformation program we expect additional sustainable products and services and increased efforts to communicate them to push sustainable revenues within the next years.

The SMARTer 2030 report, provides examples for "sustainable products". It predicts based on 12 investigated enablement areas, additional ICT revenues of 2.0 trillion US\$ by 2030. Benefiting DT products are e.g. broadband services that enable teleworking, web- and video conferences, reducing business travel, connected cars improving fuel efficiency, smart home solutions that lower the energy consumption etc. 5% sustainable revenue increase (1,6221 mio. € sustainable revenues * 5% = 811.05 mio. €) should be possible. At least an increase of 2.5% or 405.525 mio. € (1,6221 mio. € sustainable revenues * 2.5% = 405.525 mio. €) can be expected, even an increase of 7.5 % or 1,216.575mio. € (1,6221 mio. € sustainable revenues * 7.5% = 1,216.575 mio. €) seems possible.

All opportunities are assessed on a gross basis and therefore differ from other DT risk reporting such as in the annual report.

Cost to realize opportunity

11.600.000

Strategy to realize opportunity and explanation of cost calculation

Our management method consists of 4 parts: (a) Increased sales of sustainable products from DT sustainable product and services portfolio as e.g. offering refurbished smart phones under the "Green Magenta" logo (former "We care" since 2019. (b) Communication of the evaluated

sustainability effects: For certain products, we developed tools to calculate the sustainability effects for the customers and the society, developed communication materials (e.g. for B2B cloud services) and trainings for the sales staff. (c) Respective marketing measures to promote our sustainable products and services (e.g. for Connected Cars). (d) Development of sustainable products and services to benefit from increased demand for sustainable products.

We are also utilizing future-oriented and widely available technologies to make cities viable for the future, based on Narrow Band IoT (NB-IoT) including smart parking, smart cities, and smart meters. Another example is the router Speedport Smart 4, which was consistently planned and designed to be sustainable, significantly reduce use of natural resources, CO₂ emissions and avoidance of plastic waste. The housing consists of 90% recycled plastic and the product packaging is plastic-free. The use of harmful substances is limited beyond legal requirements.

Example refurbished smartphones:

Situation: 75 % of the life cycle emissions for smartphones are from the production phase. Despite slight increases in the last years, the average use time is only around 2 years in countries like Germany.

Task: Increasing product lifetime on medium term. Doubling the average product lifetime reduce average annual emissions by 37.5 %.

Action: We already started to provide refurbished smartphones under the "Green Magenta" logo for a lower price 2019 and plan to increase their share up to 25% by 2030.

Result: Offering refurbished high end smart phones DT contributes to longer product lifetimes and make high end smart phones affordable for more customers.

Costs to realize these opportunities are estimated at 11.6 mio. €. (10% increase of the R&D budget for the development of sustainable products: 3 mio. €, costs for internal stuff dealing with the sustainable product and services portfolio, costs for consultancy in the field of research and/or verification of sustainability benefits of products and services: ca. 0.5 mio. € and additional costs for marketing expenses: 8.1 mio € (Estimation based on 1% of the additional revenues).

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Carbon taxes will lead to a shift in price relations from carbon intensive products and services to carbon saving products and services as provided from telecommunication service providers as Deutsche Telekom. SMARTer 2030 shows that the market adaptation of ICT-solutions for carbon reduction would be much better if these solutions are also economical for the customers. SMARTer 2030 (see attachment, page 22), predicts, based on 12 investigated enablement areas, additional ICT revenues of 2,000 billion US\$ by 2030.

DT could benefit by increased revenues. DT revenues of 114.2 billion € in 2022 represent 6.3% of the global telecommunication services market of around 1.8 trillion € and around 2.1% of the global ICT market in 2022. Higher energy prices in consequence of carbon taxes improve the pay back periods for the energy saving solutions DT is offering to its customers.

Due to a broad offering of energy and carbon saving solutions as e.g. modern cloud data centers, low carbon mobility management or broadband internet, that enables working from home DT is well prepared to participate from these opportunities.

This opportunity relates to a time horizon of more than 2 years.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

405.500.000

Potential financial impact figure – maximum (currency)

1.622.100.000

Explanation of financial impact figure

On medium term a 5% increase in the demand for DT sustainable products and services due to a shift in consumption patterns towards more sustainable products and services means additional revenues of 811 mio. € (5% of 16.221 bn. €). As we do not provide products and services with highly negative environmental impacts, we do not expect lower revenues for the other products due to the expected shift in consumption. In the best case even 10% more revenues from sustainable products and services (1.6221 bn €) seem possible. On the low end we expect an increase of sustainable revenues by 2.5% (405.5 mio. €). By 2030 at least 42% revenues from sustainable products, including 35% revenues from taxonomy aligned revenues should be possible.

All opportunities are assessed on a gross basis and therefore differ from other DT risk reporting such as in the annual report. This opportunity relates to a time horizon of more than 2 years.

Cost to realize opportunity

8.600.000

Strategy to realize opportunity and explanation of cost calculation

Respective marketing measures to foster the shift in consumption patterns in favour of sustainable products and services.

Example provided here: Sustainable Product Portfolio:

Situation: Although up to market research up to one third of the customers would like to have sustainable ICT offers, most customers do not see respective offers in the market.

Target: Utilization of the opportunities with respect to sustainable telecommunication products and services.

Action: To access this opportunity in 2014 DT started a "Sustainable Product Portfolio" project and calculated the sustainability benefits including carbon emission reductions for the first three products: Dynamic workplace solutions, connected cars and smart meters.

Communication materials have been developed out of the project with the target to promote the sustainability benefits of our solutions to increase sales of the respective products. In between the sustainable products and services portfolio of Deutsche Telekom covers 35 products and solutions (DT CR Report 2022, page 68). Benefit calculation tools and communication materials for DT customers have been developed.

Results: The number of sustainable products and services increased to 33 in 2021, providing 16.2 billion € in revenues (without TM US).

The project for creating a sustainable product portfolio continued in 2022. DT will further increase marketing for sustainable products and services. Investments in the development of sustainable products and services will help to benefit from the changes in consumption patterns.

Another example is the Eco Rating initiative, a new sustainability-rating system for cell phones. 9 network operators are participating in the initiative. By the end of 2022, over 300 different cell phones from 22 different manufacturers had been evaluated based on the Eco Rating

method. Aspects taken into account include durability, reparability and recyclability, climate compatibility, and resource efficiency. The system drives transparency and supports reducing the entire ecological footprint. It will also motivate device manufacturers on medium term to develop more sustainable products.

We calculate the costs to realize this opportunity at 8.6 mio. €. The figure includes the costs for internal and external stuff to evaluate and verify the sustainability effects of our products and services (0.5 mio. € p.a.) and additional costs for marketing expenses. (8.1 mio based on 1% of the additional revenues).

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of new products or services through R&D and innovation

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Excellent examples for the development of innovative sustainable solutions, differentiating us against our competitors, are our new routers "Speedport Smart 4" and "Speedport Smart 4 Plus" We have consistently planned and designed the Speedport Smart 4 router generation to be

sustainable. They protect our environment through a significantly reduced use of natural resources, savings in CO₂ emissions and avoidance of plastic waste. The housing consists of 90% recycled plastic and the product packaging is plastic-free and thus enables simple recycling in paper waste. Most of the paper used is recycled or from sustainable forestry (FSC-certified). In addition, the use of harmful substances (e.g. in electronic components) is limited beyond what is legally required.

We expect energy efficiency regulations, especially within the EU) to further drive innovation and also new products and services forward. We believe in the opportunity to differentiate against competition and improve revenues and margins by products and services providing superior energy efficiency.

Energy efficient network infrastructure products as e.g. energy efficient 5G base stations can also provide competitive advantages by lowering the operative costs of Deutsche Telekom. According to the increased consumer interest into climate change and sustainability especially at our German "home market", the greenest network, operated with 100% electricity from renewables, can be a differentiator against competition. There are recent studies that show an increasing willingness of consumers to pay higher prices for more sustainable products and services.

All opportunities are assessed on a gross basis and therefore differ from other DT risk reporting such as in the annual report. This opportunity relates to a time horizon of more than 2 years.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

301.500.000

Potential financial impact figure – maximum (currency)

903.500.000

Explanation of financial impact figure

The financial impact is very much related on the efficiency standards set and on the impact on innovation. If DT could, due to products and services with higher energy efficiency, increase the market share in the German telecommunication market by 0.5% this would mean an increase in revenues by 301.5 mio. € (German market according to the VATM Study 2022 60.3 bn. €, $60.3 \text{ bn. €} \times 0.5\% = 301.5 \text{ mio. €}$). An increase of the DT market share in Germany by 1.5% would result in additional revenues of 903.5 mio. € (German market according to the VATM Study 2022 60.3 bn. €, $60.3 \text{ bn. €} \times 1.5\% = 903.5 \text{ mio. €}$).

All opportunities are assessed on a gross basis and therefore differ from other DT risk reporting such as in the annual report.

Cost to realize opportunity

3.100.000

Strategy to realize opportunity and explanation of cost calculation

The management method is to increase DT sales of energy/sustainability labelled products and services. DT already started to offer environmentally friendly and energy efficient products, e.g. by fulfilling the "Blauer Engel" requirements or products which are certified as "Green products" by the TÜV in Germany. E.g. 95% of our sold fixed network devices in Germany are certified with the "Blauer Engel". Another example is our sustainable smartphone.

Situation: No certified sustainable modular smartphone in the portfolio to provide sustainable choices to our customers.

Task: Offer a choice for customers to select a sustainable smartphone.

Action: 2021, we introduced the first sustainable 5G smartphone to markets in Germany, Austria, and the Netherlands: The Fairphone 4 is currently the world's only smartphone to have been awarded the German "Blue Angel" ("Blauer Engel") label. The phone has a modular design, conserving resources and reducing emissions. It is the first cell phone to be electronic-waste neutral. 2021 DT also introduced the eco rating scheme for cell phones.

Result: Sustainability oriented customers really have the choice to decide for a fully sustainable smartphone.

Other examples are our new routers "Speedport Smart 4" and "Speedport Smart 4 Plus" which are certified with our new "Green Magenta" label. These routers are consistently planned and designed to be sustainable by a significantly reduced use of natural resources, carbon emission reductions and avoidance of plastic waste. The housing e.g. consists of 90% recycled plastic and the product packaging is plastic-free. Most of the paper used is recycled or from sustainable forestry (FSC-certified). The use of harmful substances is limited beyond legal requirements.

DT is also supporting the EU Broadband code of conduct and addressing the respective technical requirements towards our suppliers within our procurement processes. DT networks are operated with 100% electricity from renewables.

The costs for the realization of this opportunity are calculated with 3.1 mio. €, based on assuming a 10% increase in the R&D Budget (R&D spend 2022: 30mio. €, 10% = 3 mio. €.) dedicated to develop sustainable smartphones and overall, 0.1 mio. costs with respect to EU Broadband Code of Conduct.

All opportunities are assessed on a gross basis and therefore differ from other DT risk reporting such as in the annual report. This opportunity relates to a time horizon of more than 2 years.

Comment

Identifier

Opp4

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Establishment of labels to guide consumers on their decisions on consumptions. Consumers increasingly take their decisions under sustainability aspects, including fair consideration of energy efficiency and carbon impact. Labels as the "Blauer Engel" (Blue Angel) help customers to access the sustainability of our telecommunication products and services as e.g. routers, media receivers or fixed net phones much easier and help to shift consumptions patterns towards more sustainability. DT sees related opportunities and using labelling as e.g. by labelling the majority of fixed-line phones for the German market and some media receivers with the "Blauer Engel" (Blue Angel) label. By these activities DT positively differentiates from its main competitors which should be the basis for higher revenues due to an increase in our market share. DT also increasingly markets products and services under its own "Green Magenta" label.

This opportunity relates to a time horizon of more than 2 years.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

324.000.000

Potential financial impact figure – maximum (currency)

811.000.000

Explanation of financial impact figure

At least 2% higher revenues for DT sustainable products and services due to superior labelling could be possible. This would increase annual revenues by 324 million €. According to the DT CR Report 2022 (p. 69), 16.221 billion € of revenues come from products with sustainability benefits, not including TM US (16.221 bn. € * 2% = 324 mio. €). Considering the increasing willingness to pay a premium for more sustainable products and services, even additional revenues of 5% or 811 mio. € seem possible (16.221 bn. € * 5% = 811 mio. €) . In an average scenario we expect 3.5% or 567 mio. € additional revenues from sustainable products & services (16.221 bn. € * 3.5% = 567 mio. €)

All opportunities are assessed on a gross basis and therefore differ from other DT risk reporting such as in the annual report. This opportunity relates to a time horizon of more than 2 years.

Cost to realize opportunity

5.870.000

Strategy to realize opportunity and explanation of cost calculation

Deutsche Telekom already started to offer environmentally friendly and energy efficient products, e.g. by fulfilling the "Blauer Engel" requirements or products which are certified as "Green products" by the TÜV in Germany. E.g. 95% of our sold fixed network devices in Germany are certified with the "Blauer Engel".

Our new routers "Speedport Smart 4" and "Speedport Smart 4 Plus" are certified with our "Green Magenta" label. We consistently planned and designed these routers to be sustainable. This protects our environment through a significantly reduced use of natural resources, savings in CO₂ emissions and avoidance of plastic waste. The housing consists of 90% recycled plastic and the product packaging is plastic-free. Most of the paper used in packaging is recycled or from sustainable forestry (FSC-certified). In addition, the use of harmful substances (e.g. in electronic components) is limited beyond what is legally required. Additionally, the strategy is a better market communication on the sustainability advantages of our products and services with an own label as part of the "Green Magenta" program. In 2019 we introduced the "Green Magenta" label with offering refurbished smartphones to the customers in Germany. In 2022 we labelled the new TV box G7, saving 61% in electricity consumption.

Another example is the Fairphone 4:

Situation: Average lifetime for smartphones in Germany is only slightly above 2years. Most phones are not modular and not labelled as environmentally friendly. The short use time contributes to the globally increasing e-waste problem.

Task: Offer of a really sustainable, technologically advanced long-lasting smartphone.

Action: 2021 we introduced the first sustainable 5G smartphone to markets in Germany, Austria, and the Netherlands: The Fairphone 4 is currently the world's only smartphone to have been awarded the German "Blue Angel" label, a certification for environmentally friendly products. The phone has a modular design that conserves resources and reduces emissions and it is the first cell phone to be electronic-waste neutral.

Result: Customers are offered the choice to decide for a durable and really sustainable smartphone

The cost to realize this opportunity are 5.87 mio. €. Additional labelling efforts and the necessary certification may cause costs of 0.2 million €. A marketing budget of 1% of the average expected additional revenues would cost up to 5.67 mio. € (3.5% additional revenues).

Comment

Identifier

Opp5

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Until 2050 the number of people living on earth will grow by 30% to around 9 billion. In addition, better nutrition will drive the demand for agricultural products. Climate change and an increase in the mean average temperature will drive water scarcity and provide additional pressure on the agricultural sector, which is already responsible for 21% of the global greenhouse gas emissions. SMART agriculture (based on telecommunication services), as e.g. the SMART vine yard solution DT implemented in Macedonia, can help to increase crops by 30% according to the SMARTer 2030 study and in addition help to reduce the consumption of water and energy. Therefore, increasing physical climate change may lead to demand for existing and new DT solutions especially in the field of smart agriculture solutions.

To benefit from this opportunity, Deutsche Telekom is launching a solution for reliable, high precision geo-positioning in the European market together with the U.S. navigation specialist Swift Navigation. Called "Precise Positioning", the system is accurate to the centimetre and enables, for example, lane-accurate navigation for (semi-)autonomous vehicles. Conventional satellite navigations systems like GPS are accurate only to within three to five meters. Skylark™, Swift's cloud solution, corrects this satellite data, allowing the location of autonomous vehicles and machines to be determined with greater accuracy.

In the agricultural sector we offer a real-time solution for agriculture ("Precise Positioning"). It can be used, for instance, to correct GPS data that is often too inaccurate for agricultural purposes and transmit precise location data in real time – using 5G mobile technology. Our low-threshold, comparatively inexpensive solution helps farmers deploy their machinery with greater precision, to reduce emissions, dose fertilizer and seeds more accurately, and increase their yields. (DT Annual Report 2021, p. 90)

This opportunity relates to a time horizon of more than 2 years.

Time horizon

Long-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

425.000.000

Potential financial impact figure – maximum (currency)

850.000.000

Explanation of financial impact figure

According to SMARTer 2030, the revenue potential for the ICT industry in the agricultural sector will grow to around 100 billion US\$ in 2030. If DT is able to address only 0.5% of this market by its solutions 425 mio. € in revenues are possible (based on the average \$/€ exchange rate of 0.85). If DT is focussing on this area even 1% of this market potential seems achievable, which means 850 mio. € in additional revenues.

All opportunities are assessed on a gross basis and therefore differ from other DT risk reporting such as in the annual report. This opportunity relates to a time horizon of more than 2 years.

Cost to realize opportunity

10.000.000

Strategy to realize opportunity and explanation of cost calculation

The strategy to manage this opportunity beside the promotion of existing sustainable products and services is the introduction of new sustainable goods and services. The latest DT CR Report 2018 mentions an example from the Slovenian start-up Trapview. (DT CR Report 2018, page 77). Another example from smart metering for water conservation or connected farming was mentioned within our DT CR Report from the year before (DT CR Report 2017, page 37f.). A third example is the smart vineyards project in Macedonia. Sensors in the earth measure how good the plants are supplied with water and nutrients. Via GPS the data are transported to the cloud where they are analysed. Based on this information IT systems steer the supply of the plants with water and nutrients. This increases the yields up to 30% and helps to address the global challenges of an increasing population and the limitation of arable land.

Together with U.S. navigation specialist Swift Navigation, DT is launching a solution for reliable, high precision geo positioning in the European market. Called Precise Positioning, the system is accurate to the centimetre and enables, for example, lane-accurate navigation for (semi-)autonomous vehicles. Conventional satellite navigations systems like GPS are accurate only to within three to five meters. Skylark™, Swift's cloud solution, corrects this satellite data, allowing the location of autonomous vehicles and machines to be determined with greater accuracy. In the agricultural sector, for instance, with Precise Positioning self-driving machines can be deployed to sow crops, spread fertilizer, or plow fields with inch-perfect precision and thus save seeds, fertilizer, and energy. (DT Annual Report 2021, p. 90)

Positive examples of enabled increases in harvests, productivity, or savings by lower consumption of water, fertilizers or pesticides and technological innovations help to convince customers to invest into smart agriculture solutions. Although we are currently working on some specific solutions as smart groundwater monitoring, we see the implementation on medium or longer term.

The costs to realize this opportunity are 8.65 mio. €. Additional investments in the development, marketing, and sales of such ICT solutions for agriculture supports the exploitation of this opportunity. The cost figure is based on 5% increase in the R&D costs in smart agriculture (1.5 mio €) and additional marketing costs of 1% of the expected revenues (8.5 mio €).

Comment

Identifier

Opp6

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

More than 25% of the customers are already willing to buy sustainable products and services. In some cases, the demand is even higher as e.g. 64% of the customers in Germany are potential customers for smart home solutions. On the longer run ongoing societal change and increasingly visible adverse consequences of climate change have the potential to increase the size of this customer group. This is the outcome of newer market research showing an increasing trend that consumers are willing to pay for more sustainable products and services. This yields a potential for the sale of DT's sustainable products and services, such as e.g. our Smart Home Solution Qvicom (one of the products where energy efficiency is one of the biggest motivator for the customers). There are also other DT products and solutions that enable sustainable lifestyles, e.g. by dematerialization or by sharing of products, such as car sharing. The good reputation of Deutsche Telekom with respect to CR (e.g. Sector Leader in Oekom, listing in the Dow Jones Sustainability Index, CDP A-Rating since 2016, "Deutscher Nachhaltigkeitspreis" 2017 etc.) and the already existing broad portfolio of sustainable products and services will help DT to especially benefit from this development.

The DT affiliate T-Systems also joined the Climate Neutral Data Centre Pact (CNDCP). Data centres are the tangible assets where cloud and internet technologies live and interact, and where users connect to and access digital services. Data centres have become the transactional foundation of our modern society and the global economy. By joining the initiative, we place a high level of importance on sustainability, energy efficiency, clean energy, reliability, and security, and use tools, technologies and systems to ensure we deliver. The focus and span of control of the Pact is on achieving sustainable and from 2030 onwards climate neutral data centre facilities and supporting the wider goal of the European Green Deal to make Europe the first climate neutral continent by 2050. Our "green" data center infrastructure is the basis to benefit from the increasing demand for sustainable data center services.

All opportunities are assessed on a gross basis and therefore differ from other DT risk reporting such as in the annual report. This opportunity relates to a time horizon of more than 2 years.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

405.500.000

Potential financial impact figure – maximum (currency)

1.216.500.000

Explanation of financial impact figure

Revenues from sustainable products at DTAG (excl. US) reached 16.221 billion € or 42% of the revenues in 2022 (DT CR Report 2021, p. 68). A 2.5% increase in demand means additional revenues of 405.5 mio. €. ($16.221 \text{ bn. €} \times 2.5\% = 405.5 \text{ mio. €}$) We estimate that even 7.5% or 1.2165 billion € additional revenues for Germany and Europe seem possible ($16.221 \text{ bn. €} \times 7.5\% = 1.2165 \text{ bn. €}$). In the base case scenario we calculate with a 5% increase in revenues, which means 811 mio. € in additional revenues ($16.221 \text{ bn. €} \times 5\% = 811 \text{ mio. €}$).

All opportunities are assessed on a gross basis and therefore differ from other DT risk reporting such as in the annual report.

Cost to realize opportunity

8.610.000

Strategy to realize opportunity and explanation of cost calculation

DT recognized the business potential of sustainable and carbon reducing ICT products (revenue potential: 2 trillion US-\$ in 2030 according to SMARTer 2030, p. 22). To access these opportunities DT started a "Sustainable Product Portfolio" project in 2014, calculating sustainability benefits & carbon reductions for 3 first products. We developed communication materials on sustainability benefits of our solutions to increase sales. In subsequent years, we continued the project, aiming to extend the offer of sustainable products to benefit from increased public awareness on climate change.

We offer environmentally friendly and energy efficient products, using labels. E.g. we use the "Blue Angel" for 95% of our sold fixed network devices in Germany, the Fairphone 4 we sell in Germany since 2021. In 2019 we also introduced the "we care" label to promote sustainable products & services starting with the offer of refurbished smartphones. In between we renamed "we care" to "Green Magenta" (environment) and "Good Magenta" (social aspects). New labelled products in 2020 have been e.g. the new routers "Speedport Smart 4" & "Speedport Smart 4 Plus" (Housing consists of 90% recycled plastic and 100% plastic free packaging) or "Speed Home Wlan". We also introduced the eco rating for cell phones in 2021, which we further rolled out in 2022. The new TV box G7, launched 2022 consumes 61% less electricity.

We also use of the rental model for router and media receiver. 2020 more than 12 mio. devices have been rented to our customers in Germany. The rental model extends the product lifetime and ensures state of the art recycling processes, supporting the circular economy and reduce carbon emissions.

The Open Telekom Cloud (OTC) for business customers is also one of the best in terms of environmental sustainability – another argument for companies to choose the OTC. We achieve this with 30% lower energy consumption compared to other data centers. In addition, the electricity for the OTC comes to 100% from renewable sources. Therefore, the OTC has been awarded with the "Green Magenta" label.

The costs to realize these opportunities are estimated at 8.61 mio. €. (Assessment of sustainability benefits of additional DT products: 0.5 mio. €. Eco labelling for additional DT products and services: 0.5 mio. €. 1% additional marketing costs related to the additional revenues for the sustainable products and services: 8.11 mio. € (base case scenario).

Comment

Identifier

Opp7

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

According to the "Brand Finance Global 500", Deutsche Telekom reached a brand value of 62.9 billion US-Dollar (see Brand Finance Global 500 2022 report). By this, DT is the most valuable brand in the European telco sector and the most valuable telecommunication service provider globally. As DT and its products and services offer plenty of opportunities for sustainable lifestyles and carbon emission reductions the recognition of DT as company being part of the solution of the climate change problem has the potential to increase sales and to further increase the brand value of Deutsche Telekom. Examples are DT smart home solutions that, beside protection against burglary, help to reduce home energy consumption. DT products and services also support resource efficiency e.g. by enabling the sharing economy e.g. by supporting car sharing or rental bike systems or the avoidance of travel by using broadband connections to work from home. DT is also supporting the build-up of the German charging infrastructure for electric cars via its affiliate Comfort Charge.

All opportunities are assessed on a gross basis and therefore differ from other DT risk reporting such as in the annual report. This opportunity relates to a time horizon of more than 2 years.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

405.500.000

Potential financial impact figure – maximum (currency)

1.216.500.000

Explanation of financial impact figure

Revenues from sustainable products at DTAG (excl. US) reached 16.221 billion € or 42% of the revenues in Germany and Europe in 2022. Based on expert estimation a 5% increase in demand seems possible meaning additional revenues of 811 mio. € (specific targets e.g. cloud, smart home as far as available). At least 2.5% should be possible (406 mio. €) In a best case scenario, even 7.5% in increase of sustainable revenues should be possible 1,217 mio. €).

An increase in DT brand value as consequence of the positive ecological and sustainable impacts of our products and services is likely and potentially high, however its extent is difficult predict. An increase of DT's brand value is therefore only reported on a qualitative basis. Within the last two years DT brand value increased by more than 50% to more than 60 billion € making DT the most valuable telecommunication service provider globally.

All opportunities are assessed on a gross basis and therefore differ from other DT risk reporting such as in the annual report.

Cost to realize opportunity

8.110.000

Strategy to realize opportunity and explanation of cost calculation

DT has recognized the business and the emission-reduction potential of ICT products and services at an early stage, and as one of the first companies in the industry explicitly addressed this potential in the development and introduction of new products and services in its corporate strategy. As shown in SMARTer 2030 (p. 22), till 2030 the ICT sector can expect additional revenues up to 2.0 trillion US\$ by 12 investigated enablement solutions. To access this opportunity DT started a "Sustainable Product Portfolio" project in 2014 and calculated the sustainability benefits including carbon emission reductions, starting with 3 products which continued in between. The method is to assess the sustainability of products and services to inform customers on sustainability aspects of our products and services. With the portfolio approach DT strives to increase the share of revenues from sustainable products and services over time by promoting the sales of these products and by improving the sustainability profile of our products and services over time. One example is smart metering: A reduction of the household energy consumption up to 8% is possible, which will save an average household 90 € per year.

To address these opportunities additional market communication expenses may be necessary. Based on 1% higher marketing expenses for the expected minimum revenue increase we expect additional expenses of 8.11 mio. €.

All opportunities are assessed on a gross basis and therefore differ from other DT risk reporting such as in the annual report.

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a climate transition plan that aligns with a 1.5°C world?

Row 1

Climate transition plan

Yes, we have a climate transition plan which aligns with a 1.5°C world

Publicly available climate transition plan

Yes

Mechanism by which feedback is collected from shareholders on your climate transition plan

We have a different feedback mechanism in place

Description of feedback mechanism

Our DT CR online report offers opportunities for stakeholder feedback during the whole year.

We also provide a contact form at <https://www.telekom.com/en/contact-forms/corporate-responsibility>

DT can also be contacted via various social media channels

There are also intensive dialogues with suppliers, customers, and investors on climate topics

Frequency of feedback collection

More frequently than annually

Attach any relevant documents which detail your climate transition plan (optional)

 T-Mobile-Pathway-To-Net-Zero-Jan-2023.pdf

 cr_en_2022_dt_final.pdf

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy
Row 1	Yes, qualitative and quantitative

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios RCP 8.5	Business division		In various workshops with experts from technology, purchasing, strategy and risk management, we defined the material climate-related risks and opportunities and carried out an initial weighting. We considered the consequences for our business activities that could result from the physical impacts of progressing climate change. We analysed - on an initial exemplary basis - 500 Deutsche Telekom AG sites in Germany with regard to their physical climate risks. Such an analysis shall be extended similarly also to other countries. The climate risk analysis was prepared using the "Climate Change Edition" of the "Location Risk Intelligence" software from reinsurer Munich Re. The analysis comprises eight indices (see graph). We consider the risk exposure for the respective locations of fixed line and mobile technical sites (network operation, data center and office buildings) in two climate scenarios of the Intergovernmental Panel on Climate Change (IPCC): a business-as-usual scenario (RCP 4.5), in which the global temperature increase will be more than two degrees, and a four-degree scenario (RCP 8.5). In addition to the climate scenarios, we also examine the risk exposure in different time frames: current, for the year 2050, and for 2100. Considered parameters have been: tropical cyclones, sea level rise, fire weather stress, precipitation stress, drought stress, heat stress, river flood (undefended and defended) https://www.cr-report.telekom.com/2022/management-facts/environment/climate-targets-risks#atn-19680-19685
Transition scenarios IEA NZE 2050	Company-wide		For the analysis of our transitory risks and opportunities, we used the IEA NZE 2050 Scenario (IEA NZE 2050) of the International Energy Agency (IEA), replacing the SDS scenario we used before. The NZE 2050 Scenario is a normative IEA scenario that shows a pathway to achieve net zero CO₂ emissions by 2050. This scenario also meets key energy-related United Nations Sustainable Development Goals (SDGs), in particular by achieving universal energy access by 2030 and major improvements in air quality. It is consistent with limiting the global temperature rise to 1.5 °C with no or limited temperature overshoot (with a 50% probability), in line with reductions assessed in the IPCC in its Sixth Assessment

			Report. It also covers a timeframe to 2050, which included all short-, mid- and long-term horizons at Deutsche Telekom. We choose this scenario as our transitory scenario in accordance to the Task Force on Climate-related Financial Disclosures, who requires companies to take into consideration a “Well below 2 °C” scenario. The scenario was applied in a workshop with internal sustainability experts to identify transitory risks and opportunities for our business model and along the value chain with group focus. We considered political, technological, and societal consequences associated with the transition to a low-carbon economy, as defined in the SDS scenario. As a result, the risks provided in 2.3 of this questionnaire were identified as material for DT, e.g. carbon pricing and changes in consumer preferences.
Transition scenarios IEA 450	Business division		TM US: Global emissions decline 25% by 2030, reaching net zero by ~2070 Increase in extreme weather events frequency and magnitude. Increasing signs of climate instability, for example sea level rise, loss of sea ice, decline in biodiversity etc. Reference sources: "IEA WEO 450 Scenario RCP 2.6 - 4.5"
Physical climate scenarios RCP 4.5	Company-wide		In various workshops with experts from technology, purchasing, strategy and risk management, we defined the material climate-related risks and opportunities and carried out an initial weighting. We considered the consequences for our business activities that could result from the physical impacts of progressing climate change. We analysed - on an initial exemplary basis - 500 Deutsche Telekom AG sites in Germany with regard to their physical climate risks. Such an analysis shall be extended similarly also to other countries. The climate risk analysis was prepared using the "Climate Change Edition" of the "Location Risk Intelligence"

			software from reinsurer Munich Re. The analysis comprises eight indices (see graph). We consider the risk exposure for the respective locations of fixed line and mobile technical sites (network operation, data center and office buildings) in two climate scenarios of the Intergovernmental Panel on Climate Change (IPCC): a business-as-usual scenario (RCP 4.5), in which the global temperature increase will be more than two degrees, and a four-degree scenario (RCP 8.5). In addition to the climate scenarios, we also examine the risk exposure in different time frames: current, for the year 2050, and for 2100. Considered parameters have been: tropical cyclones, sea level rise, fire weather stress, precipitation stress, drought stress, heat stress, river flood (undefended and defended) https://www.cr-report.telekom.com/2022/management-facts/environment/climate-targets-risks#atn-19680-19685
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C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

What impacts of ongoing climate change can be expected with respect to DT buildings and technical network infrastructure?

What impacts of transition towards low carbon economy will influence DT?

Results of the climate-related scenario analysis with respect to the focal questions

Beside the impact from tropical cyclones all investigated risk factors are expected to increase by 2050. The highest risk will be floods. The percentage of sites under high risk will increase from 7.4 to 11.6%, the percentage of sites under medium risk from 1.2 to 2.6%. 1.4% of all sites will also be under risks from sea level rise by 2050. By 2050 nearly all sites can be expected to be at risk from drought stress, 4.8% even from medium to high stress. Also heat stress, fire weather stress and perception stress will significantly increase by 2050. Overall, a higher resilience of network infrastructure will be necessary to limit climate change related risks and losses, including network planning and the resilience of purchased technical network infrastructure,

The central climate-related risks include the possible failure of the network infrastructure, as a result of damage to the secondary infrastructure (such as through power failures) or failures of cooling systems. Another risk consists of possible network damage or failure as a result of network-infrastructure damage resulting from climate events or changes in climate conditions. The primary transitional risks mentioned include CO2 prices and regulation of products and services – for example, via increased energy-efficiency requirements. In addition, there is a risk of negative stakeholder feedback and reputational damage. For the most part, the time horizon for the identified risks is seen as medium-term to long-term.

Climate-related opportunities and risks have affected our business operations in many different ways. Energy efficiency, for example, is of great importance for Deutsche Telekom, since the network's energy consumption strongly affects operational costs. It is also important in light of the Group's strategic approach to climate protection and of the growing concerns and expectations of our stakeholders. Consequently, we are now aiming to limit our annual energy consumption within the next years – and have defined progress toward this aim as remuneration-relevant for our Board of Management. In addition, we are permanently seeking to reduce our electricity costs.

We see DT well positioned as enabler for the transformation of the economy towards a 1.5 degree pathway in its relevant markets in Germany, Europe, and the US by offering innovative, network-based solutions, supporting our customers in reducing their own CO₂ emissions and contributing to climate protection. Therefore, we offer sustainable telecommunication products as e.g. our new Smart 4 router or the Fairphone 4 as the first "Blue angel" certified 5 G smartphone. In 2022 we started the rollout of our new G7 TV box with 61% lower electricity consumption. We also offer refurbished smartphones since 2019 and plan to increasingly provide various enabling services as e.g. cloud computing solutions, web- and video conferencing services or the Low Carbon Mobility Management (LCMM) within the next years.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	According to SMARTer 2030 the total business revenue potential from carbon reducing products and solutions only for the ICT industry is 2.0 trillion US\$ by 2030, including solutions as e.g. web- and videoconferencing, e-commerce, dematerialization, smart logistics or e-health and smart agriculture. The

		global revenues from telecommunication services reached 1.53 trillion US\$ in 2020 (Source IDC 2021). With respect to products and services DT sees lots of opportunities even in short terms. We expect these opportunities to grow on medium and especially on long term and aim to increase sustainable revenues and the enablement impact of our solutions on an annual basis. To utilize these opportunities, DT introduced a "Sustainable Product Portfolio" in 2014, calculating sustainability benefits including carbon emission reductions for the first 3 products. Communication materials have been developed to make customers aware of the sustainability benefits and to increase sales. The project continued in subsequent years, currently covering 35 products (DT CR Report 2022, p. 68 ff.) to benefit from increased public awareness on climate change issues. In 2020 we rebranded the "We care" label to "Green Magenta" and "Good Magenta". DT aims to participate in the sustainability driven market growth in the next years by bringing labelled sustainable products and services into the market, as e.g. the offering of refurbished smartphones in Germany (started in 2019). As DT represents around 8.6% of the global telecommunication services sector, the business potential for DT may reach up to 151 billion € (172 billion US\$) by 2030. A breakdown of the study for Germany we did in 2016 shows a potential of 34 billion € only for Germany. EITO estimates the ICT market volume for Germany at 144 billion €. The revenues of DT in Germany 2021 have been around 23.6 billion €, representing 17 % of the Germany ICT market. Results: Revenues from sustainable products and services in Germany & Europe reached nearly 17 bn € in 2021. Although the sustainable revenues decreased in 2021, growing revenues from sustainable products & services especially on medium and long term, DT also considers the enablement factor for Germany (enabled emission reductions on customer side/own emissions scope 1-3) which reached 3.8 in 2022.
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Supply chain and/or value chain	Yes	Climate change impacts the costs (e.g. by energy costs) and the security of our supply chains. Due to our sustainable supply chain management we currently do not see a high financial impact but there are remaining long term risks depending on the speed of climate change. Targets for 2020 have been to reach 80% CR qualified TOP 200 suppliers and a 70% coverage of our spend volume by answers to the CDP supply chain program. For 2030 we have the target to decrease the scope 3 emissions, including emissions from purchases by 25% per customer. 2023 we decided on a new target to reduce the combined scope 1-3 emissions by 55% by 2030 against 2020. Examples for related measures are e.g.: Energy costs are more taken in to consideration in procurement decisions as part of TCO-approach (TCO = Total Costs of Ownership), incl. qualification courses for purchasers in the TCO methodology. Employees, business partners and suppliers receive training in sustainability topics, e.g. through the "Sustainability in Procurement" e-learning tool, which was revised and updated in 2017. DT is also increasingly working with its top suppliers to reduce value chain emissions and by this climate change related risks. Therefore, a taskforce between corporate responsibility and the various procurement organizations has been set up. DT is investing into a specific supplier development programme (SDP) with selected and strategic relevant vendors. To utilize opportunities from sustainable & emission reducing products and services, DT increases its efforts to identify innovative start-ups with sustainable products and solutions, including products that help to reduce carbon emissions to develop new business opportunities within the "Win with partners" approach. Depending on the success of our efforts, the impact on DT revenues can be high as various market studies (e.g. GeSI SMARTer 2030) show. We exploit these opportunities together with our
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		suppliers. Due to our sustainable procurement processes the magnitude of impact is limited. Achieved results 2022: Spend coverage by answers to the CDP Supply Chain Program: 52% (without TM US). Supplier emission reductions by the CDP Supply Chain Program: 164 mio. t CO₂e .
Investment in R&D	Yes	DT invested 30 mio. € into R&D in 2022. At DT, innovation means creating the best (digital) customer experience based on the best network, now and in the future. We neither manufacture smartphones, nor do we create our own film content, or the automation technology and sensors for industrial campus networks. Our core competency consists in integrating the individual components so that, in conjunction with our network and IT infrastructure, we can guarantee the best customer experience at a reasonable price with resilient and future-proof technology. This is precisely the task of our Technology and Innovation Board of Management department (VTI), which works in close cooperation with our operating segments. VTI is where we combine and integrate our Technology, Innovation, IT, and Security functions to meet the demands of the future network generation and the associated requirements not only of our customers, but also of society as a whole – also in terms of network security and sustainability. DT Group strategy includes the claim to “lead in technology.” That applies not only to high-speed broadband access, but also to responsible network production. Due to growing cloudification, increasing data traffic, and the rising number of active components in our network this is an economic and ecological necessity. With 5G, we are creating the basis for the digital world of tomorrow, enabling real-time communication. This next-generation technology is the key to innovative applications for virtual reality and extended reality (XR), connected and autonomous driving, robotics, and Industry 4.0. Our latest innovation area is devoted to making telecommunications more sustainable. Currently, the main focus is on energy-optimized network production and the resource-efficient design of products and

		services. According to the increasing urgency of climate change, we see respective opportunities for our R&D activities especially on long term. Results achieved in 2021: We defended our position as innovation leader for the 5G core network by launching dynamic spectrum sharing (DSS), a new antenna technology that for the first time enables the parallel use of LTE and 5G in the same frequency band. We also initiated successful prototypes and tests for AI-based, smart energy management in the mobile network and for decentralized renewable energy production.
Operations	Yes	Energy efficiency is extremely important for DT, due to the high impact of network energy consumption on the operating costs but also due to the strategic approach towards climate protection and increasing stakeholder concerns and expectations. DT aims to annually limit energy consumption (ESG Board target) and reduce its costs for electricity consumption. Therefore, DT signed the EU Broadband Code of Conduct and the EU Data Center Code of Conduct to apply leading energy efficiency standards. Energy efficiency standards and requirements are part of the tendering processes for network equipment and data center facilities. DT also has a certified group wide Environmental Management System according to the ISO 14001 as part of the integrated Quality, Health & Safety & Environmental Management System. This system is internally and externally audited. Parts of DT, as the DT Power and Air Solutions Management (PASM), providing network availability in Germany run in addition an energy management system according to the ISO 50001. Considerations of physical risks to network infrastructure, e.g. due to extreme weather, are part of the regular networking planning process. According to our areas of operations we do not expect a significant

		financial impact from the increasing number and severity of climate related extreme weather events within short-term (although the recent floods Germany showed that even this is possible). The risk assessment of 500 randomly selected sites in Germany shows much bigger long-term impacts, depending on the speed of climate change. The impact of climate change on the future energy costs is reflected in our financial planning process. The magnitude of financial impact is limited as our energy costs are below 2% of our revenues. Due to current EU policy priorities and due to energy efficiency improvements in the ICT industry we still do not expect ICT specific energy regulations, that will increase the costs for our operations within our financial planning horizon (although we see raising concerns on the energy consumption increase in the ICT industry due to increasing demand for data volume, bandwidth and speed). Result 2022: Within the PLASMA project, started in 2018, DT electricity consumption in Germany has been reduced by 274 GWh, till 2021 and by additional 114 GWh in 2022.
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C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Indirect costs Capital expenditures Access to capital Assets	Climate change related risks and opportunities influence DT financial planning in many ways: Revenues: We see the contribution to the low carbon society as an essential part of our CR- and Group Strategy. We want to exploit this opportunity by increasing the enabling impact of our products and services. Last year the enabling impact of our products and services (for Germany) was 3.8, which means that we support emission reductions on our customer side that are nearly five times as high as our own value chain emissions (scope 1-3). The introduction of our

	new sustainability logos "Green Magenta" (Ecological Aspects) and "Good Magenta" (Social Aspects) should improve the communication of the sustainability aspects of our products and services should and foster the increase of revenues from respective sales. 2022, we further expanded our range of eco-friendly products and services. Now, along with more eco-friendly models of routers, media receivers and phones (the Fairphone), we also offer more eco-friendly accessories. In addition, we offer sustainability-oriented services, such as rental plans, and refurbishment and recycling of smartphones and fixed-network devices. Under the "Green Magenta" logo DT e.g. provides refurbished smartphones. By this we increase the product lifetime, which is extremely important as around 75% of the product carbon footprints comes from the production phase. As in the last years we expect increased revenues from sustainable products this year and see further growth prospects in the next years. On medium and long term revenues from sustainable products & services will even gain more importance. Indirect costs: As energy costs are an important part of our operating costs and as the increasing network requirements with respect to increased bandwidth and speed (5G, Fiber to the home etc.) tend to increase our electricity consumption, we currently run different energy efficiency programs as PLSAMA, DARWIN or TESLA to increase energy efficiency and to bring down the energy costs of our operations, even in short terms. Within the PLASMA project, which we started in 2018, our electricity consumption in Germany has been reduced by 65 Gwh in 2019, 140 Gwh in 2020 and 274 GWh in 2021. In 2022 additional reductions of 114 Gwh have been achieved. The savings are achieved by covering the whole value chain from efficiency of new architectures over optimization of the existing networks to the retirement of old equipment and reducing the electricity consumption of our buildings. We expect growing contributions from energy efficiency measures in this year and see further opportunities to decrease energy costs of the next years. Therefore, reducing energy costs by increasing energy efficiency will stay relevant in medium and long term.
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	Capital expenditure: DT drives energy efficiency to reduce the risks from increasing costs due to increasing prices for electricity (e.g. by the introduction of a carbon tax, which got more likely during the last 12 months). Therefore, DT e.g. invested more than 20 mio. into energy efficiency measures in 2021 (w.o. TM US). Despite the fact, that investments into energy efficiency compete with our core business we expect growing investments in the next years to get more independent on increasing energy prices. We also see additional capital expenditures for resilient network infrastructure even on short term. The exploitation of climate change related opportunities drives investments into the network as the expansion of network infrastructure drives future revenues by enabling new carbon reducing products and services as e.g. self-driving cars, that require low latency and a 5 G-Infrastructure. As there is currently a lot of political pressure (especially in our German home market) to increase the network coverage and the speed of data transmission, the exploitation of climate change related opportunities was not the relevant driver for investments into network infrastructure expansion and had no significant impact on our capital expenditure on short and also not on medium and long term. Access to capital: As DT considers its business with telecommunication services to contribute to the solution instead of being a significant part of the problem, DT sees no company specific risks in the access to capital. On contrary the huge opportunities by our products and services may attract investors and make the access to capital easier. Generally (beside the company specific view) the access to capital may be limited and cost of capital may rise due to regulatory uncertainty or unforeseen developments due to climate change, e.g. climate change related catastrophes as droughts or floods may have dramatic consequences on countries and their economies and are difficult to forecast. Currently this is not the case. There is a huge availability of capital which leads to interest rates on a historical low level and there was up to now no climate change related financial impact with respect to the access to capital. As based on our expert knowledge we do not expect relevant climate change related impacts on the access to capital during the time horizon of our financial planning (2021-2024) these potential costs up to now had no impact on our financial planning process (short term). Medium- and long-term effects remain possible. Assets: Local damages of infrastructure as consequence of weather extreme such as precipitation extremes and storms are possible and have been already experienced. A very real example are the impacts of the recent floods in Germany on the telecommunication infrastructure. We also experienced climate related damages of our telecommunication
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		infrastructure in other countries as e.g. in the US. Such failures can massively impact the management of rescue operations, if not render them entirely impossible. The problem in the quantification of the climate related impact is that damages by extreme weather events happen also without climate change as there already have been storms and floods before the industrialization as starting point for human made climate change. Climate change increases the probability of these extreme weather events and also the impact of these events, as e.g. proven by the scenario analyses applied for 500 randomly selected infrastructure sides in Germany last year. We see an increasing financial impact by the costs for repair and protection of our assets which may even increase in short term. These costs are integrated within the costs for the maintenance of our assets that are included in our integrated financial planning process. The magnitude of financial impact is low but can be expected to grow over time as extreme weather events and their average impact can be expected to increase on medium and especially on long term due to ongoing climate change.
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C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's climate transition?

	Identification of spending/revenue that is aligned with your organization's climate transition	Indicate the level at which you identify the alignment of your spending/revenue with a sustainable finance taxonomy
Row 1	Yes, we identify alignment with both our climate transition plan and a sustainable finance taxonomy	At both the company and activity level

C3.5a

(C3.5a) Quantify the percentage share of your spending/revenue that is aligned with your organization's climate transition.

Financial Metric

Revenue/Turnover

Type of alignment being reported for this financial metric

Alignment with a sustainable finance taxonomy

Taxonomy under which information is being reported

EU Taxonomy for Sustainable Activities

Objective under which alignment is being reported

Total across all objectives

Amount of selected financial metric that is aligned in the reporting year (unit currency as selected in C0.4)

565.000.000

Percentage share of selected financial metric aligned in the reporting year (%)

0,5

Percentage share of selected financial metric planned to align in 2025 (%)

30

Percentage share of selected financial metric planned to align in 2030 (%)

35

Describe the methodology used to identify spending/revenue that is aligned

With regards to taxonomy-relevant REVENUES, our estimations for 2025 and 2030 are based on expected future developments and more adequate criteria for “telecommunication networks” in the EU Taxonomy. Criteria currently under development at the EU commission are expected to allow for a higher eligibility of telecommunication operators’ Revenues/Capex/Opex related to their core business. We expect the incorporation of new criteria for telco networks into the EU taxonomy latest for financial year 2025. As an available proxy we rely on data available based on DT Groups ESG KPI “Sustainable Revenue Quota”. The overall quota being 42% (assumption sustainable revenue quota

would be the same including TM US) , the share with regards to state-of-the art fixed & mobile broadband solutions adds up to 35%. For simplification and based on stable trend over the last >5 years, we expect this share to remain stable of the coming years as well. Data is available in the public domain in our CR-Report: <https://www.cr-report.telekom.com/2022/management-facts/economy/sustainable-and-innovative-products#atn-19623-19625>.

Financial Metric

CAPEX

Type of alignment being reported for this financial metric

Alignment with a sustainable finance taxonomy

Taxonomy under which information is being reported

EU Taxonomy for Sustainable Activities

Objective under which alignment is being reported

Total across all objectives

Amount of selected financial metric that is aligned in the reporting year (unit currency as selected in C0.4)

0

Percentage share of selected financial metric aligned in the reporting year (%)

0

Percentage share of selected financial metric planned to align in 2025 (%)

90

Percentage share of selected financial metric planned to align in 2030 (%)

90

Describe the methodology used to identify spending/revenue that is aligned

With regards to taxonomy-relevant CAPEX, our estimations for 2025 and 2030 are based on expected future developments and more adequate criteria for “telecommunication networks” in the EU Taxonomy. Criteria currently under development at the EU commission are expected to allow for a higher eligibility of telecommunication operators’ Revenues/Capex/Opex related to their core business. We expect the incorporation of new criteria for telco networks into the EU taxonomy latest for financial year 2025. As CAPEX for our modern, energy-efficient and state-of-the-art network technology is the most relevant part of DT Group’s CAPEX, we set the expectations for 2025 and 2030 accordingly to 90% (See Annual Report DT and T-Mobile US: US-Invest at 12,5 bn EUR, Germany 4,4 bn EUR, EU 1,8 bn EUR) <https://www.telekom.com/en/investor-relations/publications/financial-results/financial-results-2022> and https://s29.q4cdn.com/310188824/files/doc_financials/2022/ar/TMUS-2022-annual-report-final.pdf

Financial Metric

OPEX

Type of alignment being reported for this financial metric

Alignment with a sustainable finance taxonomy

Taxonomy under which information is being reported

EU Taxonomy for Sustainable Activities

Objective under which alignment is being reported

Total across all objectives

Amount of selected financial metric that is aligned in the reporting year (unit currency as selected in C0.4)

2.000.000

Percentage share of selected financial metric aligned in the reporting year (%)

0,4

Percentage share of selected financial metric planned to align in 2025 (%)

30

Percentage share of selected financial metric planned to align in 2030 (%)

35

Describe the methodology used to identify spending/revenue that is aligned

With regards to taxonomy-relevant OPEX, our estimations for 2025 and 2030 are based on expected future developments and more adequate criteria for “telecommunication networks” in the EU Taxonomy. Criteria currently under development at the EU commission are expected to allow for a higher eligibility of telecommunication operators’ Revenues/Capex/Opex related to their core business. We expect the incorporation of new criteria for telco networks into the EU taxonomy latest for financial year 2025. As an available proxy we rely on assumptions made for REVENUE (see above), adopting the relevant share for OPEX as well.

Financial Metric

Revenue/Turnover

Type of alignment being reported for this financial metric

Alignment with our climate transition plan

Taxonomy under which information is being reported

Objective under which alignment is being reported

Amount of selected financial metric that is aligned in the reporting year (unit currency as selected in C0.4)

16.220.879.434

Percentage share of selected financial metric aligned in the reporting year (%)

14

Percentage share of selected financial metric planned to align in 2025 (%)

42

Percentage share of selected financial metric planned to align in 2030 (%)

42

Describe the methodology used to identify spending/revenue that is aligned

According to the EU Taxonomy Regulation, the first step is to ascertain the taxonomy-eligible economic activities of a company. These are activities that are covered by the EU taxonomy and that therefore potentially contribute significantly to achieving the environmental objectives of the EU. The second step is to check whether these activities are taxonomy-aligned. An activity is considered taxonomy-aligned if it meets the technical screening criteria listed in Annexes I and II of Delegated Regulation (EU) 2021/2139 to qualify as contributing substantially to at least one environmental objective, does not cause significant harm to any of the other environmental objectives, and complies with the minimum social standards (minimum safeguards) stipulated in the Taxonomy Regulation (EU) 2020/852 in regard in particular to respecting human rights and complying with labor law.

As Deutsche Telekom belongs to the information and telecommunications industry, two of the economic activities currently listed in the EU taxonomy are relevant for the environmental objective "Climate change mitigation" (taxonomy-eligible) in respect of its core business.

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

As we provide charging infrastructure for electric vehicles through our subsidiary Comfort Charge, the following additional economic activity, which is pertinent to the environmental objective "Climate change mitigation," is taxonomy-eligible:

- Infrastructure enabling low-carbon road transport and public transport (6.15)

The EU taxonomy does not currently include criteria for the economic activity "Provision and operation of a network infrastructure for telecommunications." The EU taxonomy thus offers no way to illustrate the contribution to climate change mitigation in respect of our network infrastructure and our core business. We therefore lobby in a range of business and industry associations for the inclusion of suitable, relevant criteria in the EU taxonomy to describe our core activities.

On the other hand, the EU taxonomy does provide a list of cross-cutting activities outside of our core business that are relevant for our general corporate infrastructure, such as fleet and facilities management. The following cross-cutting activity for the

environmental objective “Climate change mitigation” is relevant for Deutsche Telekom (taxonomy-eligible):

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

No economic activities relevant to the environmental objective “Climate change adaptation” were identified in the 2022 financial year.

Those activities identified as taxonomy-eligible were checked individually for their taxonomy alignment. As we manage climate risks centrally at Group level, determining whether an activity causes no significant harm to the environmental objective “Climate change adaptation” took place at a higher level for all taxonomy-eligible activities (Exceptions USA, Hungary and Greece, where climate risk management is not fully conform with EU taxonomy requirements. Eligible revenues from these companies are reported as not EU taxonomy aligned)

We ensure compliance with minimum social safeguards using a Group-wide management system.

For calculating the sustainable revenue quota, revenues (without TM US) are assessed on their sustainability. To be classified as sustainable, a product or service needs to provide at least one significant sustainability benefit and to have no relevant negative sustainability aspects. 42% of DT revenues come from sustainable products and services (data excluding TM US).

C3.5b

(C3.5b) Quantify the percentage share of your spending/revenue that was associated with eligible and aligned activities under the sustainable finance taxonomy in the reporting year.

Economic activity

Data processing, hosting and related activities

Taxonomy under which information is being reported

EU Taxonomy for Sustainable Activities

Taxonomy Alignment

Taxonomy-eligible but not aligned

Financial metric(s)

Turnover

CAPEX

OPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)

1.124.000

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year

1

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)

171.000.000

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year

0,4

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)

2.000.000