

# Sustainability

Telia Denmark 2022



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We are transparent about our emissions throughout the entire value chain and our road to zero CO<sub>2</sub>e and zero waste in 2030. Reaching climate neutrality is a big undertaking and we acknowledge that our climate ambitions require dedication and persistence.



Furniture  
refurbished and  
used in new HQ



**430**  
tables

**480**  
chairs

**160**  
lockers



Avoiding  
**150**  
tonnes of CO<sub>2</sub>e

# Greening our network and energy

The demand for data is ever growing and the need for faster and more reliable mobile connectivity is essential. For staying connected to our loved ones, for work, for leisure. Telia Denmark embraces this trend and aims to build the best 5G network in Denmark. A network that provides superior reliability and performance and is more energy-efficient than ever before. From 2024 our 5G network will be powered by green energy sources through a Power Purchase Agreement.



We are massively modernizing our network and entering 2023 almost 80% of the population has access to the new 5G technology. By the end of 2023 that number will be 95%. The effort and investment has already shown its benefits. In a recent study by the international network benchmarking company 'umlaut' on network quality and performance our network came out on top in the four largest cities in Denmark. While the network upgrade eventually will result in a greener network transmitting more data with a reduced carbon footprint it comes with a price in the short run. The rollout emits CO<sub>2</sub>e in the construction phase as towers, antennas and equipment is upgraded.

This largely accounts for the 24,5% increase in our total emissions and the rise in carbon intensity of 20 percentage points compared to our 2021 baseline. As our network rollout continues through 2023 we expect this trend to continue.

## Renewable electricity

To further greenify our operations we have signed a Power Purchase Agreement (PPA), stipulating that 125 GWh of additional renewable electricity will be supplied to the Danish electricity grid per year by a new solar park. The park will supply renewable energy to Telia's and Telenor's joint TT network, supplying about 75% of the network's total

energy use from 2024 and onwards. This is a significant achievement. Not only in climate terms but also regarding the global energy insecurity resulting from the war in Ukraine.

## Ramping up on circularity

Greening our network and our energy consumption are critical steps towards achieving net-zero carbon emissions by 2030. But it will not be enough. We also continue to focus on operations circularity. In 2022 we launched 'Næsten Ny' – the sale of refurbished phones as the first telco in Denmark. This is implemented on top of our take-back program 'Telia Recycle' and thus completes a circular use and re-use loop for mobile phones.

We have also implemented take-back and re-use programs for our customers' other electronics devices. Beyond that we have refurbished office furniture for our new headquarters and resold used hardware from our network upgrade efforts. Together these efforts represent significant steps towards a more sustainable and circular business model.

This sustainability report will present you with more detail and data on the topics presented here and much more. I hope you will enjoy the read.

Petr Cermak  
CEO Telia Denmark

# Our carbon footprint

In Telia Denmark we have calculated our full CO<sub>2</sub>e emissions from our entire value chain for four years. In 2022, total emissions increased by 24,5% compared to the previous year, primarily due to the country-wide network modernization program. While this initiative contributes to a temporary increase in emissions, the long-term benefits will enable the transmission of data more efficiently.

In 2022, Telia Denmark's total CO<sub>2</sub>e emissions from scope 1-3 reached ~101.000 tons up from 81,055 tons the previous year. The emissions from our own operations (scope 1 and 2) only accounted for around 1% of the total emissions, whereas the rest came from our value chain (scope 3).

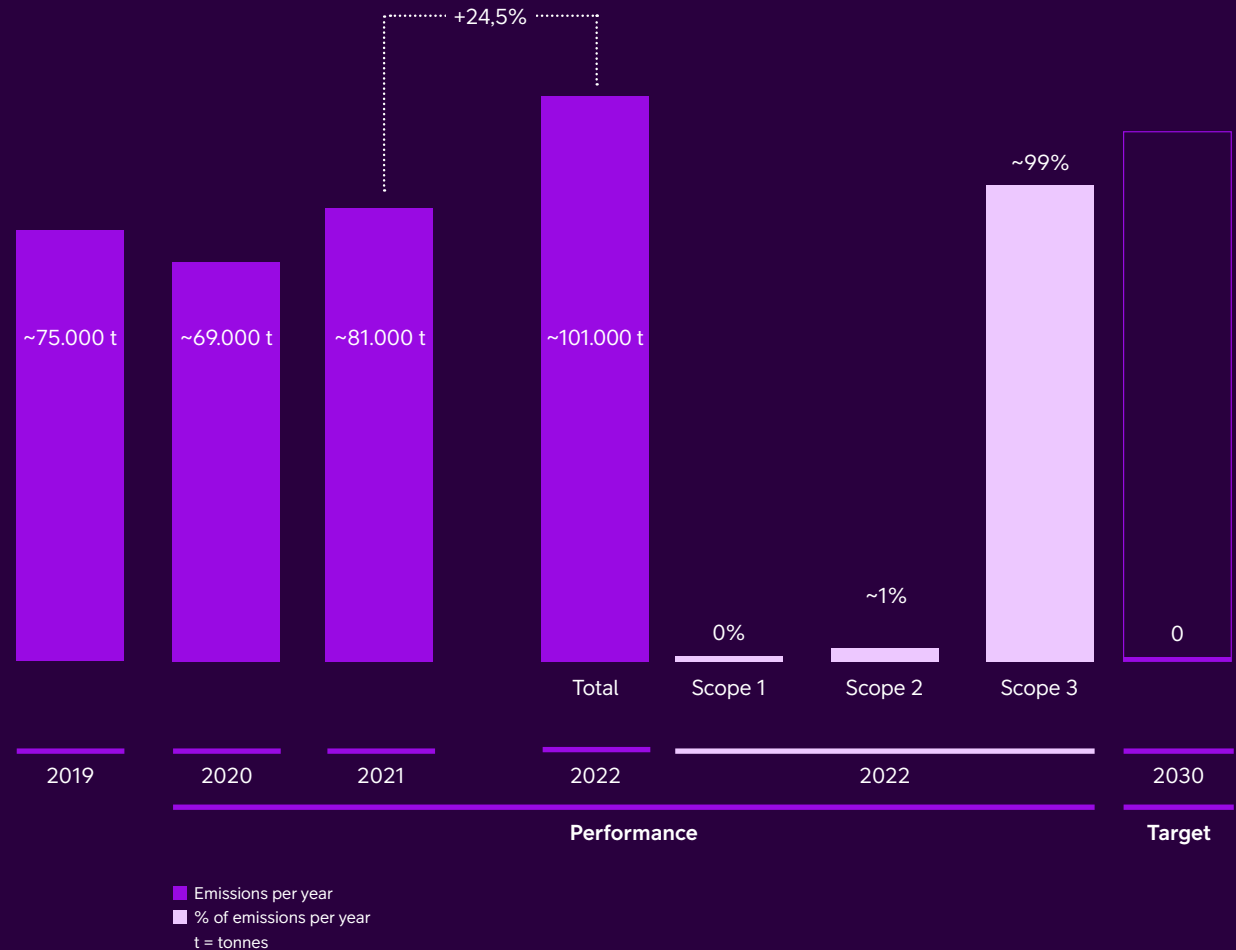
The increase in emissions from Scope 3 can largely be attributed to the country-wide network modernization program aimed at upgrading the existing network to 5G and improving 4G and decommissioning 3G. This account alone has resulted in an increase of almost 16.000 tons of emissions in 2022.

The benefits from this investment, including providing our customers with a state-of-the-art network and the ability to traffic more customer data with a reduced carbon footprint

relative to the case where we continued operating our current network. In comparison to 2021, Scope 1 declined 2,4% in emissions, primarily due to a substantial reduction in refrigerants, i.e., substances used for cooling of our datacentres.

On the other hand, our Scope 2 emissions rose by 3%, despite a reduction in the company's overall electricity consumption and district heating. This increase in emissions was mainly due to an increase in electricity consumption from the network and higher emission factors in the Danish electricity grid.

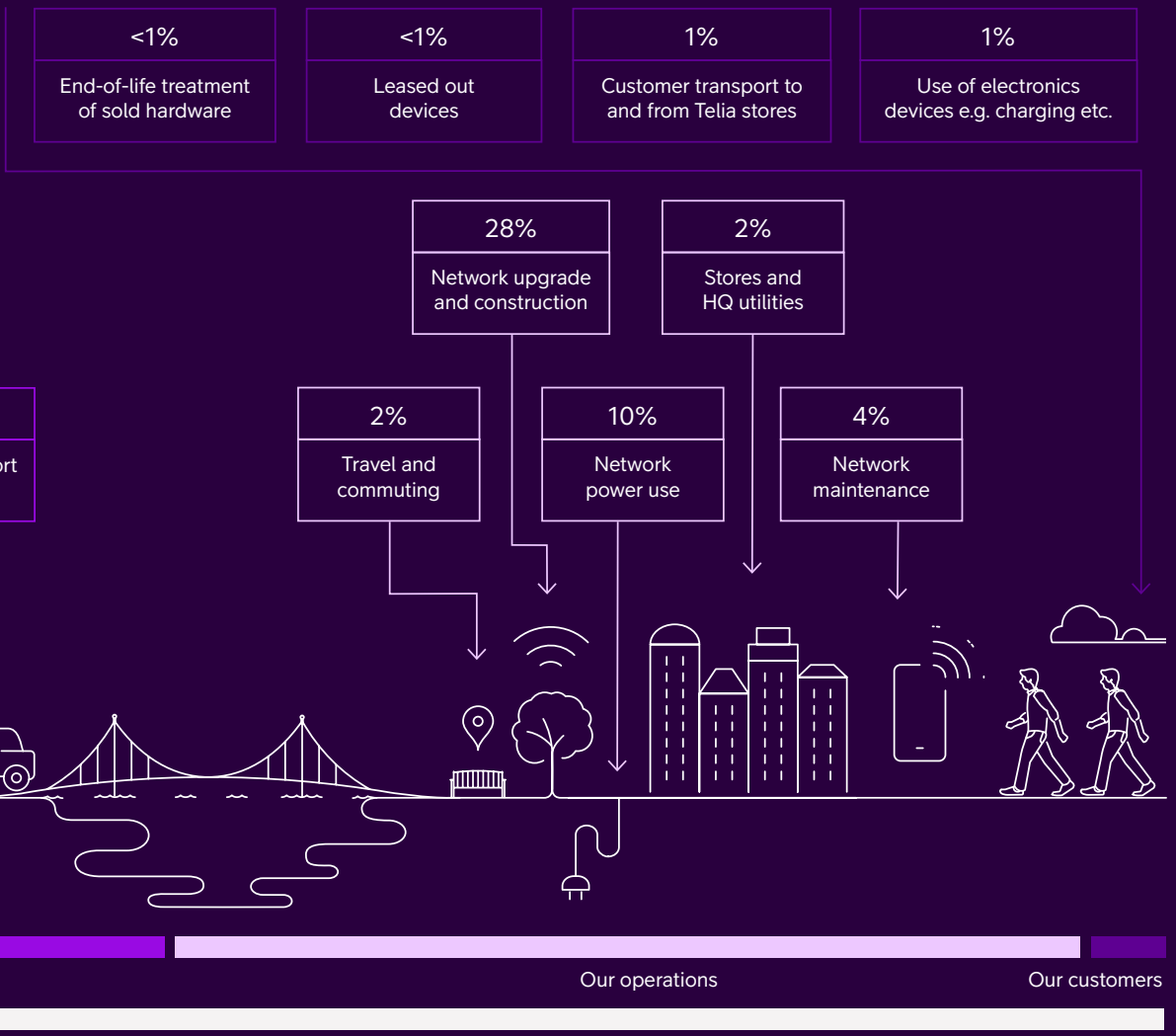
We foresee a significant reduction in our scope 2 emissions in the upcoming years with the implementation of our Power Purchase Agreement, which will secure renewable electricity for our network operations.



# Emissions overview

Our emissions can be divided into three major categories. Our suppliers covers all products and services that we purchase. Our own operations covers both the operations of our network, offices and shops. Our customers covers transport to our shops and the use of our products.

Notes: Percentages may not total 100 due to rounding. Our carbon emissions accounting follows the Greenhouse Gas Protocol. For our detailed emissions accounting please see our methodology description page 14. Due to a difference in approach used to divide emissions, it is not appropriate to compare this year's overview with the one from the previous year.



Total emissions baseline for Telia Denmark 2022 is ~101.000 tonnes

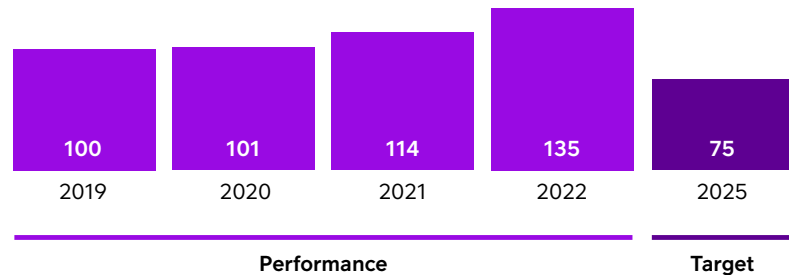
# Our targets to reach climate neutrality

In Telia, we have set targets of zero CO<sub>2</sub>e emissions and zero waste by 2030. To achieve these goals and accelerate our actions in 2020 we adopted the science-based targets (SBTs) aligned with a 1.5°C pathway. In addition, we have set an ambitious sub-target for 2025 to make sure we are on the right pathway.

While the energy efficiency improvements from the upgraded network will aid us in achieving our long-term goal of zero CO<sub>2</sub>e emissions by 2030, we still have a gap to bridge in order to meet our 2025 intensity target of a 25 percentage point reduction compared to 2019.

In 2022, carbon intensity rose by 21 percentage points compared to the previous year, primarily due to our network modernization program. The program is set to continue in 2023, indicating that our carbon intensity is likely to exceed our expected levels once again this year.

In the near future, our efforts to reduce emissions will be supported by our Power Purchase Agreement, circularity measures and supplier engagement program. Furthermore we are committed to identifying and implementing additional reduction measures to achieve our goals.



Notes: Telia Denmark defines greenhouse gas emissions intensity as tonnes CO<sub>2</sub>e emissions / mDKK Service Revenue. Emission intensity reduction targets are compared to 2019 baseline.

## Targets

### 2025

25% reduction in carbon intensity

>50% of supply chain emissions covered by SBT

50% reduction in our scope 1 and 2 emissions



### 2030

Zero CO<sub>2</sub> emission in our entire value chain

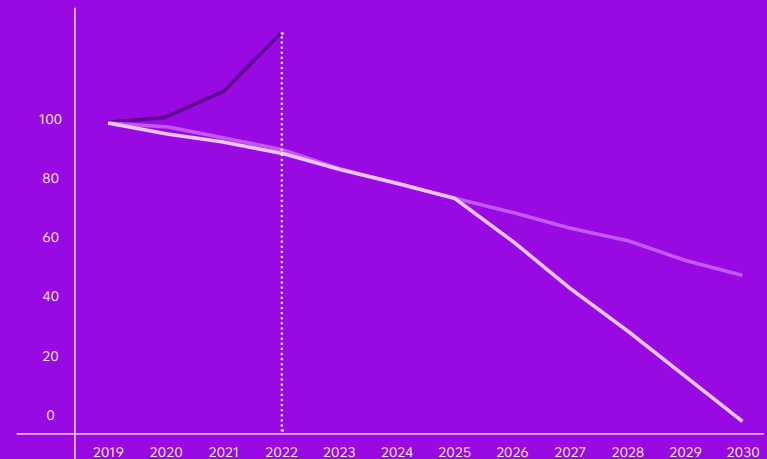
Zero waste in our own operations

## Performance

### Carbon neutral by 2030

Percent reduction in carbon intensity

- Telia realized
- Telia target
- IPCC -1,5 degree



# A greener network...

With 5G, we can deliver data traffic with five times lower energy consumption than 4G.

Our 5G network can adjust its capacity based on the traffic needs, benefiting both customers and the environment.

Traffic in the network fluctuates throughout the day, with high usage during daytime and after-work hours. By reducing capacity during low-traffic periods, we save resources and energy - thus reducing our carbon footprint.



Our 5G network has an intelligent wake-up function that prevents wasting electricity, by keeping extra capacity layers open.

It turns on sleeping capacity layers if the need arises, making it a smart solution for unexpected traffic outside of peak hours.

## 5x

5G is five times more efficient than 4G when it comes to transporting data

## PPA

Our PPA will supply 125 GWh of electricity through solar power. This covers 75% of our networks' total consumption

A Power Purchase Agreement (PPA) means that we buy green electricity from a new solar park that will be built as a result of our electricity agreement.

The Power Purchase Agreement stipulates that 125 GWh of additional renewable electricity will be supplied to the Danish electricity grid per year.



75 percent of Telia Denmark's and Telenor's joint TTN network's electricity consumption will be powered by solar cell produced electricity by the end of 2024.

The green energy ensured by the Power Purchase Agreement (PPA) will have a positive effect on our scope 2 emissions.

# ...through renewable energy

# Our way to climate neutrality

We have identified four priority areas containing several initiatives to accelerate our reduction efforts – covering our network, our products and services, our suppliers and our transport.

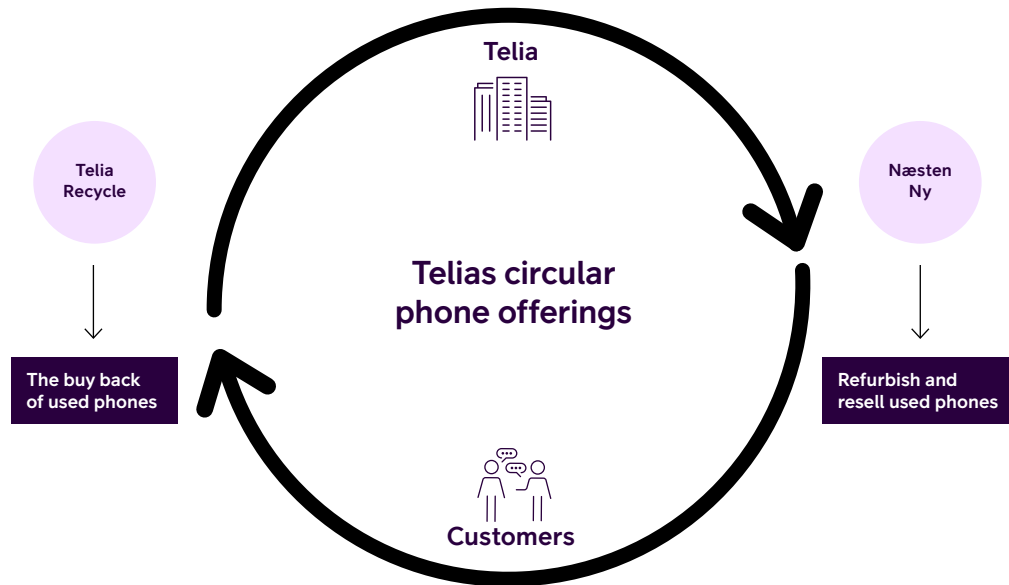
The identified emission reduction initiatives targeting our emission hotspots as well as supply chain emission hotspots. Every year, we take stock of our short-term progress and evaluate and update our road ahead to zero emissions in 2030.

|              | Greening our network   | Greening our products and services   | Greening our suppliers  | Greening our transport  |
|--------------|--|--|---|---|
| About        | Make our network more efficient – both by generating more renewable energy and by optimizing our datacenters.  | Develop recycling, leasing and re-use offerings of phones and other electronic hardware to our customers – to prolong lifetime of hardware and increase utilization.                                     | Collaborate even closer with our suppliers – ensure that they set zero CO2e emission targets by 2030.   | Make our employee commuting, business travel and transport of our products as climate-friendly as possible.                                       |
| Sub-targets  | Increase energy efficiency in our data centers through upgrades in hardware.   | 25% take-back of used phones in 2025.  | All our large suppliers – representing more than 50% of the emissions from our supply chain – have science-based targets (SBTi) by 2025.                    | 50% reduction in business travel by 2025.<br>100% electrified carpool by 2026.  |
| Initiatives  | Finalize Power-Purchase Agreement (PPA) to get solar cell park in operation.<br>Optimize cooling facilities in data centers.   | Roll out our refurbished phone offering “Næsten Ny” to our shops   | Involve all our suppliers through our Supplier Engagement Program.<br>Requirements stipulated in the Supplier Code of Conduct                               | Engage in dialogue with our parcel shipment suppliers to reach carbon neutrality in our distribution.<br>EV target integrated in Telia EV-policy. |
| Progress '22 | PPA signed covering approximately 75% of the network’s power consumption by 2024.<br>New HQ downsizing office space with ~50% enabling less energy use.<br>Our 5G network is currently available to 80% of the population. | Refurbished phone offering “Næsten Ny” launched for online sales.<br>Reached 10% take-back rate of used phones via “Telia Recycle”<br>Reached 11% refurbished share of CPE (customer premises equipment) | Supplier Engagement Program accelerated with suppliers covering 40% of Telia Denmark’s value chain emissions now committed to SBTi.<br>Up from 30% in 2020. | Transition to a green car fleet through electric vehicles has reached 39%.<br>Up from 27% in 2020.  |



# Refurbished device sales

During 2022 Telia launched 'Næsten Ny' providing its customers with the opportunity to buy refurbished phones. This marks an important step for circularity within Telia Denmark as the concept combined with Telia Recycle, the buy-back program launched in 2019, shows that circular phone offerings is achievable and business relevant.



# 90%

of all used phones on average can be repaired and resold for extended use. The rest can be disassembled to ensure that components and raw materials can be used in the production of new phones

# 30.000

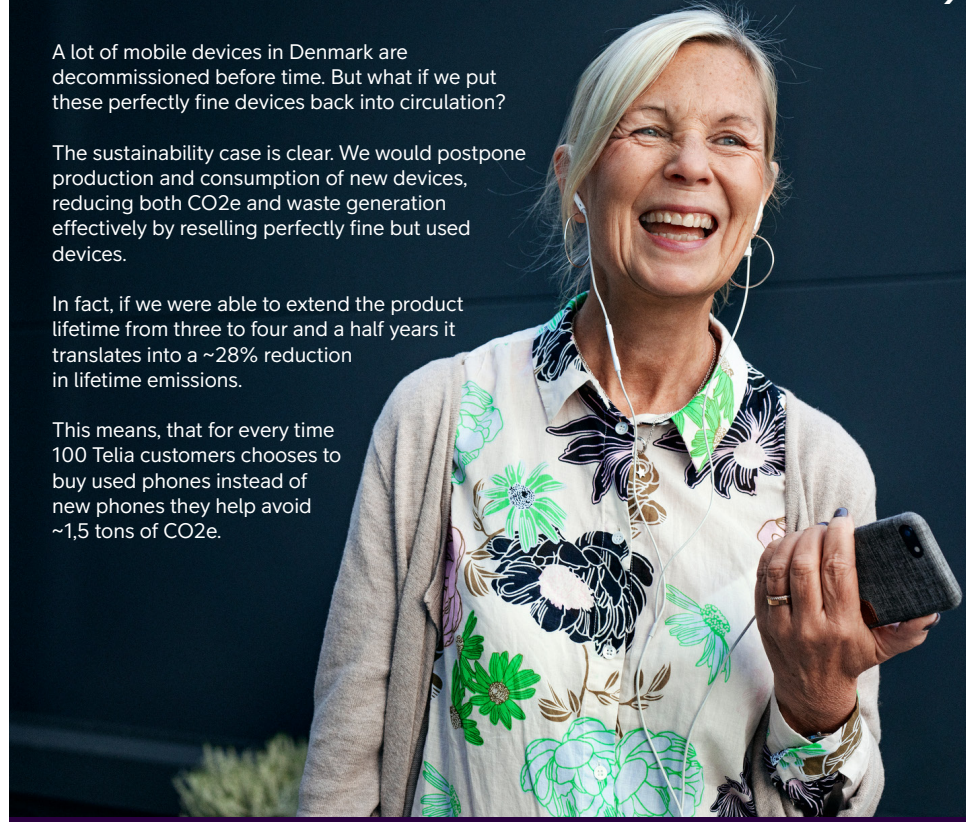
Since 2019, Telia Danmark has bought back more than 30.000 used phones from its customers to be repaired and reused

A lot of mobile devices in Denmark are decommissioned before time. But what if we put these perfectly fine devices back into circulation?



The sustainability case is clear. We would postpone production and consumption of new devices, reducing both CO2e and waste generation effectively by reselling perfectly fine but used devices.

In fact, if we were able to extend the product lifetime from three to four and a half years it translates into a ~28% reduction in lifetime emissions.

This means, that for every time 100 Telia customers chooses to buy used phones instead of new phones they help avoid ~1,5 tons of CO2e.



## Circular products - our way forward

| Circular offerings   | Progress 2022   | Action 2023  | Target 2025 |
|--|---|--|-------------|
|  <b>Næsten Ny</b>     | Launched refurbished device sales offerings online      | Roll out 'Næsten Ny' to all channels and segments  | 15%         |
|  <b>Telia Recycle</b> | Reached 10% take-back rate in 2022 (up from 8% in 2021) | Empower concept through marketing and partnerships | 25%         |

# Our waste generation

In 2022, Telia Denmark generated ~877 tons of waste, an increase of around ~41% compared to 2021. Although the waste from end-of-life of sold products decreased by 14%, the retirement of old equipment at our data centers and technical sites related to the network modernization program contributed to an overall increase in total waste.

In 2022, Telia Denmark generated ~877 tons of waste, equivalent to the amount of waste generated by ~1,060 average Danes in a year. 72% of this was reused or recycled.

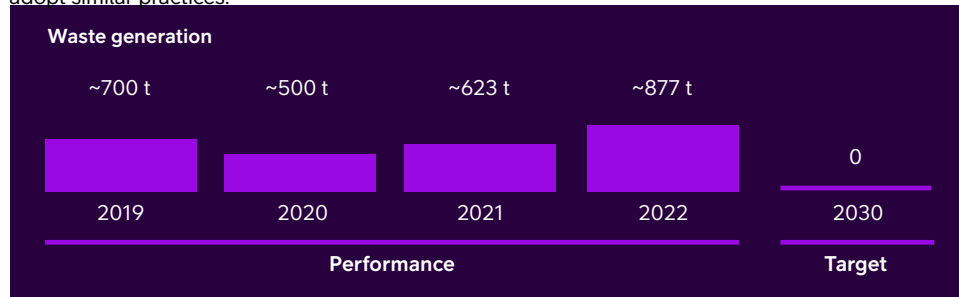
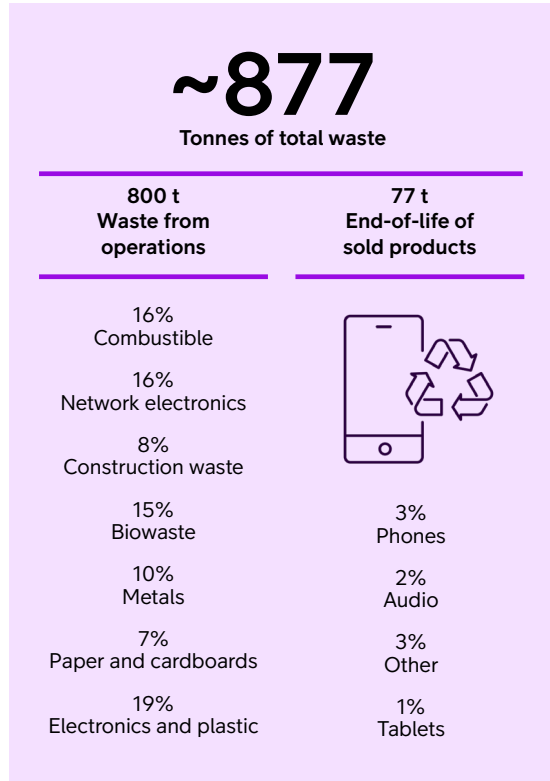
The waste originates from two primary sources. Operations of our shops, technical sites, headquarter etc. accounted for ~91% of total waste. Over half of this waste is recycled, while the rest is converted into energy.

The remaining ~9% of waste is generated from the hardware sold to customers, which becomes a waste stream when it reaches end-of-life. Compared to 2021 our total waste generated has increased by ~41%

This increase is mainly driven by our network modernization program that started in 2021 causing the retirement of old network equipment. Since 2021 more than 250 tons of scrapped network equipment has been collected at our technical sites. Furthermore, by

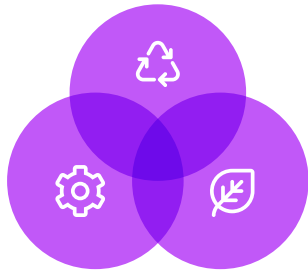
consolidating 6 data centres into 5 using similar equipment, we were able to decrease energy consumption, but this decision also caused an increase in waste. On the other hand, we experienced a decrease in end-of-life treatment of sold products of ~14% compared to 2021.

We place great importance to embedding circularity in our waste handling procedures. For instance, we facilitate the reuse of used network hardware by reselling it, and continually seek out new areas where we can adopt similar practices.



# Our way to zero waste

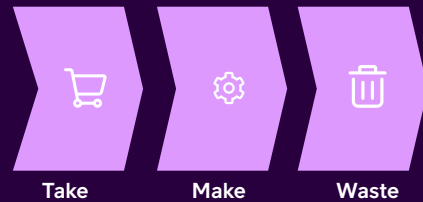
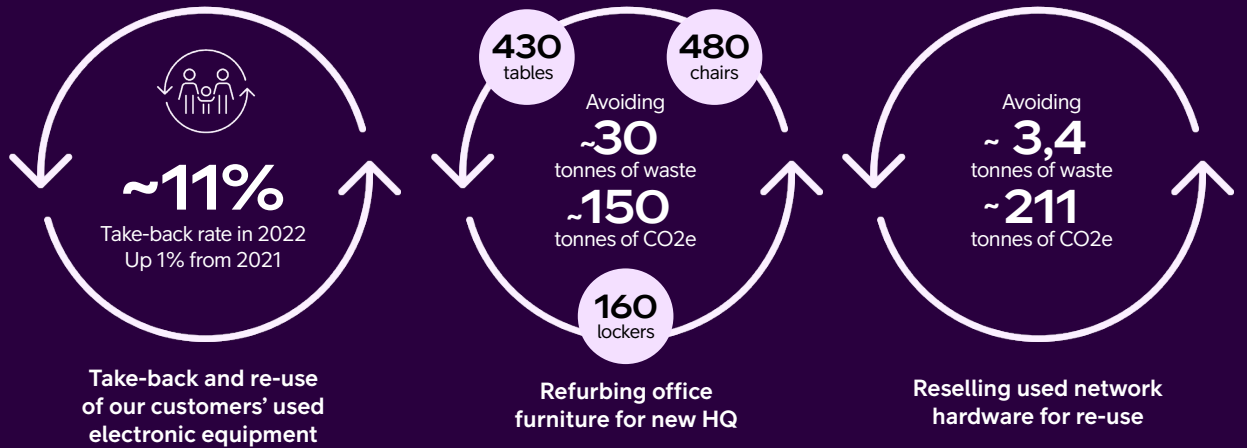
To reach our goal of zero waste by 2030, we need to address our two main waste streams: Our own waste from our shops, technical sites, headquarter, etc. and the hardware that we sell. This is reflected in our waste strategy that is build on a circularity mindset.



Embedding circularity in own operations by applying a rethink, reduce, reuse, re-purpose and recycle mindset. An example is to recycle our plastic waste and turn it into equipment in our shops or facilities in our offices.

Offering circular products and services to our customers. Offering refurbished devices and leasing services to our customers, is one way forward to embed circularity and drive a sustainable business.

Enabling a circular ecosystem to secure future market shares. As part of the ICT sector, we play a key role in the much needed shift to a circular economy - stepping up actions to take responsibility for our own waste flows while enabling other sectors to do the same through digital solutions.



Linear economy



Circular economy



# Telia Company overview of 2022 achievements

Here we provide an overview of our main achievements during the year and how our impact areas are contributing to the UN Sustainable Development Goals (SDGs). In addition, Stakeholders can track our performance via external Sustainability ratings.

## 2022 External rating results

Sustainability ratings provide information about the overall performance and maturity of our work to our stakeholders and in turn help us identify opportunities for improvements. Below are some of the results for the year:

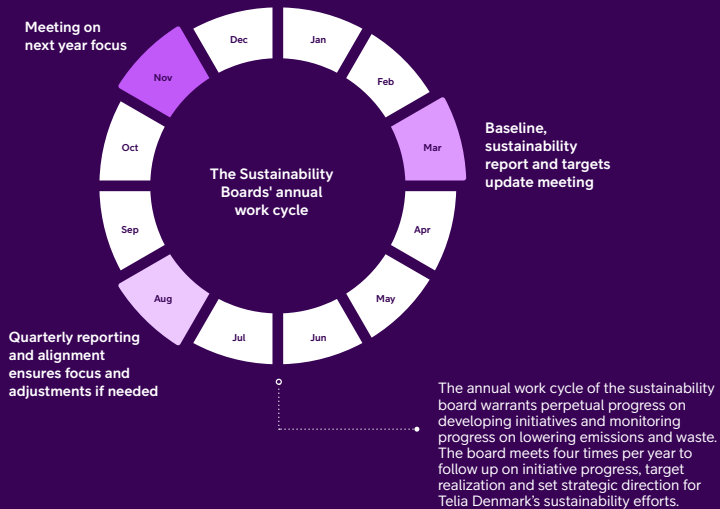
- Platinum medal in **EcoVadis**, placing Telia among the top 1%
- Scored A- in **CDP Climate Change**
- Received AAA by **MSCI's ESG rating**
- Ranked B- by **ISS ESG rating**
- Included in the **FTSE4Good Index**



| Strategic pillar       | Impact area                                    | SDGs              |                 | 2022 Achievements  |
|------------------------|--|-------------------|-----------------|--|
|                        |  | Direct impact     | Indirect impact |  |
| Inspiring customers    | Climate and circularity                        | 7                 | 9, 11, 12, 13   | <ul style="list-style-type: none"> <li>• Achieved 85% CO<sub>2</sub>e emissions reductions in own operations compared to 2018</li> <li>• Suppliers representing 35% of supply chain emissions have set science-based targets</li> <li>• 66% of waste in own and network operations reused or recycled</li> </ul> |
| Connecting everyone    | Digital inclusion                              | 5, 9              | 10              | <ul style="list-style-type: none"> <li>• Reached 1,015,914 individuals with digital skills building initiatives targeting seniors, children, SMEs and others</li> </ul>  |
| Transform to digital   | Privacy and security                           | 16                |                 | <ul style="list-style-type: none"> <li>• Achieved top tier positions (either first or second) on privacy in 4 out of 6 markets, according to Telia consumer survey</li> </ul>  |
| Delivering sustainably | Human rights                                   | 3-5, 8, 10-12, 16 |                 | <ul style="list-style-type: none"> <li>• Reviewed and updated Telia's human rights risk mapping and salience analysis</li> </ul>   |
|                        | Children's rights                              |                   | 4, 16           | <ul style="list-style-type: none"> <li>• Conducted a Children's Rights Impact Assessment based on UNICEF's dedicated model</li> </ul>  |
|                        | Freedom of expression and surveillance privacy | 16                |                 | <ul style="list-style-type: none"> <li>• Took measures to respect users' rights in relation to high-risk requests (~15) from governments or local authorities</li> </ul>   |
|                        | Employee diversity, health and well-being      |                   | 5, 8, 10        | <ul style="list-style-type: none"> <li>• 41% females in the Extended Leadership Team (~130 top leaders)</li> <li>• 78% of employees state that they are able to successfully balance work and personal life</li> </ul>   |
|                        | Responsible sourcing                           | 8, 12             | 16              | <ul style="list-style-type: none"> <li>• Deep dived into labor rights risks related to field service in our markets</li> </ul>   |
|                        | Anti-bribery and corruption                    | 16                |                 | <ul style="list-style-type: none"> <li>• Completed anti-bribery and corruption risk assessments and program maturity assessments in all markets</li> </ul>   |

# Telias sustainability governance

Our Country Management Team (CMT) constitutes the Sustainability Board in Telia Denmark. The board tracks our progress and ensures that our sustainability efforts are anchored at the core of our corporate strategy.



## Ensuring commitment and progress of our sustainability efforts is managed on multiple levels in our organization

### Sustainability Board Country Management Team

Overall responsible for the implementation of the sustainability targets in Telia Denmark. Provides strategic guidance on sustainability, approves targets and monitors that they are achieved by following up on our reduction initiatives. Approves the annual sustainability report.

### Communications and Sustainability Department

Owns the sustainability strategy and tracks our progress. Follows up on targets and initiatives across business units, and provides support to the business units regarding business case calculations etc. Responsible for yearly updates of our baseline calculations.

### Business Units

Owns the implementation of the individual reduction initiatives by defining and measuring performance indicators and managing and reporting on performance.

# Methodology

## Identifying our emissions in accordance with the Greenhouse Gas (GHG Protocol).

Telia Denmark's CO<sub>2</sub>e baseline is based on The Greenhouse Gas (GHG) Protocol - the world's most widely used greenhouse gas accounting standard. Specifically, our baseline follows "The GHG Protocol Corporate Accounting and Reporting Standard" and "The Corporate Value Chain (Scope 3) Accounting and Reporting Standard".

At Telia Denmark, we use the equity share approach as organizational boundary setting. This means that we account for GHG emissions from our operations according to our share of equity in our subsidiaries. The used equity share can be seen in table 1 (see Appendix). Aligned with the GHG-protocol, some scope 3 categories have not been included in the baseline calculations as they have been deemed not relevant. This is described in table 2 (see Appendix).

### Calculation Method

Emissions have been calculated by combining a supplier specific method, an average data method and a spend-based method in accordance with "The Corporate Value Chain (Scope 3) Accounting and Reporting Standard".

Data has been extracted from Telia Denmark's ERP-systems and collected from Telia Denmark's suppliers when relevant. Emissions from employee commuting is based on survey data. Telia Denmark's CO<sub>2</sub>e baseline split on scope 1-3 is depicted in table 3 (see Appendix)

whereas CO<sub>2</sub>e intensity is reported in table 4 (see Appendix).

### Emissions factors

Emission factors have been collected via supplier specific environmental product declarations (EPDs), research-based Life-Cycle-Analysis (LCAs), IEA electricity emission factors and from the UK Department for Environment, Food & Rural Affairs (DEFRA). These factors have been supplemented with Telia Company's own emission factor database based on CO<sub>2</sub>e baseline calculations in other Telia affiliates.

As part of our efforts to improve our understanding of our emissions we have refined our calculation methods from 2021 to 2022. Specifically, we have revised our emission factors using a hierarchical approach based on three different calculation methodologies: LCA data, supplier CDP climate change questionnaire and annual reports data, and procurement spend data.

This has improved the accuracy of our emission factors and our baseline. In order to ensure true and fair comparison of our emission progress we have updated our 2019, 2020 and 2021 emissions using the revised emission factors. This is in line with the guidance in "The GHG Protocol Corporate Accounting and Reporting Standard". The adjusted emissions are found in tables 3 and 4 (see Appendix).



### Scope 1 Direct emissions

Direct emissions from sources owned or controlled by Telia Denmark (e.g. diesel consumption from our company cars)

### Scope 2 Indirect emissions

Indirect emissions from the generation of purchased energy (e.g. electricity and district heating to operate our network and facilities)

### Scope 3 Indirect emissions

Indirect emissions in Telia Denmark's value chain both up- and downstream (e.g. production and use of electronic equipment sold to customers).

Table 1 - Equity share of subsidiaries

| Company                     | Equity share |
|-----------------------------|--------------|
| Telia Danmark               | 100%         |
| Telia Company Danmark A/S   | 100%         |
| Telia Carrier Denmark A/S   | 100%         |
| Telia Mobile Holding AB     | 100%         |
| Telia Mobile Holding AB     | 100%         |
| Telia Nättjänster Norden AB | 100%         |
| MIT TELE I/S                | 100%         |
| TT-Netværket P/S            | 50%          |

Table 2 - Categories not included in the scope

|                              |   |
|------------------------------|---|
| 8. Upstream leased assets    | Telia Danmark only leases cars, but these are with full benefit (Telia pays the fuel) and thus, all emissions from company cars are reported under scope 1. |
| 10. Processing of sold units | Not relevant as Telia Danmark does not sell any intermediary goods and thus have no processing of sold products.  |
| 14. Franchises               | Not relevant as Telia Danmark has no franchises.  |
| 15. Investments              | Not relevant. Category is mainly for financial sector.  |

Table 3 - Telia Denmark's CO2e baseline scopes

| Scope 1 & 2                                   | 2019 t CO2e   | 2020 t CO2e   | 2021 t CO2e   | 2022 t CO2e    |
|---|---------------|---------------|---------------|----------------|
| Total scope 1 emissions                       | 529           | 548           | 368           | 359            |
| Total scope 2 emissions (location based)      | 9.097         | 6.824         | 7.623         | 7.849          |
| Total scope 2 emissions (market based)        | n/a           | n/a           | 0             | 0              |
| Scope 3 - categories                          | 2019 t CO2e   | 2020 t CO2e   | 2021 t CO2e   | 2022 CO2e      |
| 1. Purchased goods and services               | 48.454        | 44.880        | 48.817        | 52.496         |
| 2. Capital goods                              | 7.823         | 8.409         | 15.415        | 31.502         |
| 3. Fuel- and energy-related activities        | 3.064         | 2.815         | 4.323         | 4.458          |
| 4. Upstream transportation and distribution   | 1.167         | 1.194         | 1.257         | 1.275          |
| 5. Waste generated in operations              | 14            | 9             | 11            | 17             |
| 6. Business travel                            | 630           | 169           | 89            | 414            |
| 7. Employee commuting                         | 1.281         | 1.034         | 912           | 816            |
| 8. Upstream leased assets                     | not included  | not included  | not included  | not included   |
| 9. Downstream transportation and distribution | 1.017         | 766           | 559           | 536            |
| 10. Processing of sold units                  | not included  | not included  | not included  | not included   |
| 11. Use of sold products                      | 2.360         | 2.239         | 1.509         | 1.053          |
| 12. End-of-life treatment of sold products    | 2             | 2             | 2             | 2              |
| 13. Downstream Leased Assets                  | -             | 169           | 171           | 172            |
| 14. Franchises                                | not included  | not included  | not included  | not included   |
| 15. Investments                               | not included  | not included  | not included  | not included   |
| <b>Total emissions</b>                        | <b>75.438</b> | <b>69.058</b> | <b>81.055</b> | <b>101.000</b> |

Table 4: Telia Denmark's CO2e intensities

|  | 2019 | 2020  | 2021 | 2022 |
|--|------|-------|------|------|
| Scope 1 & 2 intensity (ton CO2e / mDKK Service Revenue)    | 3,20 | 2,61  | 2,86 | 2,88 |
| Scope 1, 2 & 3 intensity (ton CO2e / mDKK Service Revenue) | 25,1 | 24,44 | 29,1 | 35,4 |

\*Categori has been climate compensated in 2020-2021, but not reported before 2021. To be able to track absolute emissions reductions, scope 2 market-based emissions are now reported excluding carbon offsetting.