



**SUSTAINABILITY OF THE  
TELECOMMUNICATION  
COMPANIES WORLDWIDE**

CIVITTA

#tomas4itu

*COP26 has been a wake-up call for the world. It has also made it clear that we cannot pretend that we can just delegate the problem of the climate crisis upwards – to the political leaders alone. If we are to succeed, we all need to take action – decisively and immediately.*

*What this study is making clear, is that while we all in the telecom industry recognize that action needs to be taken, there is still some way to go in setting clear, measurable, science-based targets, committing to concrete actions, and measuring the progress. There are, however, a good number of great examples in the industry on how to do that. Hence it is crucial that we learn from each other in addressing this challenge.*

*Let's work together to raise the ambition on what we can do to contribute to averting the climate disaster and achieving a sustainable world.*



## **TOMAS LAMANAUSKAS**

Candidate for Deputy Secretary General  
International Telecommunication Union

## WHY?

The principal aim of this work is to understand the sustainability status of the telecommunication companies worldwide.

## WHO?

This report is the result of a joint project between **TOMAS LAMANAUSKAS** and **CIVITTA**.

## WHEN?

This project was executed in the time period of 25.October – 09. November 2021.

## HOW?

This report's methodology and sources have been provided at the end of the presentation, in the ANNEX.

# \ THIS REPORT ANALYSES THE SUSTAINABILITY PROGRESS OF TELECOMMUNICATION COMPANIES BY LOOKING AT THE FOUR TOPICS

## SUSTAINABILITY COMMITMENT



- Sustainability reporting
- Science Based Targets (SBTs)
- Carbon neutrality

## ENERGY



- Renewable energy
- Energy efficiency
- Supply chain (scope 3) emissions
- Offsetting

## WASTE, WATER



- Waste reduction measures
- Buy-back programmes
- Water efficiency

## SOCIAL SUSTAINABILITY



- Company initiatives

# \ BRIEF SUMMARY OF THE FINDINGS AND RECOMMENDATIONS FOR THE FUTURE



## SUMMARY

- Sustainability has a strong position in the agenda of the telecommunication companies: 88% of the companies report their sustainability progress and more than a third have set Science Based Targets.
- European companies are leading the way but the rest are starting to catch up.
- In Europe and Americas, companies' carbon neutrality targets for scope 1, 2 are set mostly for before 2030 while for the whole supply chain the goals are mostly for after 2030.
- Carbon neutrality targets for other regions are set mostly for 2050.
- The majority of the companies are addressing energy efficiency, renewable energy and waste reduction.

## WHAT IS NEEDED

### **More efforts should be directed towards:**

- Science Based Target setting, especially outside Europe and Americas.
- Providing measurable information about progress and goals, instead of remaining descriptive.
- Having more explicit targets in such areas as energy efficiency, use of renewable energy
- Measuring and reducing emissions across the whole of the value chain.
- Continue to raising industry ambition in contributing to achieving the below 1.5°C world.

# AGENDA

1. Sustainability commitment
2. Sustainability progress and goals
  1. Emission reduction
  2. Resource efficiency
  3. Social sustainability
3. Sustainability champions



# **SUSTAINABILITY COMMITMENT**

## \ WHAT IS THE COMPANIES' OVERALL SUSTAINABILITY AMBITION?

Before concentrating on more specific areas of environmental sustainability among the telecommunication companies, the overall sustainability ambition of the analysed companies can be summarised by looking at three aspects:



How many companies report their sustainability progress?



How many companies have established Science Based Targets?



What is the current situation in terms of net zero/carbon neutrality goals among the telecommunication companies?



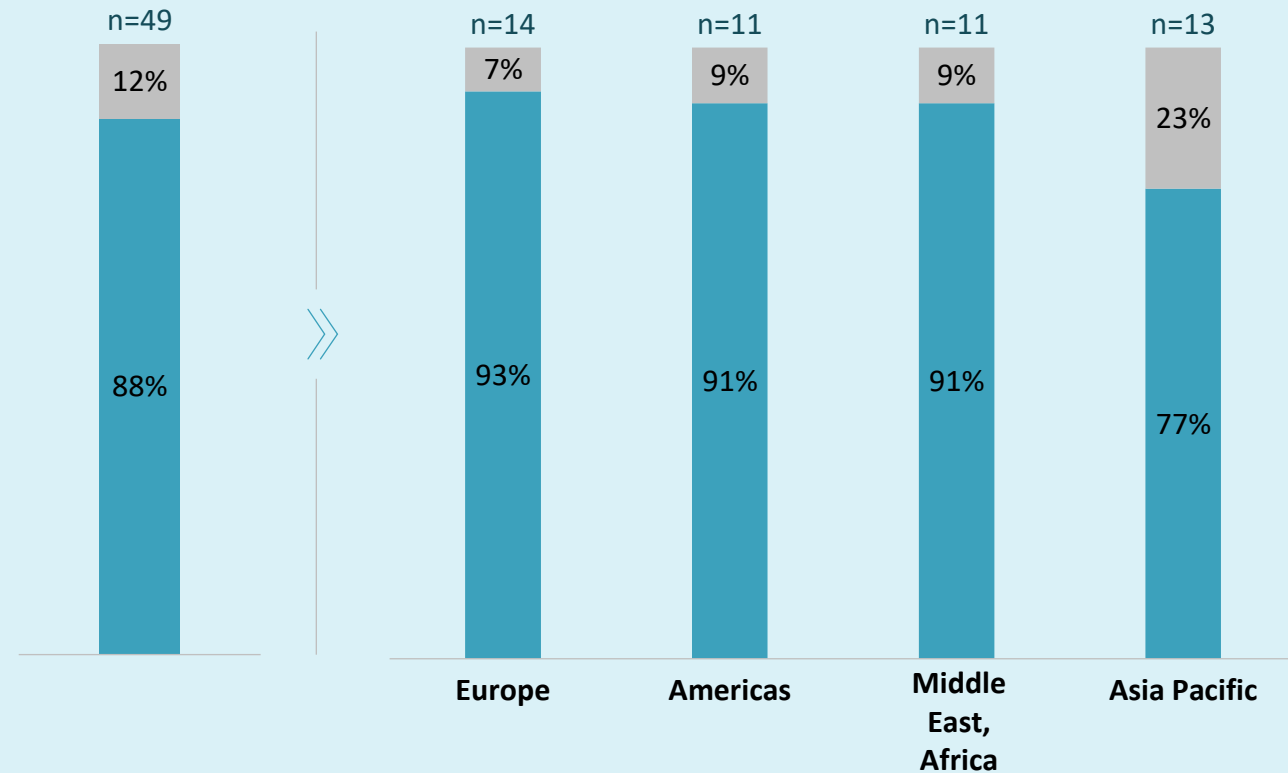
# **SUSTAINABILITY REPORTING**

# \ 88% OF THE ANALYSED COMPANIES REPORT THEIR SUSTAINABILITY INFORMATION

- Reporting company's sustainability performance and impacts is key for communicating its sustainability ambition and progress to the clients, investors and wider public.
- The accompanying graph illustrates whether companies report their sustainability advancements – be it in a separate sustainability report or as part of their annual report.
- In Europe, Americas, Middle East and Africa, only less than 10% of the companies does not report their sustainability information

SUSTAINABILITY COVERAGE IN COMPANIES' REPORTS, n=49

... BY REGIONS



■ Sustainability is not being reported ■ Sustainability is being reported

# \ MOST POPULAR REPORTING FRAMEWORKS ARE GLOBAL REPORTING INITIATIVE (GRI), CARBON DISCLOSURE PROJECT (CDP) AND SUSTAINABILITY ACCOUNTING STANDARDS BOARD (SASB)

While not mandatory, companies are more and more often choosing to report their sustainability advancements according to a standardised and recognised frameworks.



One example is the **Global Reporting Initiative (GRI)** which provides a comprehensive framework for sustainability reporting.

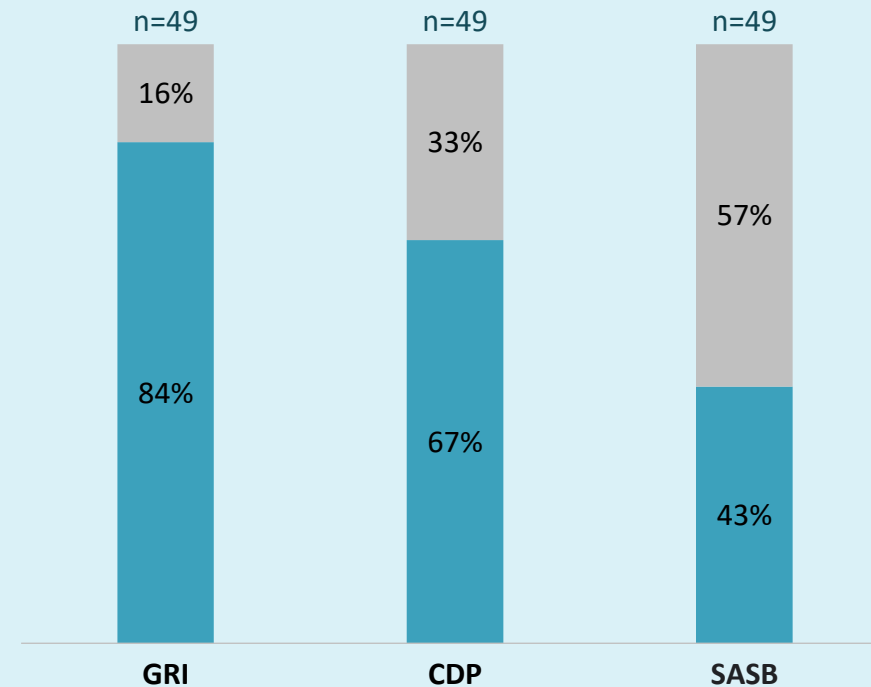


**Carbon Disclosure Project (CDP)** is a standard for environmental reporting, also scoring the companies based on their disclosed information.



**Sustainability Accounting Standards Board (SASB)** guides the disclosure of financially material sustainability information by companies to their investors.

AFFILIATION OF COMPANIES TO REPORTING FRAMEWORKS, n=49



Have not joined the framework Have joined the framework

# SCIENCE BASED TARGETS

## \ SCIENCE BASED TARGETS INITIATIVE DEFINES AND PROMOTES BEST PRACTICES IN EMISSIONS REDUCTIONS AND NET-ZERO TARGETS IN LINE WITH CLIMATE SCIENCE

On top of following reporting frameworks, telecommunication companies are also joining Science Based Targets initiative (SBTi), giving the sustainability ambition quantitative goals that support the Paris Agreement.

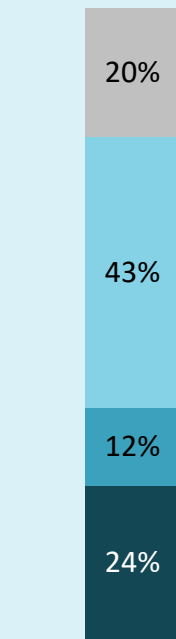
### SCIENCE BASED TARGETS (SBTs):

- Show companies how much and how quickly they need to reduce their greenhouse gas (GHG) emissions to prevent the worst effects of climate change.
- The targets can involve involves emissions from three scopes:
  - **Scope 1 emissions** are direct emissions from company-owned and controlled resources.
  - **Scope 2 emissions** are indirect emissions from the generation of purchased energy, from a utility provider.
  - **Scope 3 emissions** are all indirect emissions that occur in the value chain of the reporting company, including both upstream and downstream emissions.

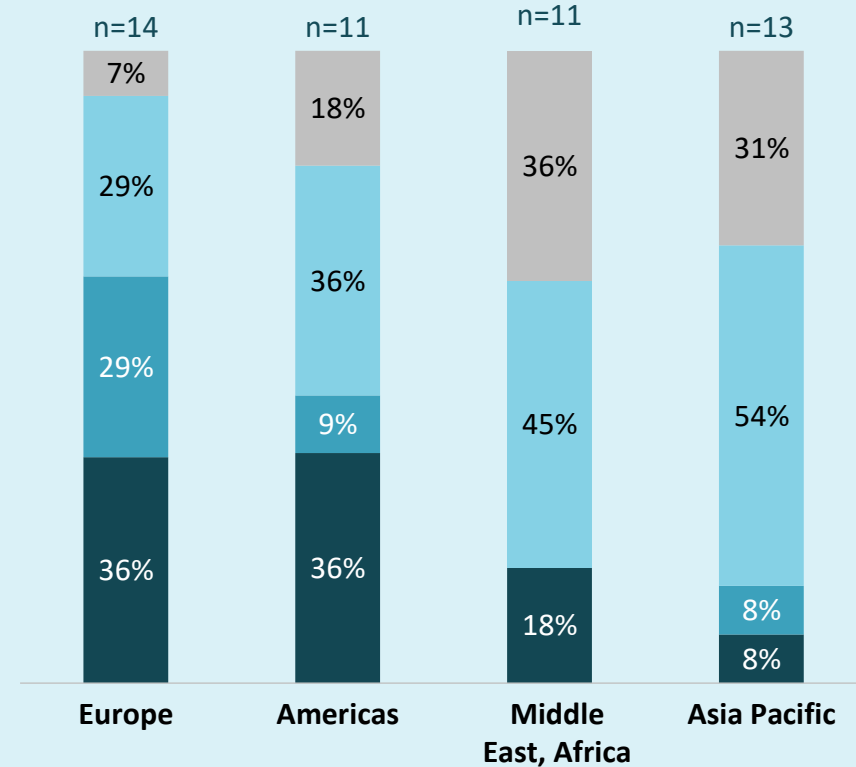
# \ GLOBALLY, 36% OF THE COMPANIES HAVE SET SCIENCE BASED TARGETS

- Globally, 80% of companies have set emissions reduction targets.
- SBTs are most popular among the companies in Europe, while in the Middle East, Africa and Asia Pacific, telecommunication companies prefer to set their own targets.

EMISSIONS REDUCTION TARGETS SETTING BY COMPANIES, n=49



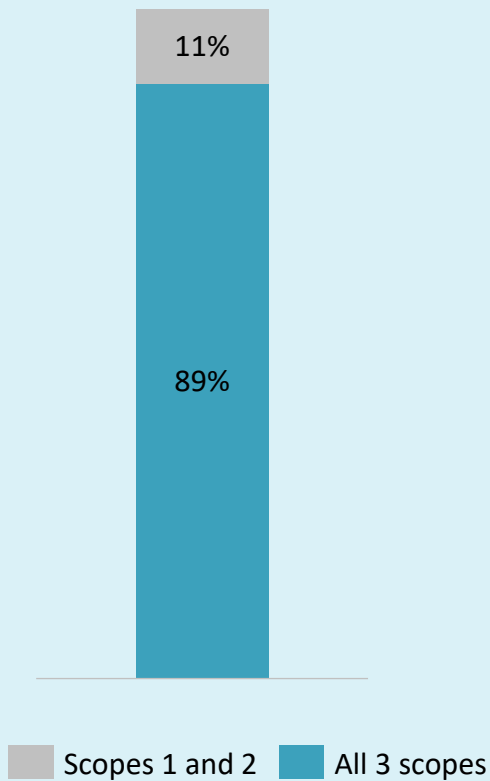
... BY REGIONS



Have not set any emissions reduction targets
  Have set only SBTs  
 Have set emissions reduction targets, but not SBTs
  Have set SBTs and other emissions reduction targets

# ALMOST ALL TELECOMMUNICATION COMPANIES WHICH HAVE SET SBTs, HAVE DONE IT FOR ALL 3 SCOPES

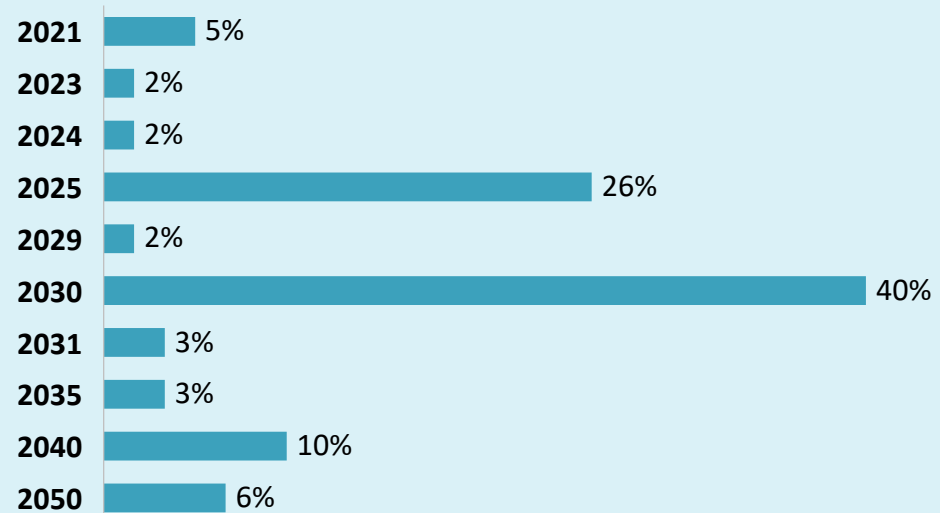
SCOPES INCLUDED IN THE SCIENCE BASED TARGETS, n=18



WARMING LIMIT FOR SBTs

With one exemption, all analysed companies' SBTs are consistent with the reductions required to limit global warming at **1.5°C**

YEAR SET FOR SBTs' ACHIEVEMENT, n=62\*

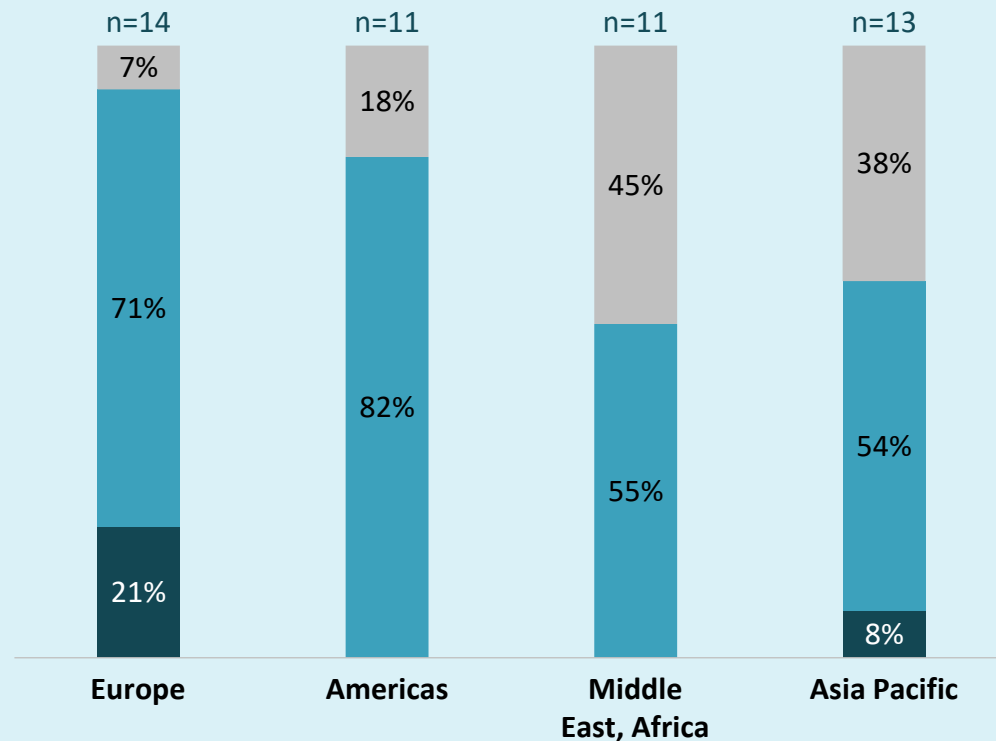


# CARBON NEUTRALITY



# A MAJORITY OF THE COMPANIES IN EUROPE AND AMERICAS HAVE SET A NET ZERO/ CARBON NEUTRALITY GOAL

THE PRESENCE OF SET CLIMATE NEUTRALITY/NET ZERO GOALS, n=49



- Four companies have reached carbon neutrality within their operations (scope 1 & 2)
- Middle East and Africa are slightly behind in terms of their net zero/carbon neutrality goals

- Have not set climate neutrality/net zero goal
- Have set climate neutrality/net zero goal
- Have reached climate neutrality within its operations

# NET ZERO/CARBON NEUTRALITY GOALS AMONG COMPANIES

EUROPE, AMERICAS

Own operations

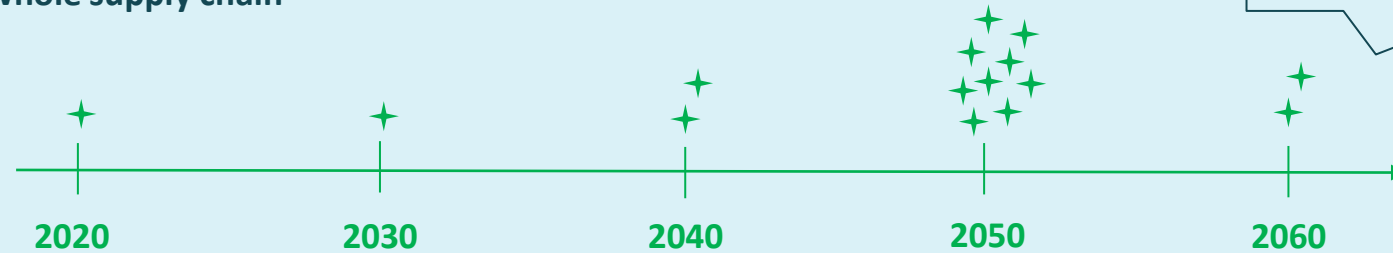


Whole supply chain



MIDDLE EAST, AFRICA, ASIA PACIFIC

Own operations/whole supply chain



The scope of the set goals in those regions are sometimes not specified so the targets for company's own operations have been combined with targets for the whole supply chain.



# **SUSTAINABILITY AMBITION AND ADVANCEMENTS**

# 2.1

## EMISSION REDUCTION

# \ COMPANIES' EMISSIONS ARE THE MOST ADDRESSED ASPECT OF ENVIRONMENTAL SUSTAINABILITY

**Telecommunications companies are striving to reduce their emissions by:**



increasing energy efficiency



increasing the share of renewable energy in their energy consumption



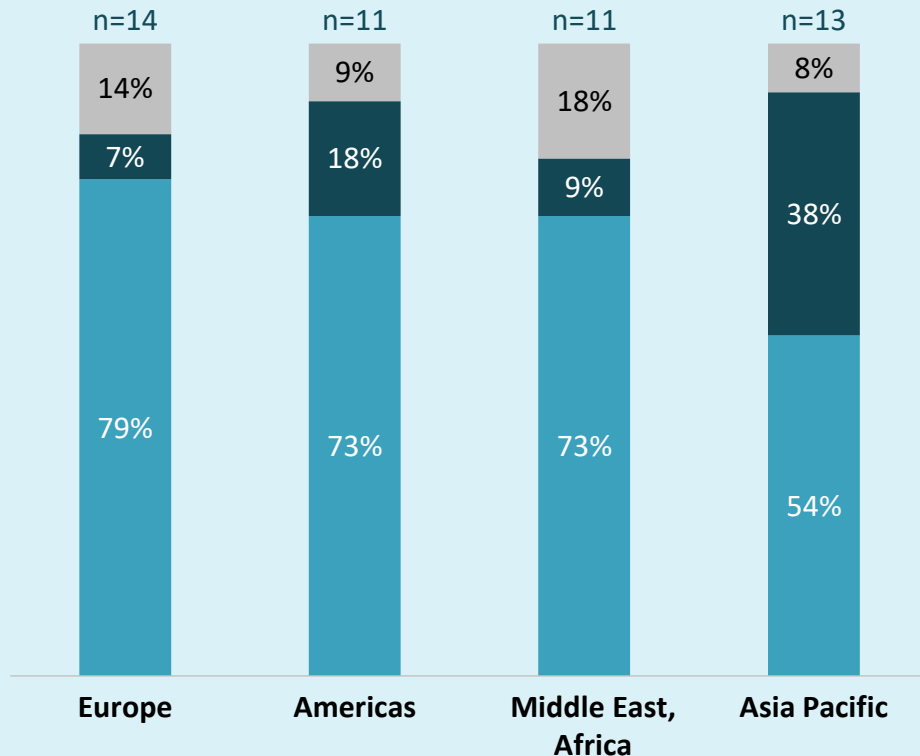
influencing their suppliers to reduce emissions (scope 3 emissions).

Companies also often offset part of their emissions.

# ENERGY EFFICIENCY

# \ MOST OF THE COMPANIES TAKE THEIR ENERGY EFFICIENCY INTO CONSIDERATION

COMPANIES' ACTIVITIES/TARGETS RELATED TO ENERGY EFFICIENCY, n=49

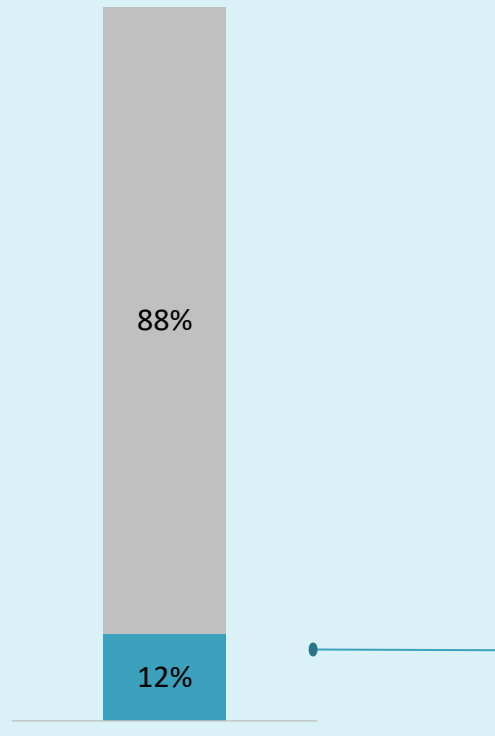


- Energy efficiency is considered by most of the companies in all of the regions.
- A few companies in every region remain descriptive about their energy efficiency efforts but majority also provide quantitative information about their activities and targets.

Do not have any related activities/targets  
Have related activities/targets  
Provide measurable information about their activities/targets

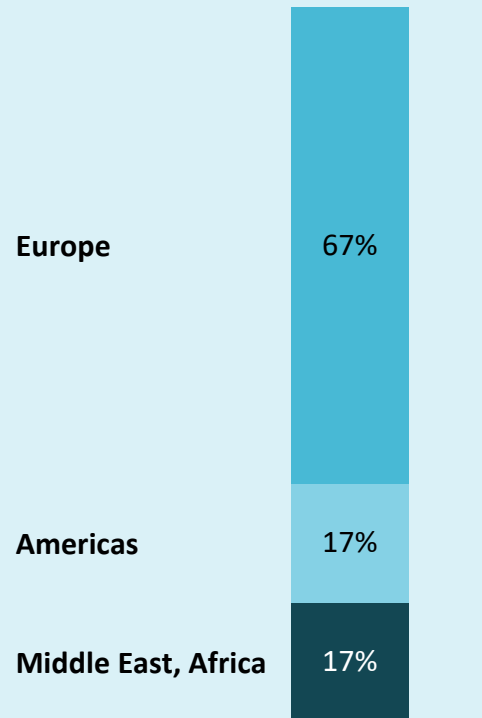
# \ HOWERER, ONLY A FEW TELECOMMUNICATIONS COMPANIES SET CLEAR ENERGY EFFICIENCY GOALS FOR THE FUTURE

SETTING OF GOALS RELATED TO ENERGY EFFICIENCY BY COMPANIES, n=49



Have not set goals Have set goals

... BY REGIONS, n=6



## EXAMPLES OF GOALS:

### By 2022:

Reduce energy consumption per subscription equivalent by 5% (baseline 2018)

Telia

### By 2030:

Increase energy efficiency by 80% compared with 2019

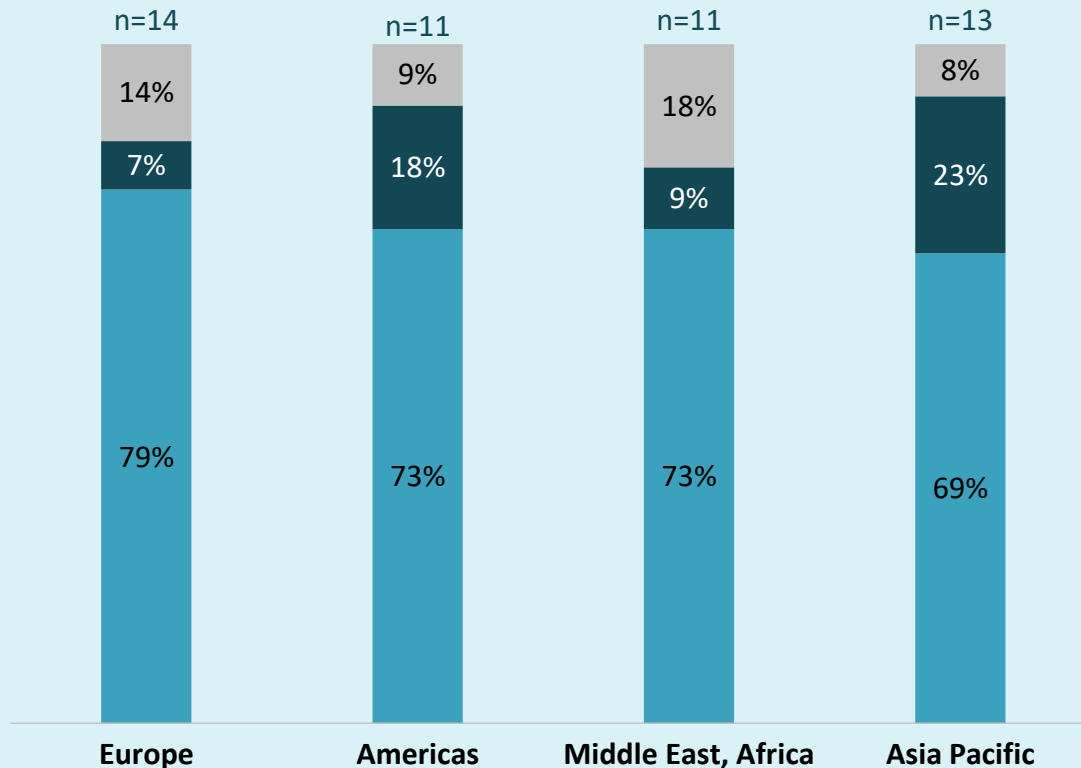
A1 Telecom Austria Group



# RENEWABLE ENERGY

# \ MOST OF THE TELECOMMUNICATIONS COMPANIES ARE AIMING TO SWITCH TO RENEWABLE ENERGY SOURCES IN THEIR ACTIVITIES

COMPANIES' ACTIVITIES/TARGETS RELATED TO RENEWABLE ENERGY, n=49

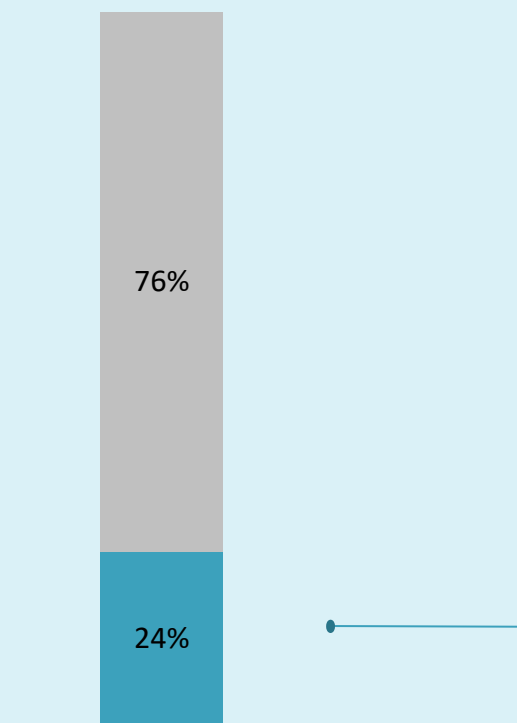


- To achieve the emission reduction targets the companies have adopted, renewable energy gains more and more momentum all over the world.
- All of the regions show a similar result in terms of considering renewable energy in their activities

Do not have any related activities/targets  
Have related activities/targets  
Provide measurable information about their activities/targets

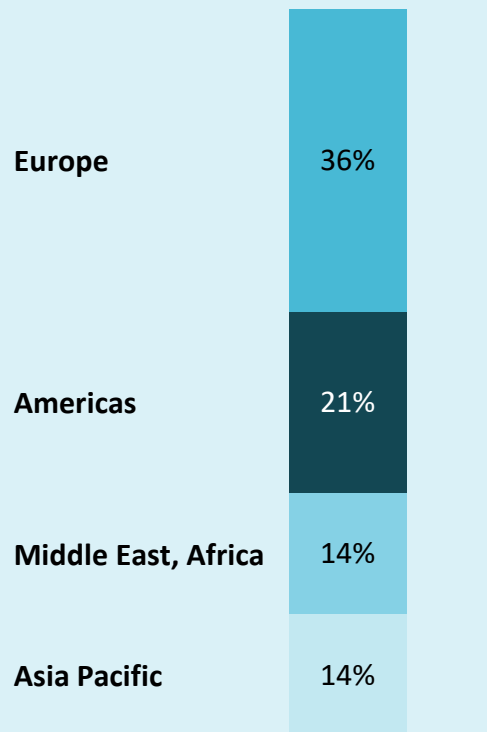
# HOWEVER, ONLY 24% OF THE COMPANIES DEFINE CLEAR GOALS ON RENEWABLE ENERGY FOR THE FUTURE

SETTING OF GOALS RELATED TO RENEWABLE ENERGY BY COMPANIES, n=49



Have not set goals    Have set goals

... BY REGIONS, n=12\*



## EXAMPLES OF GOALS:

### By 2025:

Meet over 50% of electricity needs with power generated from renewable sources

Orange

### By 2025:

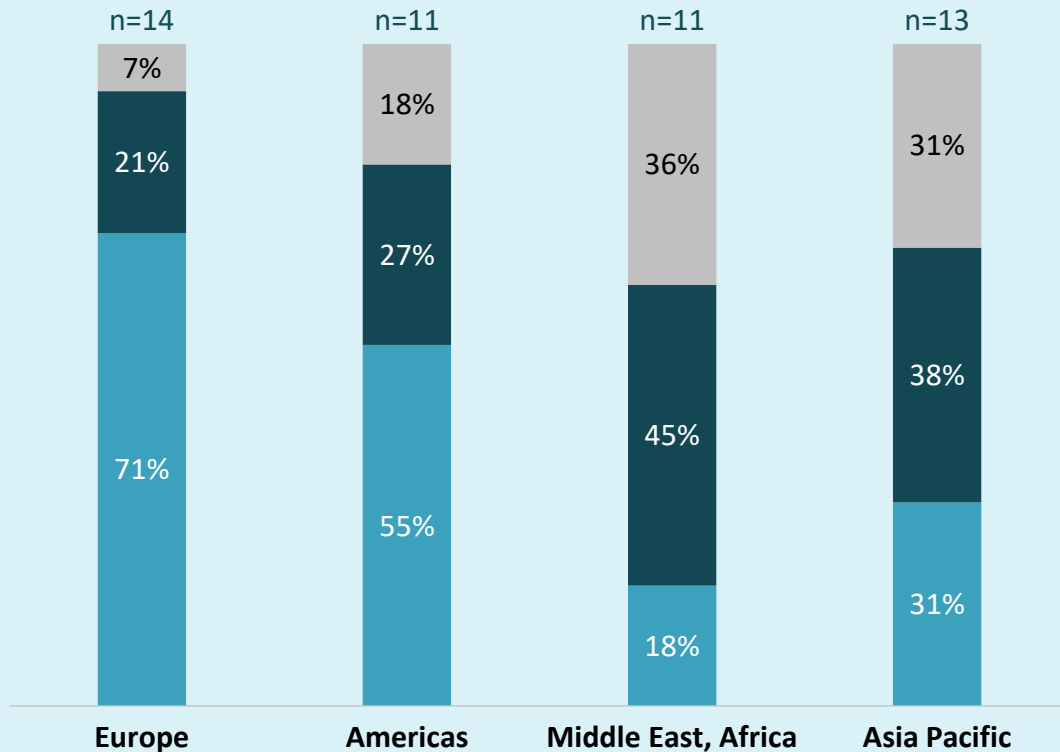
100% of the purchased electricity (globally) to be from renewable sources

Vodafone

# **SCOPE 3 EMISSIONS**

# \ MOST COMPANIES ADDRESS THEIR SCOPE 3 EMISSIONS BUT IN MIDDLE EAST, AFRICA AND ASIA PACIFIC THE INFORMATION TENDS TO REMAIN DESCRIPTIVE

COMPANIES' ACTIVITIES/TARGETS RELATED TO SCOPE 3 EMISSIONS, n=49

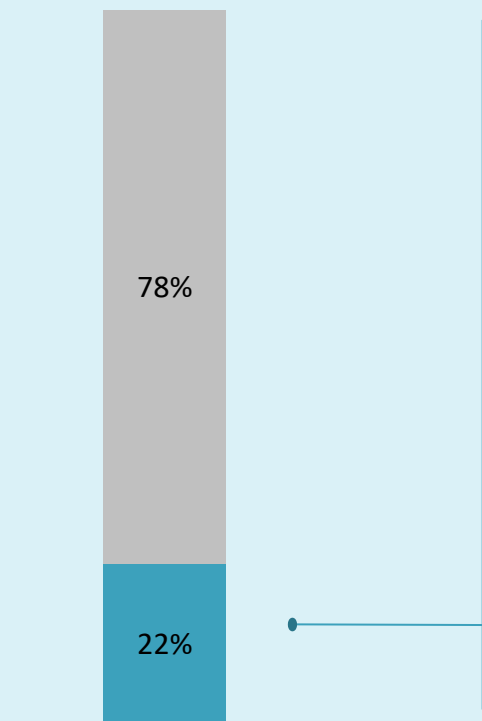


Scope 3 emissions are difficult to measure and reduce, which can be one of the reasons why the efforts in Middle East, Africa and Asia Pacific tend to remain descriptive.

- Do not have any related activities/targets
- Have related activities/targets
- Provide measurable information about their activities/targets

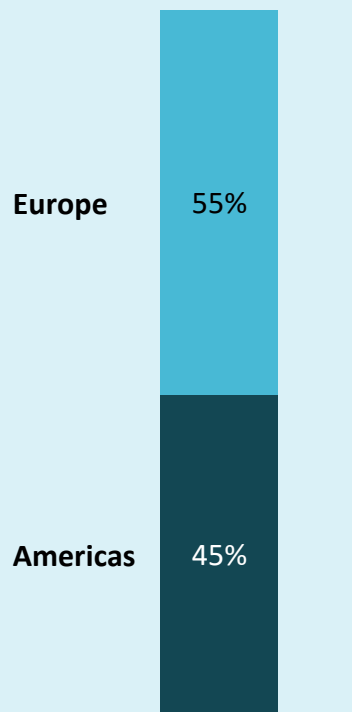
# NO COMPANIES IN MIDDLE EAST, AFRICA AND ASIA PACIFIC HAVE SET GOALS FOR REDUCING THEIR VALUE CHAIN EMISSIONS

SETTING OF GOALS RELATED TO SCOPE 3 EMISSIONS BY COMPANIES, n=49



Have not set goals    Have set goals

... BY REGIONS, n=11



## EXAMPLES OF GOALS:

### By 2030:

Reduce all emissions resulting from the manufacture and use of company's products by 25% per customer (baseline 2017)

Everything Everywhere

### By 2040:

Reduce CO<sub>2</sub> emissions throughout the supply chain by 50% (2014 baseline)

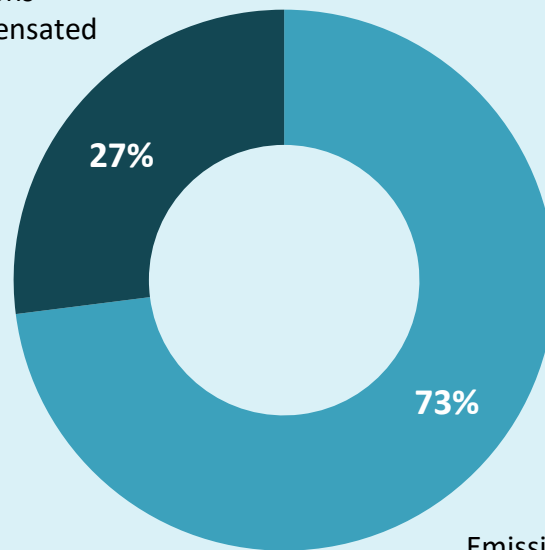
KPN

# **GHG OFFSETTING**

# \ EMISSION OFFSETTING SHOULD COME ONLY AFTER THE MEASURES FOR EMISSION REDUCTION HAVE BEEN TAKEN

## TELIA'S SCOPE 1 & 2 MARKET-BASED EMISSION REDUCTION TO ZERO

Remaining emissions  
which were compensated  
through offsetting



Emission reduction from the  
2019 base year

- The emissions that cannot be reduced can be offset by funding an equivalent carbon dioxide saving elsewhere.
- In 2020, **Telia** reached climate neutrality within its operations (scope 1 & 2) by:
  - Reducing emissions by 73% from the 2019 levels
  - Offsetting for the remaining emissions (13 ktons CO<sub>2</sub>e)



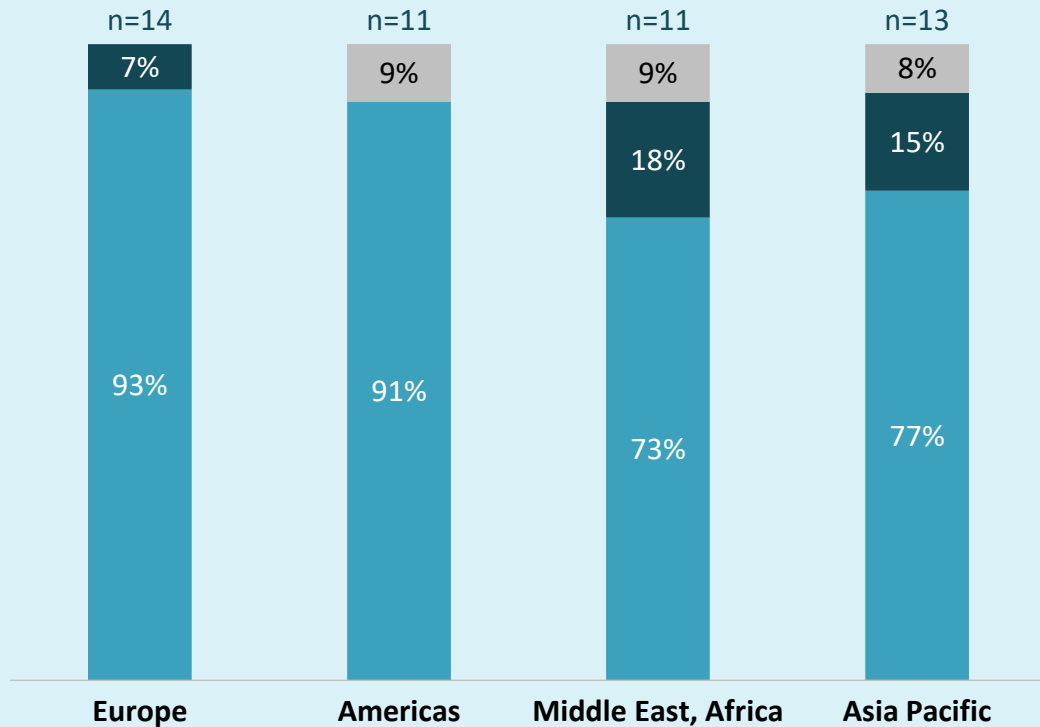
**2.2**

**RESOURCE EFFICIENCY**

# **WASTE & CIRCULAR ECONOMY**

# LARGE MAJORITY OF TELECOMMUNICATION COMPANIES ARE ENGAGED IN WASTE REDUCTION ACTIVITIES

COMPANIES' ACTIVITIES/TARGETS RELATED TO WASTE REDUCTION, n=49

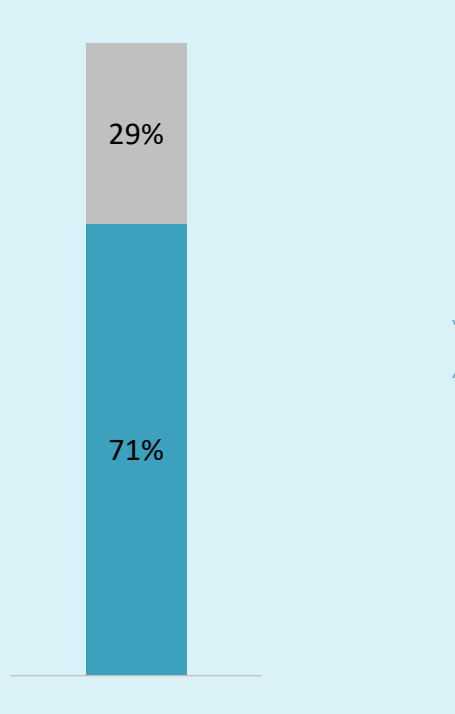


- One of the greatest challenges in the telecommunication sector is the generation of e-waste.
- A great majority of the companies worldwide are addressing waste reduction – 100% in Europe, 91% in Americas, and more than 70% in other regions. Most of them provide measurable information about their progress and goals.

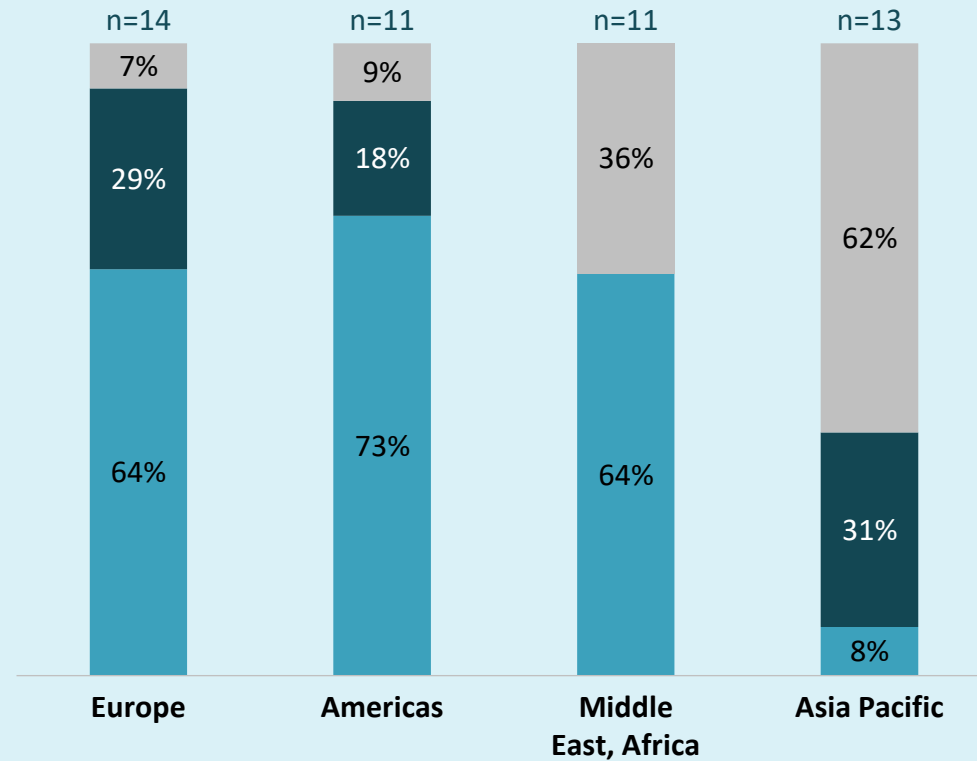
- Do not have any related activities/targets
- Have related activities/targets
- Provide measurable information about their activities/targets

# BUY-BACK PROGRAMS FOR USED DEVICES ARE THE LEAST COMMON IN ASIA PACIFIC REGION

PRESENCE OF BUY-BACK PRGRAMS OR THEIR ALRTENATIVES IN COMPANIES' ACTIVITES, n=49



... BY REGIONS



- Do not have related activities/targets
- Have related activities/targets
- Provide measurable information about their activities/targets

# **WATER EFFICIENCY**

## \ DESPITE BEING A LESS-CONSIDERED ASPECT OF SUSTAINABILITY, WATER USE CAN HAVE FAR-REACHING IMPLICATIONS TO BUSINESS AND SOCIETY

Water-use is a less-considered environmental aspect among the telecommunications companies, as direct water consumption is often limited to its use in offices. Nevertheless, companies can address their indirect water consumption which takes place, for example, in data centres and manufacturing process.



AT&T realises they have a responsibility to actively manage and reduce their water use wherever possible.



### ACTION

- **In 2010:** first water footprint assessment
- **Since 2013:** has saved 6 billion gallons of water by consolidating buildings that they own or lease and by reducing building space.
- **In 2020:** further reduced their water consumption by 11% compared to 2019.



### GOALS

- **In 2019:** exceeded their goal to reduce water consumption relative to data growth on their network by 60% (2013 base year).
- **For 2030:** achieve a 15% reduction (2019 base year) in U.S. water use in areas of high/extremely high-water stress.

**2.3**

# **SOCIAL SUSTAINABILITY**

## \ SOCIAL SUSTAINABILITY PROMOTES HUMAN WELLBEING AND CAN BE APPROACHED IN A VARIETY OF WAYS

Sustainability goes further than the environment, involving also social aspects. The goal of social sustainability is to support the capacity of current and future generations to create healthy and livable communities. It is a topic each telecommunications company is addressing as part of their sustainability journey, with the initiatives differing greatly in terms of their scope, size and approach.

*Telefonica*

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A great example of social sustainability activities is Telefonica's Volunteers Programme which is one of the biggest corporate volunteer initiatives in the world.

By promoting social action of its employees, the projects covers areas such as:

- Social exclusion and disabilities
- Child safety
- Protection of the environment and biodiversity





# **SUSTAINABILITY CHAMPIONS**

## ✓ Sustainability reporting

## ✓ Science Based Targets:

- To reduce absolute scope 1 and 2 GHG emission 50% by 2025 from a 2018 base year.
- To reduce absolute scope 3 GHG emissions from use of sold products 29% by 2025 from a 2018 base year.
- Commits that 72% of its suppliers by emissions covering purchased goods and services and capital goods, will have science-based targets by 2025.

## ✓ Carbon neutrality within their operations from 2020

## ✓ Waste reduction:

- Goal is to achieve zero waste by 2030 within their own operations, including network construction and maintenance (base - 2019)

**Telia Company issued its first green hybrid bond of EUR 500 million in February 2020, followed by a SEK 750 million senior bond in June.**

The proceeds of the Green Bonds have been allocated to two different categories:

- Energy Efficiency: network transformation through fiber development in Sweden
- Green Digital Solutions: IoT solutions reducing customers' environmental impact

# DEUTSCHE TELEKOM PAYS GREAT ATTENTION TO ALL OF THEIR EMISSIONS AND HAS CLEAR REDUCTION TARGETS IN PLACE



## Sustainability reporting



## Science Based Targets:

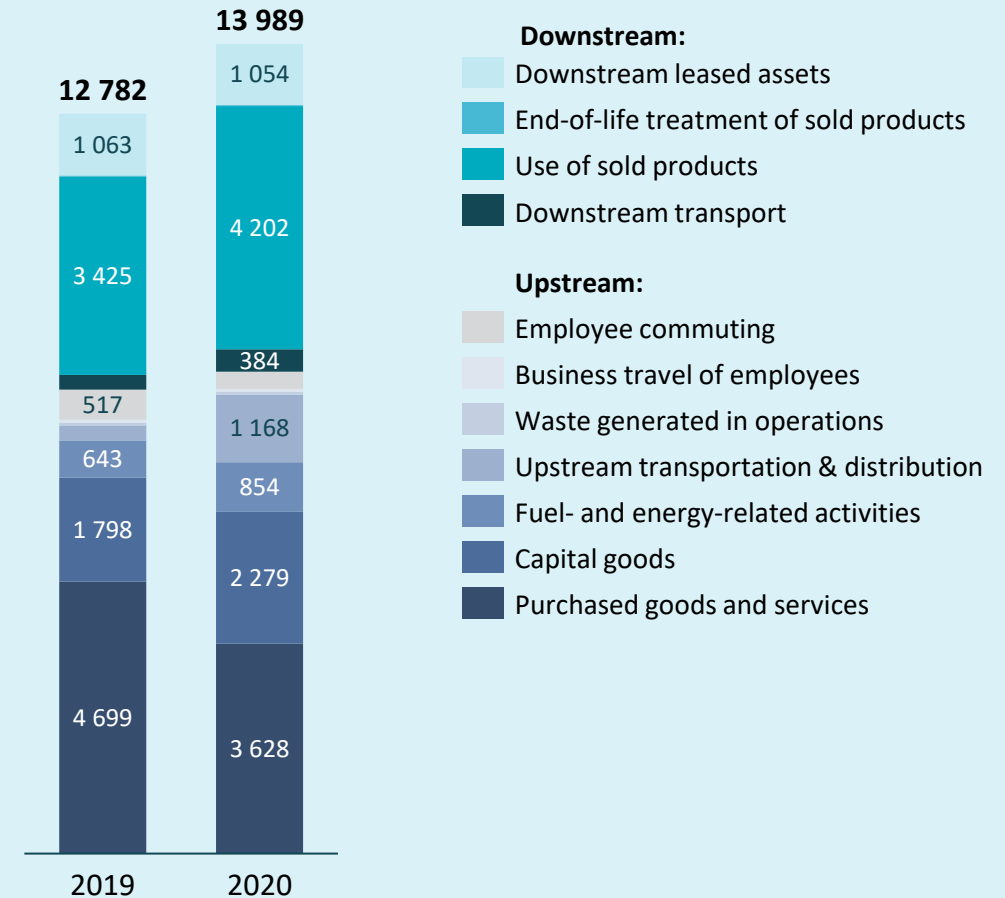
- To reduce absolute Scope 1 & 2 GHG emissions 90% by 2030 from a 2017 base-year.
- To increase annual sourcing of renewable electricity from 41% in 2017 to 100% by 2021.
- To reduce Scope 3 GHG emissions 25% per customer by 2030 from a 2017 base-year.



## Energy efficiency:

- Their data centre in Biere is one of the most energy-efficient data centers in the world

SCOPE 3 EMISSIONS FOR THE WHOLE DEUTSCHE TELEKOM GROUP, kt CO<sub>2</sub>e



# TELSTRA STANDS OUT FOR THEIR AMBITIOUS SUSTAINABILITY ACHIEVEMENTS AND GOALS FOR THE FUTURE



- ✓ **Sustainability reporting**
- ✓ **Renewable energy**
  - Enable 100% renewable energy generation equivalent to our consumption by 2025
- ✓ **Carbon neutrality within their operations from 2020**
- ✓ **Waste reduction goals:**
  - Reuse or recycle 500,000 mobile phones, modems and other devices each year to 2025
  - Ensure 100% of Telstra branded packaging is made of renewable or recycled material and is fully recyclable by 2022
  - Increase network waste recycling rate to 85% by 2025

## ACHIEVEMENTS



In 2020 saved 18,537 tCO<sub>2</sub>e and more than 19,335 MWh of electricity through \$8.6 million worth of energy reduction projects



Purchased over 3.4 million carbon credits over the last two years



Introduced 256 hybrid vehicles to their fleet which contributed to a 33% fuel reduction.



Has encouraged 89% of their top 100 suppliers to disclose their environmental impacts via Carbon Disclosure Project



In 2021 collected more than 392,229 devices from customers to be repurposed, reused or recycled.

# SAFARICOM WILL GROW INDIGENOUS TREES AS THEIR PRIMARY CARBON OFFSET INITIATIVE



- ✓ **Sustainability reporting**
- ✓ **Science Based Targets:**
  - To reduce absolute scope 1 and 2 GHG emissions 43% by 2030 and 74% by 2050 from a 2017 base year.
  - To reduce absolute scope 3 GHG emissions 41% by 2030 and 72% by 2050 from a 2017 base year.
  - Commits that 10% of its suppliers by spend covering purchased goods and services will set science-based scope 1 and 2 targets by 2023.
- ✓ **Renewable energy:**
  - Has transitioned 255 (5%) of their sites to renewable and hybrid energy sources – up from 217 (4%) in FY20

Safaricom will plant **5 million trees** over a period of 5 years



The initiative is expected to offset around

# 26%

**of their carbon emissions** once the trees have grown to maturity

# VERIZON HAS BECOME ONE OF THE LARGEST CORPORATE BUYERS OF U.S. RENEWABLE ENERGY



## Sustainability reporting



## Science Based Targets:

- Commits to reduce absolute scope 1 and 2 GHG emissions 53% by 2030 from a 2019 base year.
- Commits to reduce absolute scope 3 GHG emissions 40% by 2035 from a 2019 base year.



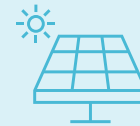
## Waste management:

- In 2020 recycled more than 33 million pounds— and reused nearly 2.6 million pounds—of e-waste.

## RENEWABLE ENERGY PROGRESS AND GOALS



Verizon has entered into 13 long-term renewable energy purchase agreements totaling nearly 1.7 GW of renewable energy capacity.



Since 2013 have installed more than 28 MW of green power at 26 locations



Goal: Source or generate renewable energy equivalent to 50% of our total annual electricity consumption by 2025.

# ANNEX

## \ METHODOLOGY

In order to understand the current level of sustainability ambition in the telecommunication industry, this work analyses 49 (n=49) telecommunication companies worldwide.

The company list was developed with an aim to:

- Include companies which have the greatest market share in each region
- Include companies from different areas inside the region



To gain a further insight, the 49 companies have been divided into four regions:

- Europe (14)
- Americas (11)
- Middle East, Africa (11)
- Asia Pacific (13)

Several companies operate in few of the abovementioned regions, where they have a strong presence. For this reason, these companies have been counted for both regions.



# \ SOURCES AND AUTHORS OF THE REPORT

## SOURCES

A1 Telekom Austria Group  
Airtel Africa America Móvil  
AT&T  
Axiata  
BCE  
Bharti Airtel  
China Mobile  
China Telecom  
China Unicom  
Etisalat  
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