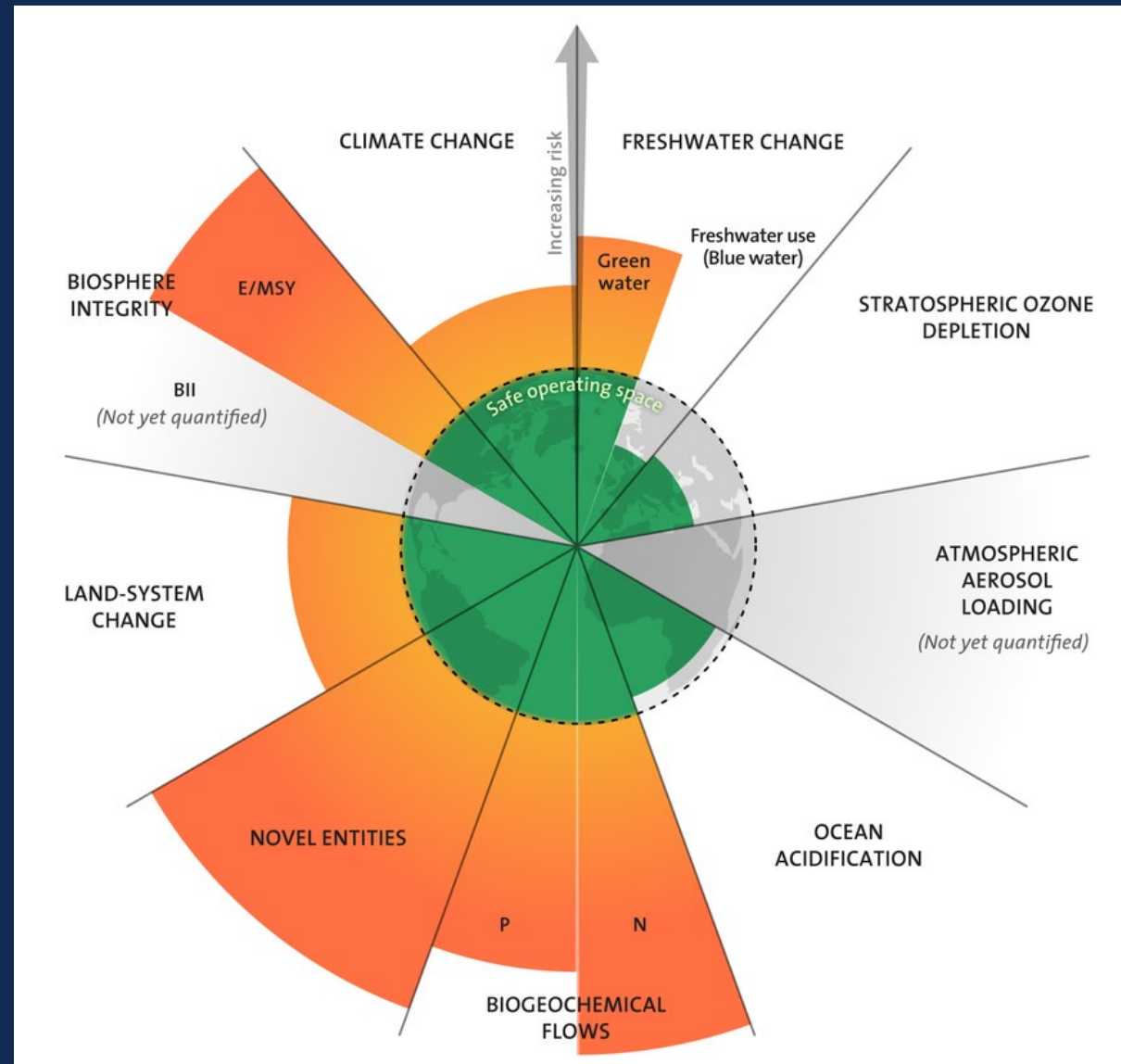**Allianz ⑪**

Sustainability in der IT

Teil der Lösung oder Teil des Problems?

Rainer Karcher
Global Head of IT Sustainability
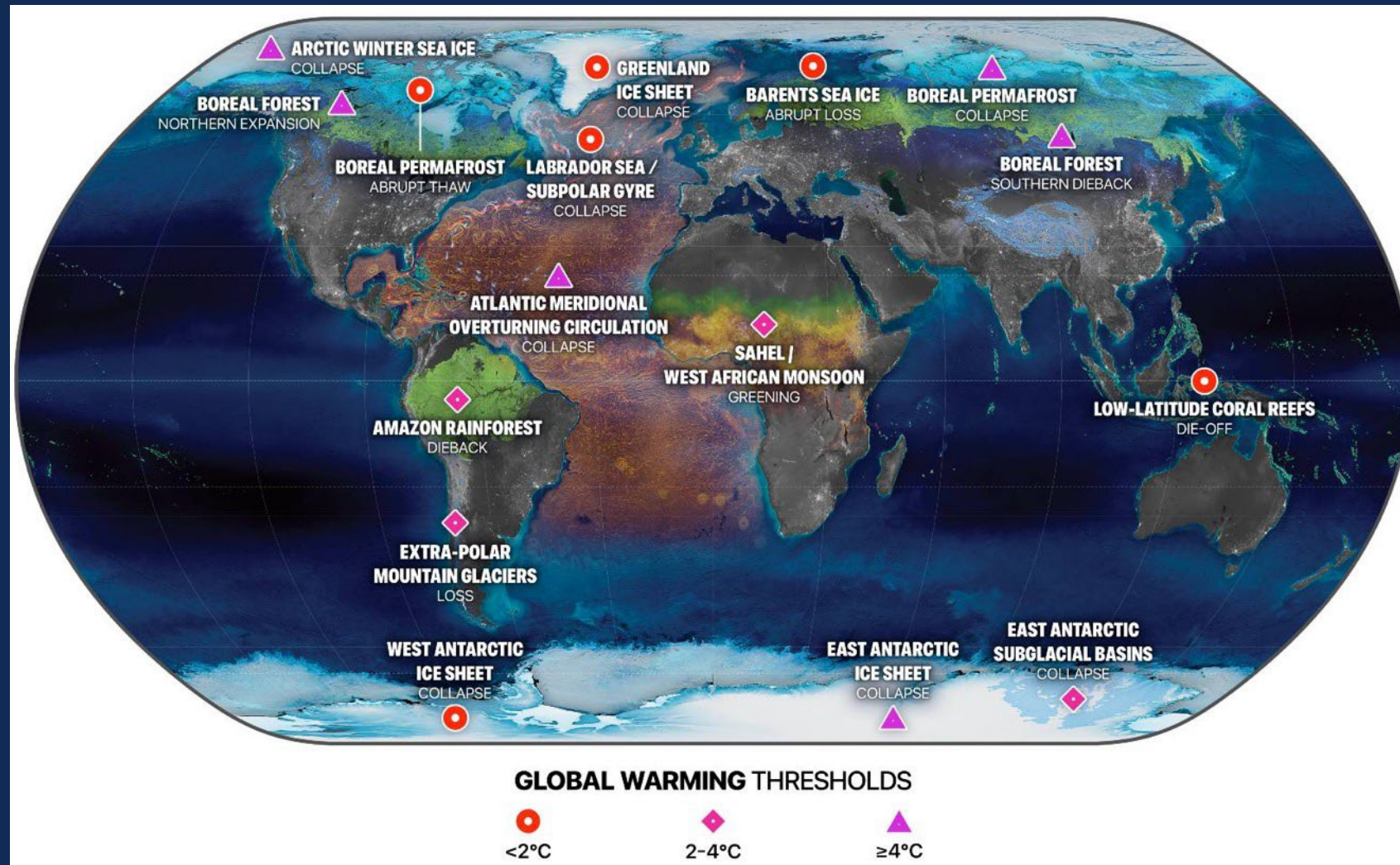13. Oktober 2022

Planetary Boundaries

The focus on the CO2 budget diverts attention from the dimension of climate change and, above all, does not take into account the loss of biodiversity and ecosystem services

Dr. Frauke Fischer– Biodiversity Expert
Julius-Maximilians-University Würzburg

Sources Person et al. (2022): Outside the Safe Operating Space of the Planetary Boundary for Novel Entities. https://doi.org/10.1021/acs.est.1c04158
Steffen et al. (2015): Planetary boundaries: Guiding human development on a changing planet. https://doi.org/10.1126/science.1259855

Climate Tipping Elements

Trajectories of the Earth System & Key messages of the latest Intergovernmental Panel on Climate Change (IPCC) report published in April 2022

Allianz (ıı)
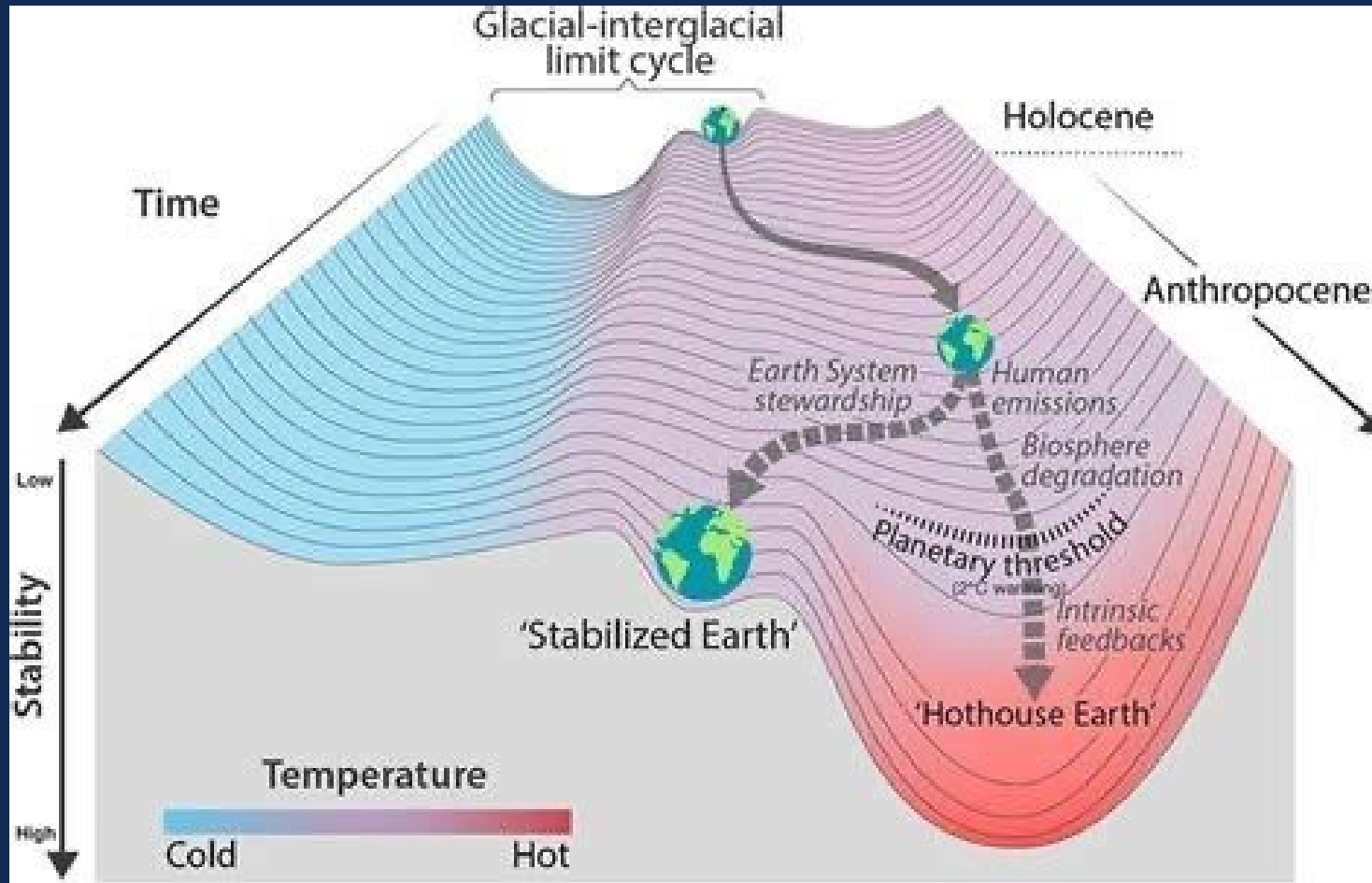
It`s now or never to limit global warming to a maximum of 1.5°C

Immediate and deep emissions reductions across all sectors are needed to limit global warming to 1.5°C. Emissions need to peak latest in 2025 and to be reduced by 43% by 2030.

The technologies are there to halve emissions by 2030

Having the right policies, infrastructure and technology in place to enable changes to our lifestyles and behaviour can result in a 40-70% reduction in greenhouse gas emissions by 2050. The evidence also shows that these lifestyle changes can improve our health and wellbeing.

Global Greenhouse Gas Emissions per Sector

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2%
IT

3.2%
Waste

5.2%
Industry

18.4%
Agriculture, Forestry & Land Use

73.2%
Energy
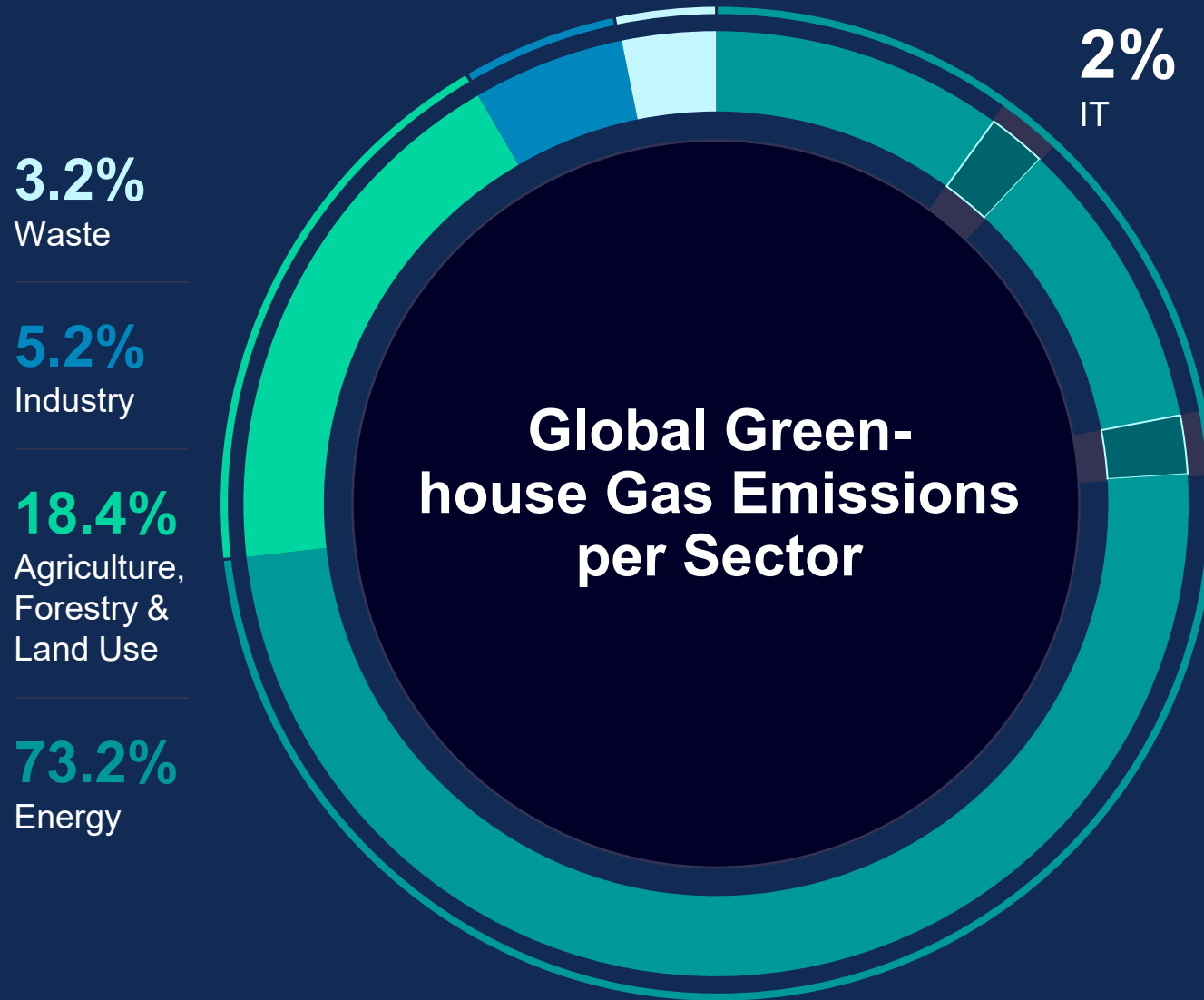
Global greenhouse gas emissions per sector in year 2016 with a total of 49.4 billion tonnes CO_2 emissions.

Projection of Federal Environment Agency (Umweltbundesamt) is that IT could reach 26% until 2030 due to massive increase of digitalization aspects.

Sources: Freitag, C. et al. (2021): Review The real climate and transformative impact of ICT: A critique of estimates, trends, and regulations:
https://www.sciencedirect.com/science/article/pii/S2666389921001884,
Emissions by sector: https://ourworldindata.org/emissions-by-sector

■ Energy (= Electricity, heat and transport)   ■ Agriculture, Forestry & Land Use   ■ Industry (= direct industrial processes)   ■ Waste

Best energy is not used energy
Electricity production by source - World

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TWh

2020 in %

Source	2020 %
Other renewables, including bioenergy	2.72%
Solar	3.26%
Wind	6.15%
Hydropower	16.84%
Nuclear	10.12%
Oil	4.36%
Gas	22.78%
Coal	33.77%

Y-axis (TWh): 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26

X-axis (years): 1986, 1988, 1990, 1992, 1994, 1996, 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014, 2016, 2018, 2020
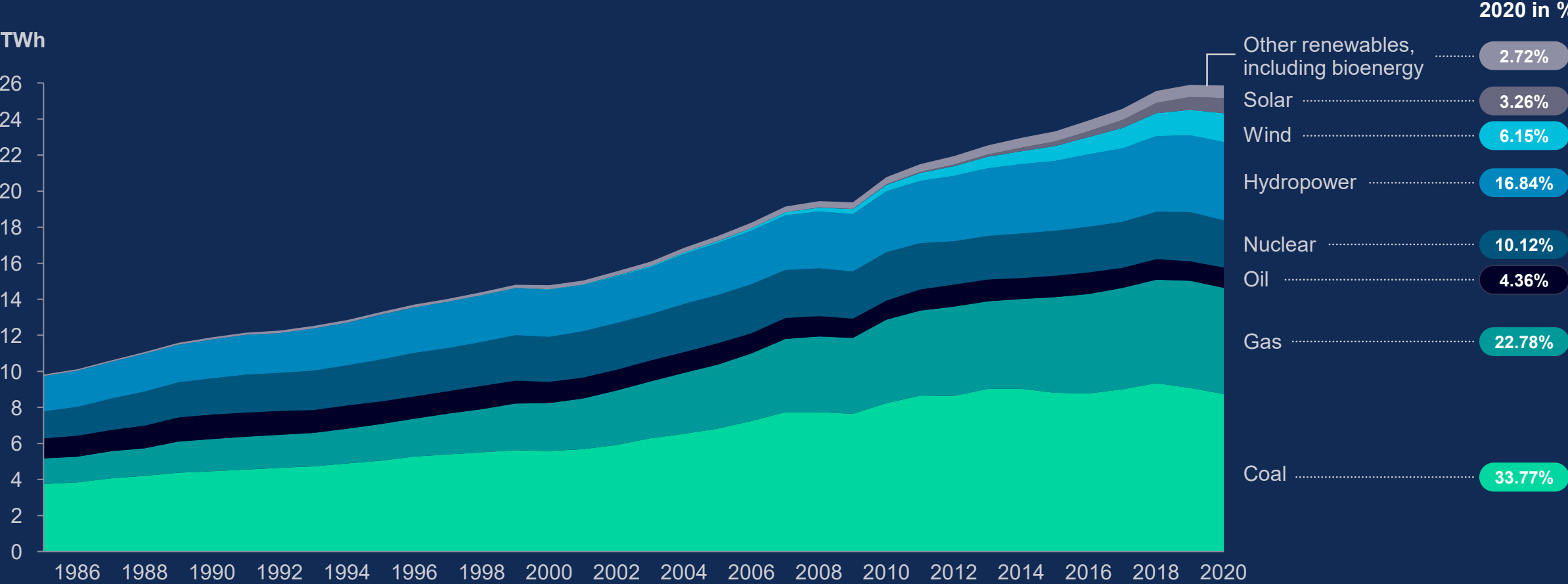
Note: "Other renewables" includes biomass and waste, geothermal, wave and tidal
Source: Our World in Data based on BP Statistical Review of World Energy & Ember (2022)

Sustainability at Siemens IT

DEGREE framework
sets clear priorities for Sustainability at Siemens

Decarbonization
support the 1.5°C target to fight global warming

Ethics
foster a culture of trust, adhere to ethical standards and handle data with care

Employability
enable our people to stay resilient and relevant in a permanently changing environment

Equity
foster diversity, inclusion, and community development to create a sense of belonging

Governance
apply state-of-the-art systems for effective and responsible business conduct

Resource efficiency
achieve circularity and dematerialization

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Accelerating DEGREE in IT, through IT and to society
Highlights & Achievements FY22

ecovadis

Ecovadis rating :
IT turned from „weakness" to „strength"

Sustainable IT
actively driving Siemens' DEGREE framework at IT

A **Refurbishment**
Optimization through Pickup@Home possibility (Germany & Austria) and globalization & standardization across all Siemens sites

B **IT Supplier Regulations & Measures**
Creation of specific IT Supplier KPIs to be able to compare suppliers for IT products & services efficient and science based and enhance RFPs and contracts with Sustainability criteria

C **CO_2 Footprint in myIT / myMall**
Product Carbon Footprint of IT equipment displayed and explained to raise awareness and mindset shift in device ordering

D **Fairphone**
Sustainable smartphone in IT catalogue. Available currently in Germany & Austria, more countries soon

E **Public Cloud Emission Dashboard**
Transparency on CO_2 emissions at AWS, Microsoft and Google

IT for Sustainability
IT enables DEGREE at Siemens Enterprise

F **Sustainability Data Cloud**
Data mesh with 84 different environmental source systems

G **DEGREE Reporting & Susy Tool**
Enabling a standardized DEGREE reporting for Business Units, Regions and Countries

H **EU Taxonomy project**
Joint initiative with CF R, P&O EHS and SUE to setup and implement the requirements of the EU

I **Sustainability@IT Community**
ambassadors across regions, countries and businesses with monthly activities and projects

IT to Society
Corporate Social Responsibility

J **Equipment Donations**
>2000 laptops and >1500 smartphones refurbished & donated together with Caring Hands via Covid Relief fund and currently via Ukraine support. Working hand-in-hand with other partners

K **#SiemensbewegtSchule**
Siemens grassroot initiative, contribution with Hacker School, CodeIT, collaboration trainings for teachers

L **SDG4Youth**
interactive presentation for schools (8th grade and higher) explaining the importance of the UN Sustainable Dev. Goals

M **Employee Engagement**
Awareness campaigns (Earth Day, Digital Clean-up Day), 4 events in UseIT Roadshow

N **siaf e.V.**
NGO in Munich supporting single moms with children with & w/o disabilities with IT knowledge (IT Café)

O **Females in Tech**
Initiative of Siemens, Rossmann, Bosch, OTTO to strengthen females in technology jobs

P **Digital Social Award**
Siemens, Capgemini, Orange, AfB teamed up to award digital & social projects with impact for inclusion

Inspire & Communicate
creating an ecosystem with like-minded partners to really make an impact

Podcasts, Interviews, Videos
5 podcasts with various partners (e.g. IDC), several interviews (CIO Magazin,…), COLLAB video with Logitech & Siemens City Performance Tool

Panel Talks and Fairs
various talks on virtual & hybrid external panels (LMU, University of Bayreuth, Hasso Plattner Institute, Confare Frankfurt & Vienna, ISE Fair Barcelona, etc.)

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D E G R E E

DECARBONIZATION ETHICS GOVERNANCE RESOURCE EFFICENCY EMPLOYABILITY EQUITY

Sustainability System (SUSY)

What?

- End-to-end sustainability data platform solution as single source of truth to cover existing and future sustainability reporting demands
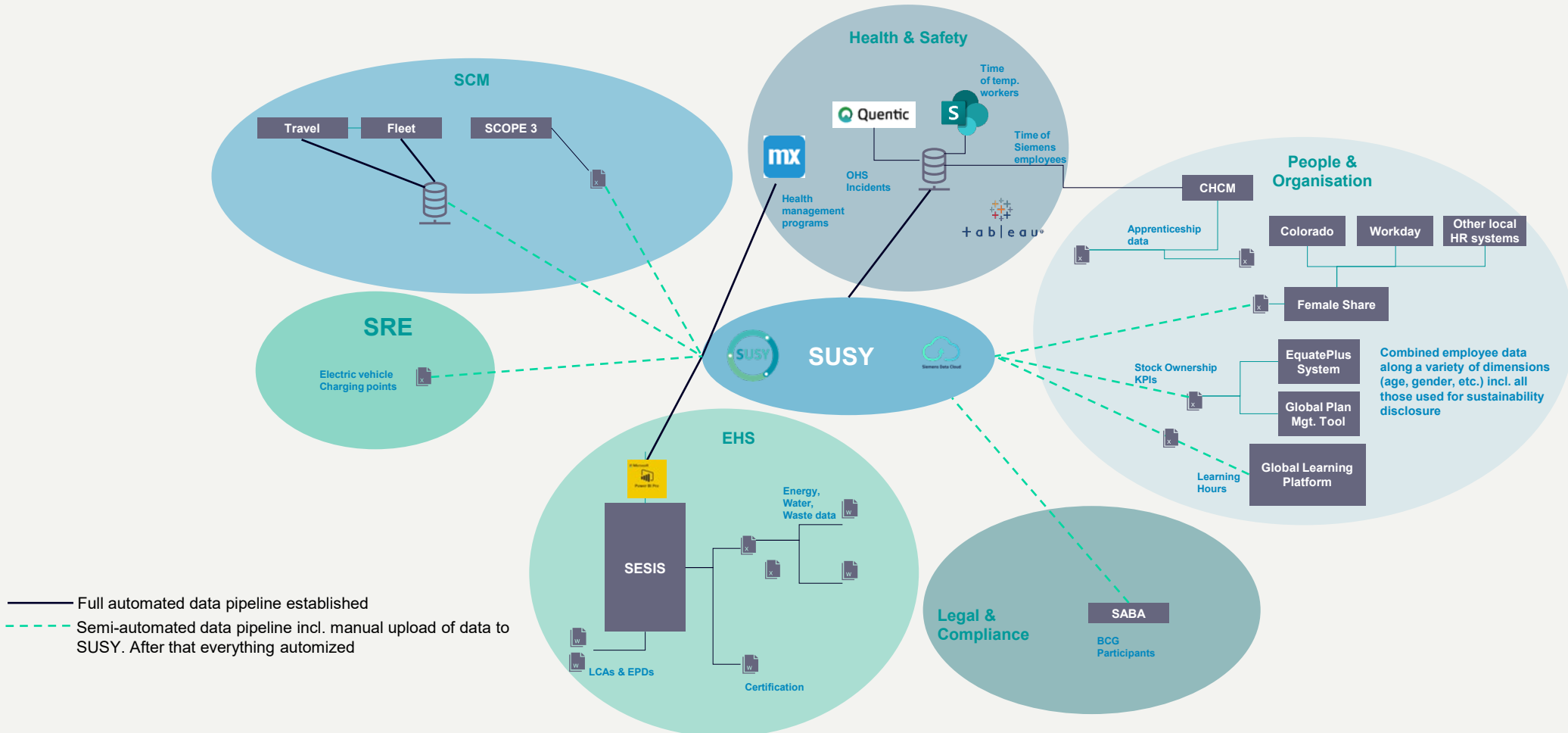
Benefits

- Having one central source for important DEGREE sustainability data across Siemens
- Creating transparency about progress of the DEGREE KPIs among all employees
- Reduction of manual work through automated data extraction and thereby decreasing the risks of errors


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Our DEGREE framework
Siemens w/o SHS if not otherwise stated

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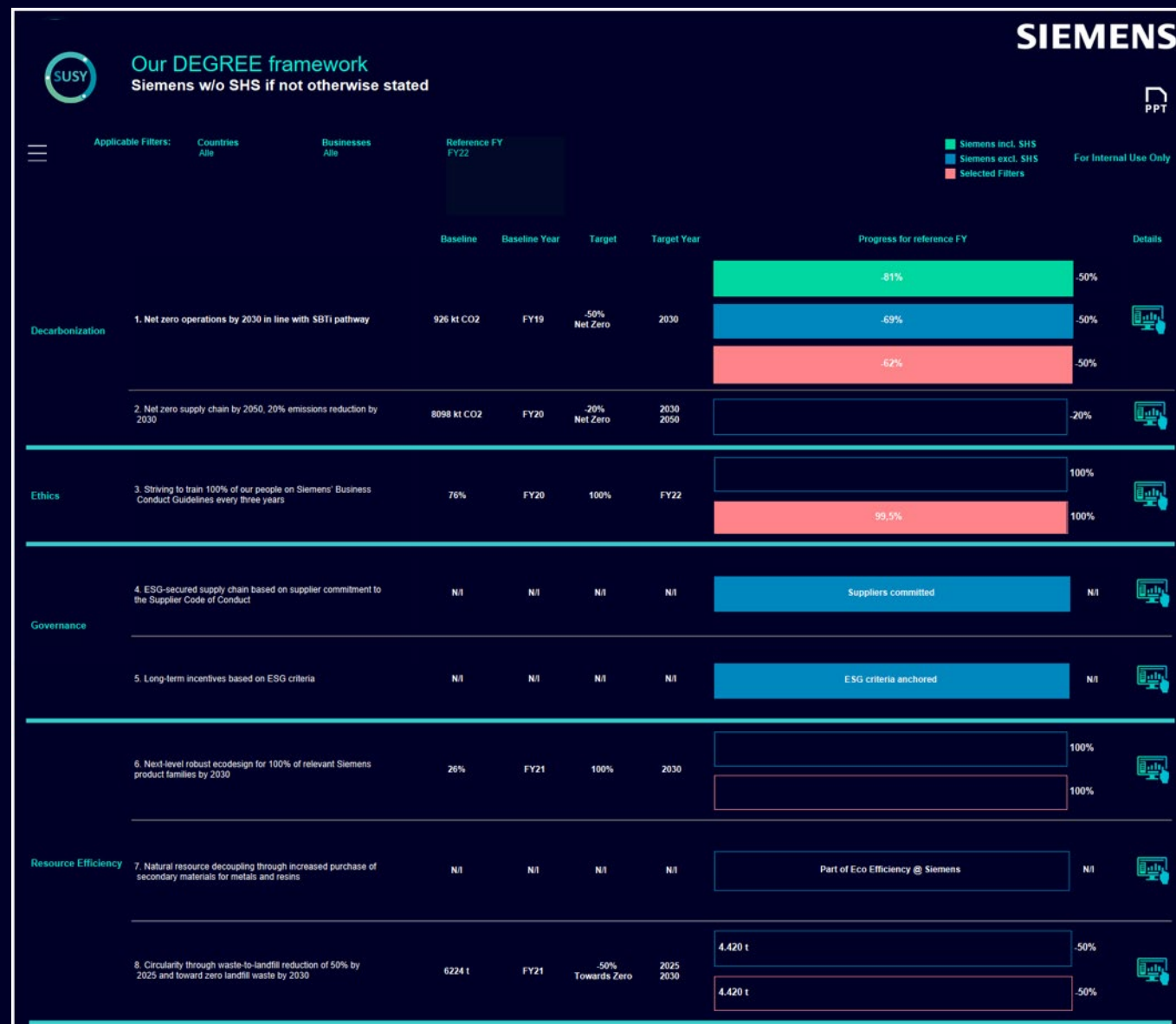
Sustainability Reporting & DEGREE reporting conducted quarterly, exhibit potential for quality management and efficiency improvements

Corporate Sustainability Data Landscape

SCM
- Travel
- Fleet
- SCOPE 3

Health & Safety
- Quentic
- Time of temp. workers
- Time of Siemens employees
- OHS Incidents
- Health management programs
- tableau

People & Organisation
- CHCM
- Apprenticeship data
- Colorado
- Workday
- Other local HR systems
- Female Share
- Stock Ownership KPIs
- EquatePlus System
- Global Plan Mgt. Tool
- Global Learning Platform
- Learning Hours

Combined employee data along a variety of dimensions (age, gender, etc.) incl. all those used for sustainability disclosure

SRE
- Electric vehicle Charging points

SUSY
- SUSY
- Siemens Data Cloud

EHS
- Power BI Pro
- SESIS
- Energy, Water, Waste data
- LCAs & EPDs
- Certification

Legal & Compliance
- SABA
- BCG Participants

─────── Full automated data pipeline established

- - - - - - Semi-automated data pipeline incl. manual upload of data to SUSY. After that everything automized

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SUSY Data Platform is stable foundation for existing, but also future Sustainability measurement and reporting demands
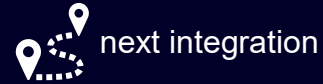
next integration

DEGREE Reporting (MB, Bus & Countries)
automated, consistent and refined

EU Taxonomy

- Tool-supported screening process, in line with the existing Project on Taxonomy (SAP)
- Integration of reporting requirements to SUSY to have a single source of reporting

Future reporting to track a sustainable company

- Possibility to simply add new reports and data sources alike
- Support the Business and deliver value and insights i.e. for Production and Product IT

SUSY Data Platform

secures flexible and dynamic data availability

reduces redundant work and silos

facilitates re-use of data for data providers

possibility for future IoT integration

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D E G R E E

DECARBONIZATION · ETHICS · GOVERNANCE · RESOURCE EFFICENCY · EMPLOYABILITY · EQUITY

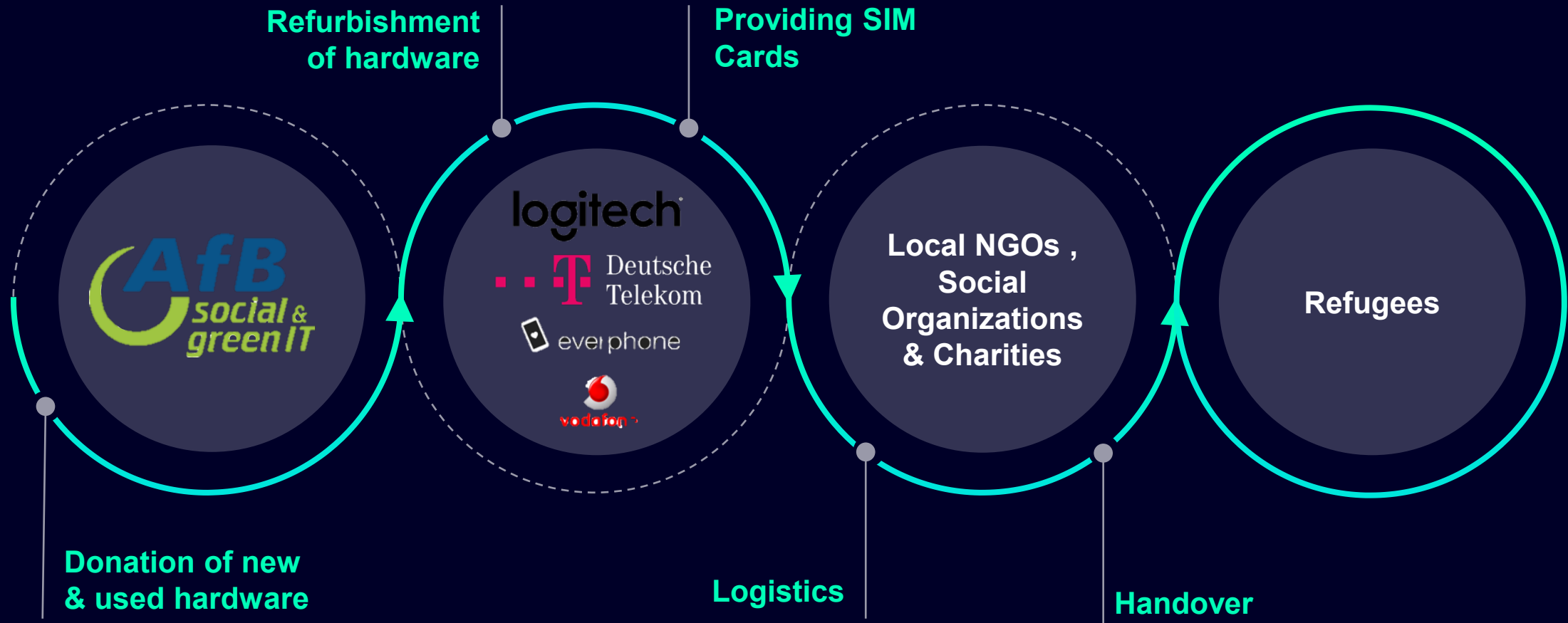## IT Supplier Regulations & Measures

What?

- Development of IT commodity specific sustainability KPIs in five categories to monitor progress of IT suppliers in regards of sustainability:
    - Hardware
    - Software
    - Application Management Services
    - Infrastructure Services
    - Mobile Communication Services

- Currently piloting with Microsoft, Orange and Atos

	Prior to engagement	First year of engagement		Subsequent years
Criteria Type	**KPI Measure**	**Base Scenario**	**Example Initial Target in First Year***	**Example Ambition Target in Subsequent Years***
Energy	Product Carbon Footprint (PCF) measurement	No PCF	PCF calculation and reporting in tCO2e	Reduction in PCF of 50%
	Ecolabel / energy certifications	No energy certifications or ecolabels	Commitment to implement ecolabels or energy certification	Ecolabel and energy certification schemes accredited
	Renewable energy use	No procurement of renewable energy	50% renewable energy across operations	100% renewable energy across operations
Transportation	Measurement of GHG emissions	No emissions data	Measurement of travel related emissions in tCO2e per product	Reduction in travel related emissions of product by 75%
	Measurement % low carbon fuels & electric vehicles in fleet	No low carbon fuels or electric vehicles in fleet	25% of fuel use from low carbon fuels and 25% of fleet are electric	50% of fuel use from low carbon fuels and 50% of fleet are electric
Waste	Measurement of product lifespan	No measurement conducted on product lifespan	Lifespan of product calculated and reported	Lifespan of product calculated and greater than >2 years
	Commitment to recycled material usage in product	No use of recycled materials in finished product	20% of finished product composed of recycled materials	50% of finished product composed of recycled materials
Packaging	Commitment to recycled material usage in packaging	No use of recycled materials in packaging	50% of packaging composed of recycled materials	100% of packaging composed of recycled materials
	Measurement of waste and reduction	No measurement of waste materials	Waste in kg are measured and reported	50% reduction in waste

*All percentages % are example target values that should be replaced with agreed targets between the supplier and Siemens

Donation of Equipment - Hand in hand with our partners

Refurbishment of hardware

Providing SIM Cards

AfB social & green IT

logitech
T Deutsche Telekom
everphone
vodafon

Local NGOs , Social Organizations & Charities

Refugees

Donation of new & used hardware

Logistics

Handover

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D E G R E E

DECARBONIZATION   ETHICS   GOVERNANCE   RESOURCE EFFICENCY   EMPLOYABILITY   EQUITY

Equipment Donations

#standwithUkraine

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D E G R E E

DECARBONIZATION   ETHICS   GOVERNANCE   RESOURCE EFFICENCY   EMPLOYABILITY   EQUITY

Digital Social Award

What?

- The Digital Social Award (initiated by Siemens, Capgemini, Orange Business Services and AfB) honors projects and initiatives that combine digital and social aspects in four categories:
  Education & Culture, Inclusion & Work, Sport & Health, Innovation & Future
- Under the auspices of DSEE, WHU, ZIVIZ & Stiftung Bürgermut* from 113 applications the TOP 3 in every category were solemnly awarded at Siemens Mosaikhalle in Berlin

* Deutsche Stiftung für Engagement und Ehrenamt (DSEE), WHU Center for Non Profit Management and Digital Social Impact (WHU), Zivilgesellschaft in Zahlen (ZIVIZ)

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D E G R E E

DECARBONIZATION   ETHICS   GOVERNANCE   RESOURCE EFFICENCY   EMPLOYABILITY   EQUITY
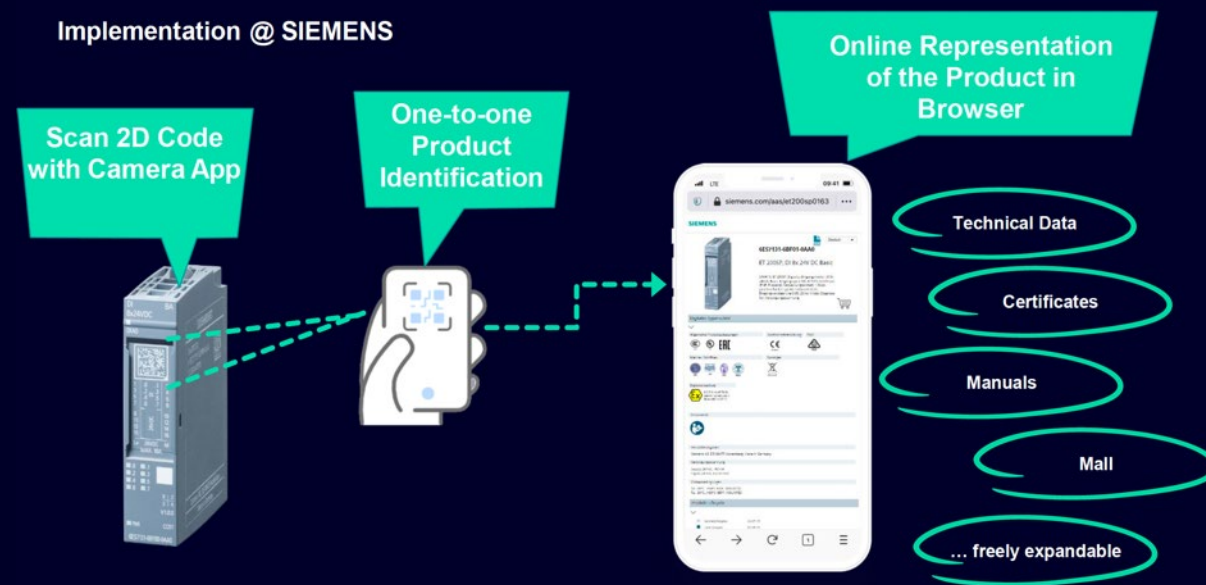
ClarITy Project

What?

- Siemens Sustainability label for IT and Software Products
- IT Circle project, that based on a questionaire and defined criteria helps to provide an label
- Currently in PoC, planned alignment with several Siemens Business Units and the University of Amsterdam

Digital Product Passport

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Sustainability in IT

Strategy 2023

We secure the future through responsible IT

Sustainable IT

We minimize our footprint in IT,

In order to achieve a sustainable IT, we create transparency, set up a strategy, ensure implementation and measure the impact.

IT for Sustainability

maximize our handprint with IT,

In order to foster sustainability through IT, we identify opportunities, bring together individuals and organizations, drive innovation and show presence.

IT for Society

and leave a heartprint in the society.

To positively contribute to society through IT, we create awareness, empower people, generate and measure impact.

Allianz Technology IT Sustainability minimizes its own footprint, maximizes the handprint through IT and ensures a heartprint with IT

Allianz ⑪

Driving the Sustainability strategy of Allianz Technology and link with Group Functions. This includes to achieve GHG emission of 1,875 t/NO per employee and 100% of renewable energy by 2023.

Sustainable IT & IT for Sustainability

- Overarching baselining with full carbon footprint assessment (ClarITy) to enable clear measurable goals in the future
- Strategic DC - Energy reduction & efficiency increase
- Decommissioning of local data centers and applications (Gearshift)
- Sustainable IT development guide (Green Coding)
- Creation of specific IT Supplier KPIs (collaboration with GSP)
- Supporting EV100: Electrification of car fleet, e.g., in GER with the New Mobility Policy[2]

IT for Society

- Set up of Social Charity Committee to decide on strategic donations & partnerships
- Establishment of strategic partnerships, e.g., Women in Tech, Hacker School, Digital Social Award etc.
- Chief Human Rights Officer implementation in Allianz Technology
- Allianz Technology organizing Green Week for all Allianz employees globally

1) GHG emission reduction and 100% RE targets are including datacenters, GHG emission reduction target is including public cloud 2023 onwards
2) Switching to electric and hybrid vehicles or choosing BahnCard or bicycle, charging station (supplied with 100% RE) at home for employees purchasing cars under the New Mobility Policy

Key Take Aways

Time is now

1 Data is key but only if provided efficient & reliable

2 Create lighthouses to remove barriers

3 Collaboration & Transparency instead of IP & competitiveness

Sustainability is more than CO_2

- Operational efficiency
- Cost & time savings
- New business opportunities and partnerships
- Audit proof environmental reporting
- Well prepared for upcoming directives
- Employee Engagement and talent attraction
- Better reputation also for high potentials, trustworthiness

Change starts with ourselves

Thank you!

Rainer Karcher

Global Head of IT Sustainability
Allianz Technology

rainer.karcher@allianz.de

+49 170 101 6686

https://www.linkedin.com/in/rainerkarcher/