ENGINEERING
TOMORROW

KONSEQUENTE DEKARBONISIERUNG VON PRODUKTIONSSTÄTTEN UND WERTSCHÖPFUNGSKETTEN

Frank Vorrath, Vice President Supply Chain Services

Danfoss at a glance

Worldwide sales
in more than
100
countries

Three strong business segments
with leading positions

Power Solutions

Climate Solutions

Power Electronics and Drives

Leading technology partner for our customers who want to decarbonize through energy efficiency, machine productivity, low emissions, and electrification

+42,000
Employees worldwide.
People are the foundation of our business

Well on the way towards carbon-neutral global operations by 2030

97
Factories in more than 20 countries

1933
Long track record within innovation and engineering

Milestones

Becoming the preferred decarbonization partner

Danfoss ESG Journey

We engineer solutions that enable the world to do more with less

We engineer tomorrow to build a better future

Step 1

Energy efficiency
reduce

Step 2

Energy recovery
re-use

Step 3

Source Renewable Energy
re-source

CO_2-neutral in our operations globally by 2030

Scope 1

Combustion of fuels

Company cars

Leakage of cooling agents in factories

0.1%

Scope 2

Purchased electricity

Purchased heating

0.4%

Our 3 step approach will get us to CO_2 neutrality in Scope 1 and 2 by 2030

Step 1

Energy efficiency
reduce

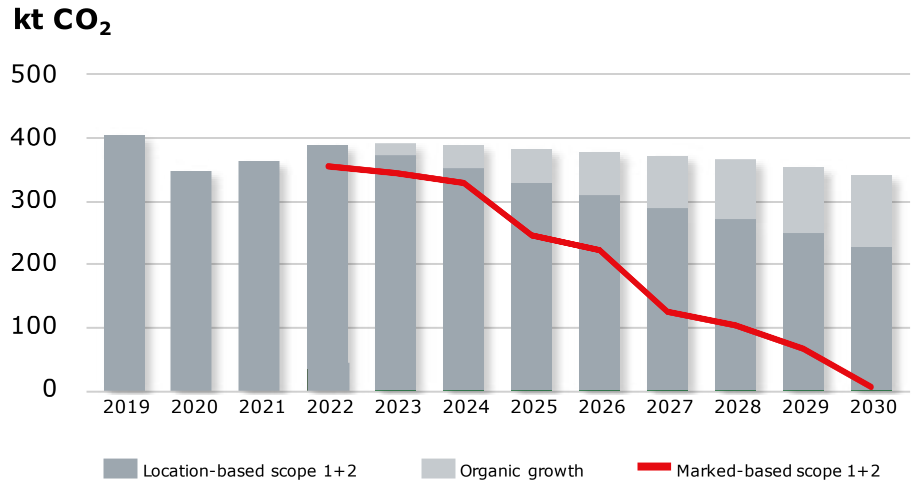
Step 2

Energy recovery
re-use

Step 3

Source Renewable Energy
re-source

We have a **clear plan to decarbonize scope 1 and 2 emissions** in all our operations **by 2030**



Effect of levers:

25% from energy efficiency

65% from PPA impact

10% from carbon offsets

Our Actions:

- Part of our DNA
- Execution of Regional Segments Roadmaps
- Global Tracking and Incentive Mechanism
- Global Expertise, Products and Technology

Leading by example: Nordborg campus reached **CO2 neutrality in 2022**

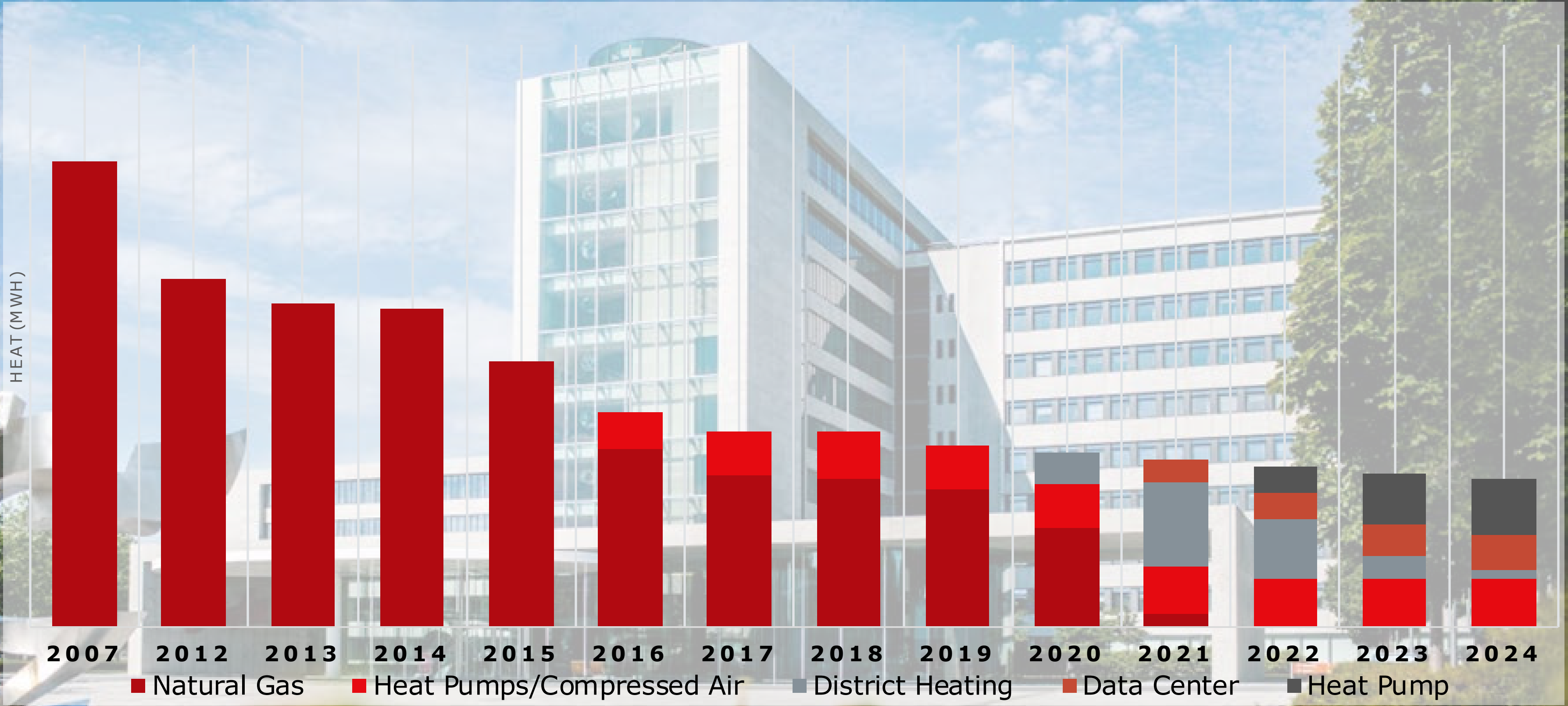
Heating savings, 2007-2022

1. Reduce	2. Re-use	3. Re-source
70%	**15%**	**15%**

Power savings, 2007-2022

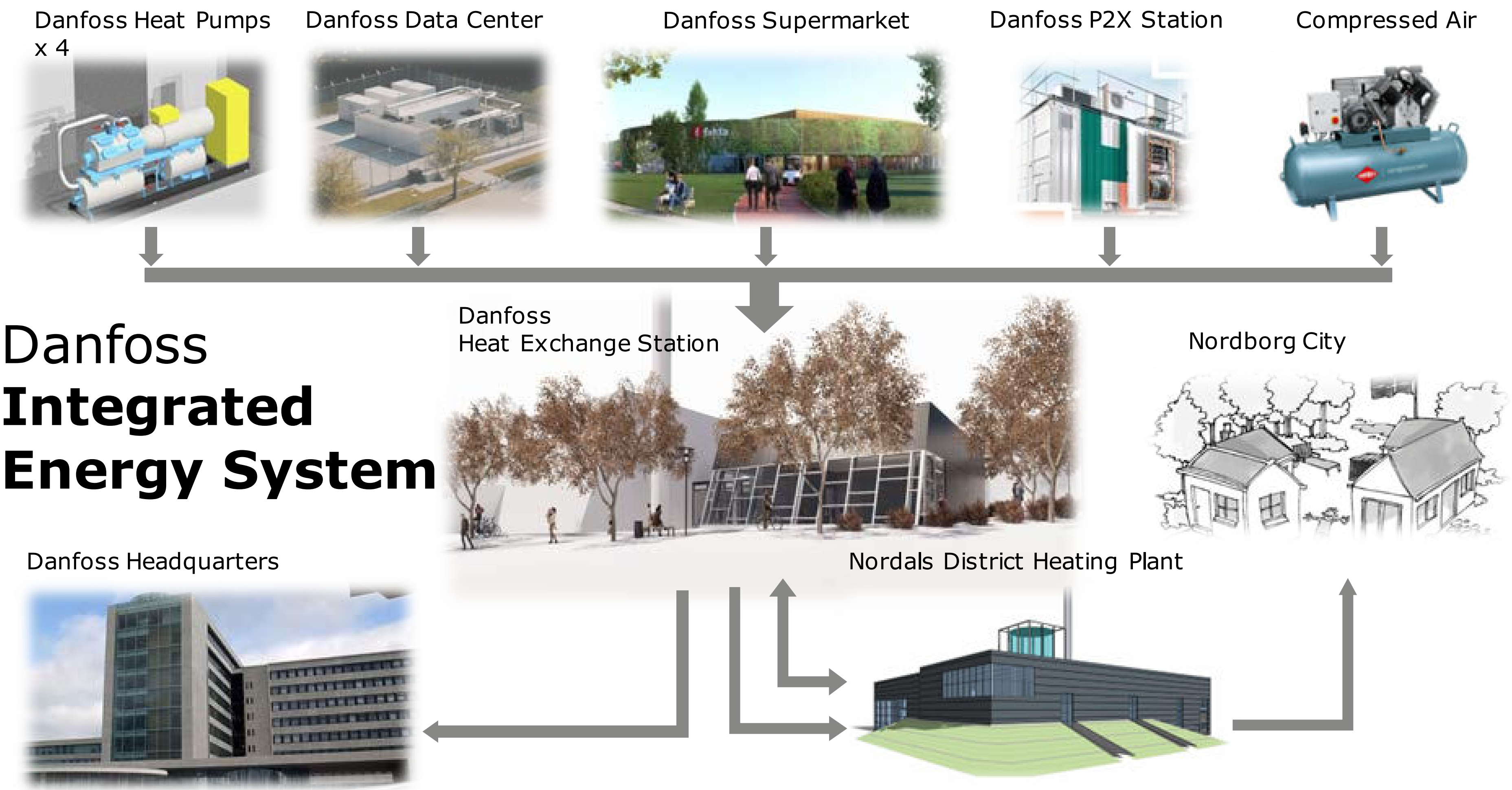
1. Reduce		3. Re-source
43%		**57%**

Nordborg Campus: Solutions of Decarbonization

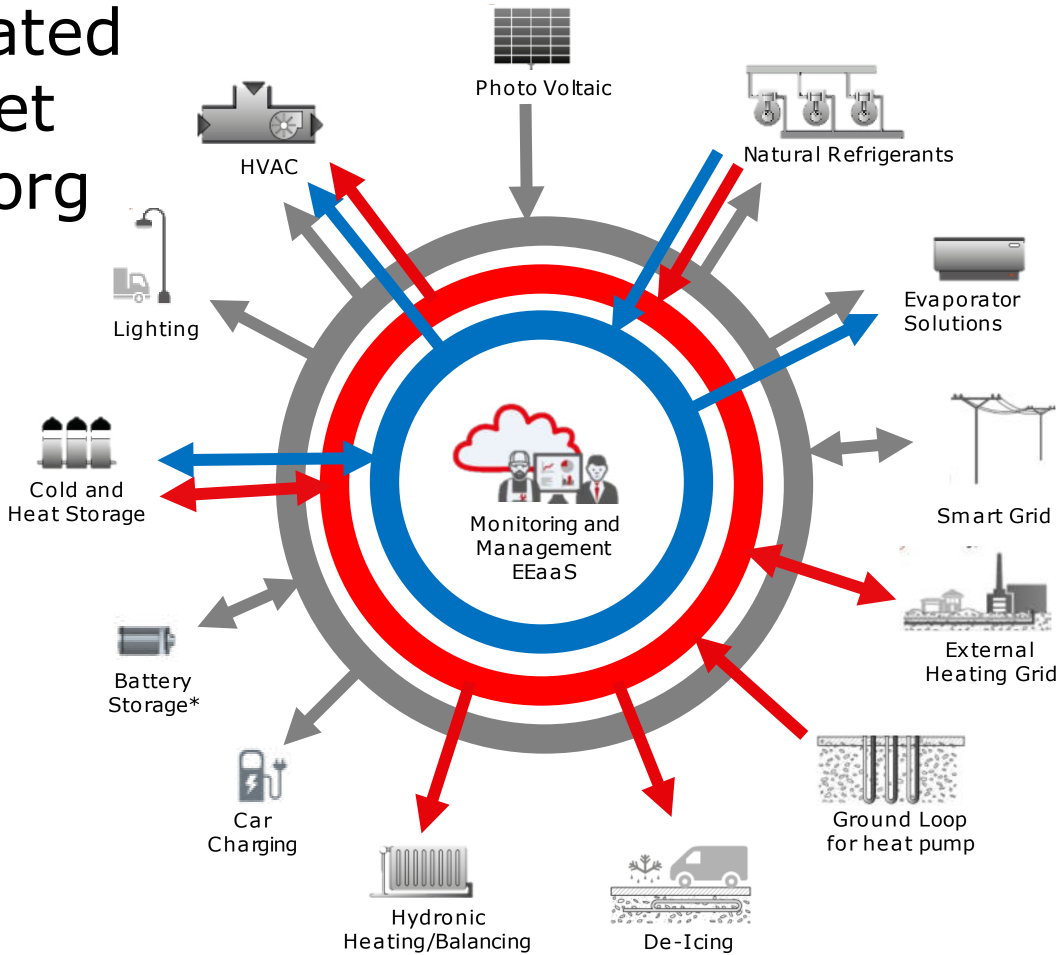


ENGINEERING TOMORROW

Danfoss **Integrated Energy System**



World’s first fully integrated Smart Store supermarket Danfoss Campus Nordborg



New factory at Danfoss' existing campus in Grodzisk, Poland, **runs on CO_2 neutral energy**

Reduce

Heat pumps and chillers are effective at reducing energy consumption

Re-use

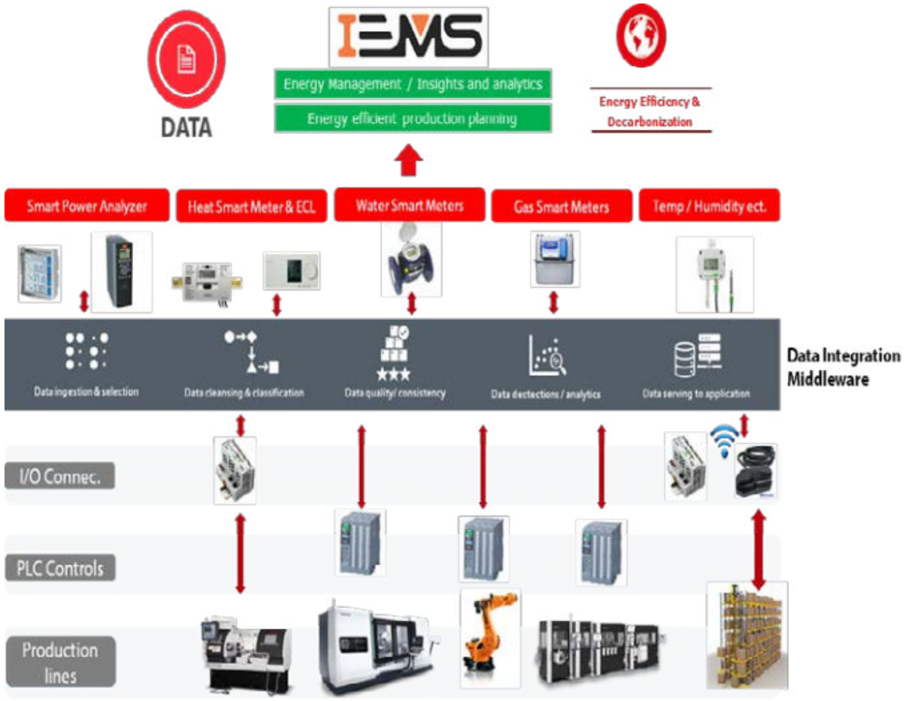
Factory machines generate excess heat, which is re-used to heat the building

Re-source

Heating, cooling, and ventilation, and all factory machines run on green electricity

Danfoss Chennai campus **reduced their CO_2 footprint** with 12,000 tons per year since 2021

Key Enabler:Technology and Data driven Approach



DATA

More **transparent data** on Scope 1 & 2 emissions.

Increased accuracy of energy consumption.

More transparent **KPIs & reports**.

IEMS

All data stored at one Platform with **remote access.**

Visualization of our energy consumption per Manufacturing site.

Analytics approach towards energy efficiency.

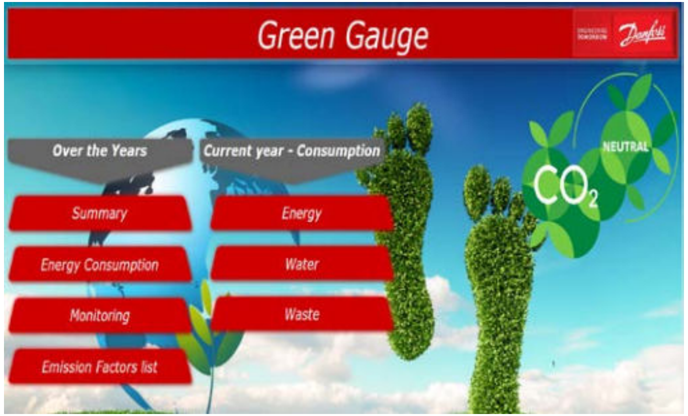
OPTIMIZE

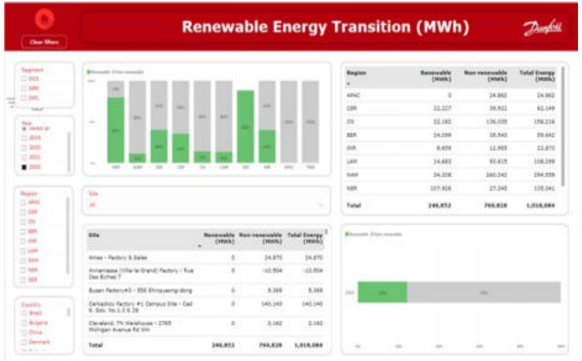
Detect **behavioral & technology** improvements on sites.

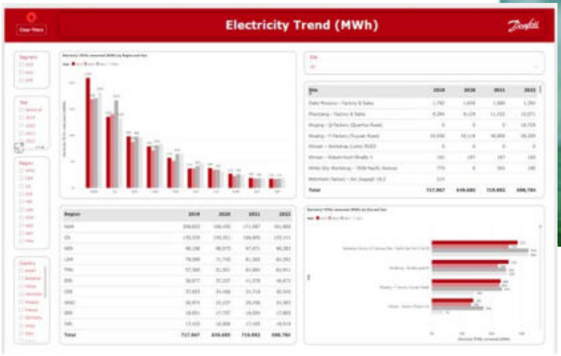
Optimization roadmap generation with energy managers.

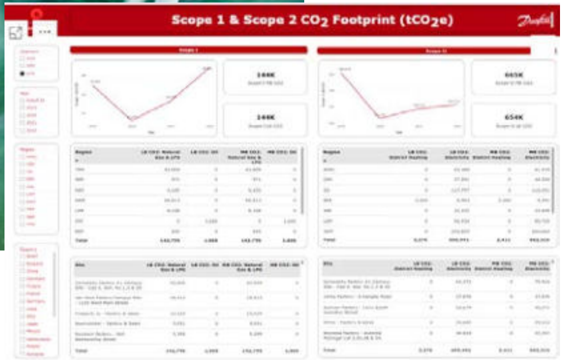
Benchmarking and **energy audits**.

Digital data driven Energy Efficiency **optimization**









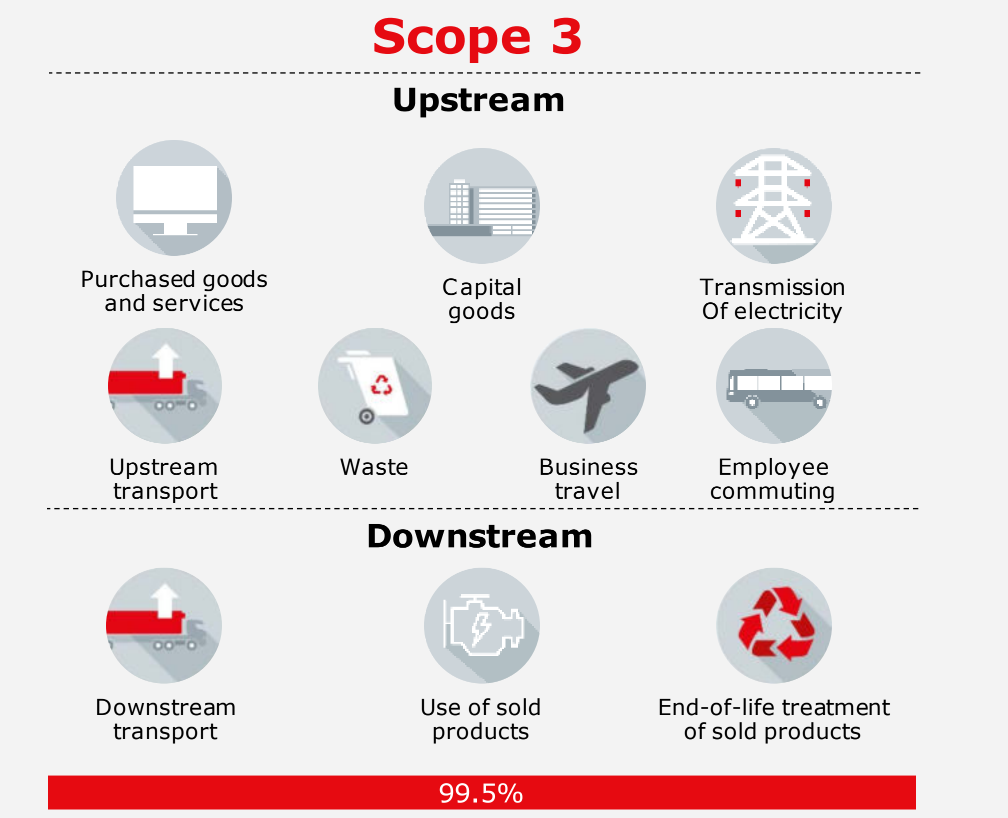
Our approach to **reduce scope 3 emissions**

1. **Design for low carbon products** at a manageable cost partnering with suppliers ‘ **GREEN ASK**’

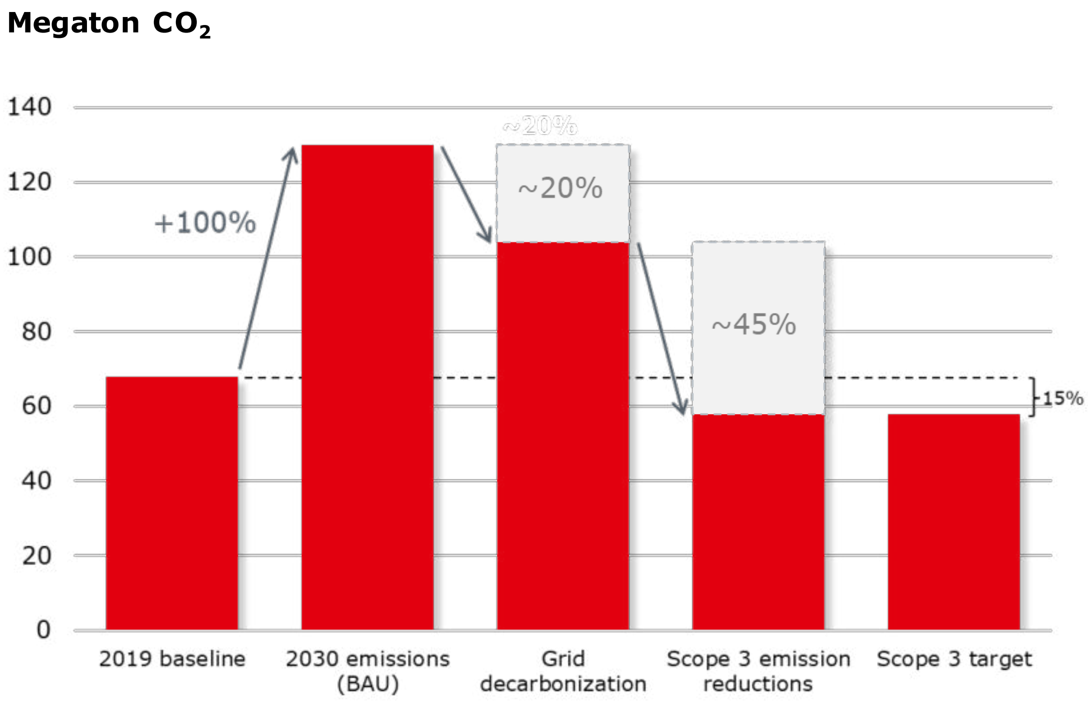
2. **Make our portfolio circular** to decarbonize our value chains

3. **Optimize logistics** with partners

4. **Reduce emissions from use of our products** by optimizing the products and help our customers decarbonize their operations



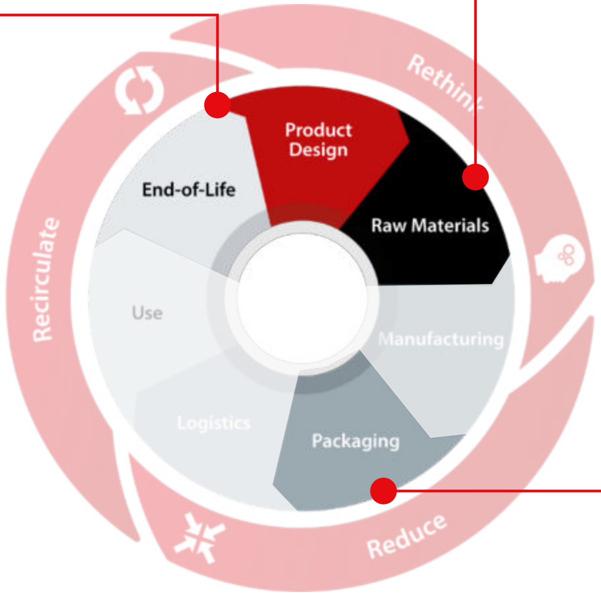
65% reduction is needed to meet our scope 3 target



- **The 2030 emissions equals a doubling of the baseline due to sales growth**
- Decarbonization of the grid is expected to deliver **20% of the required reduction**
- We need to deliver **~45% reduction** by using abatement levers:
  - Product and market mix
  - Product efficiency and less losses
  - Energy efficiency and optimization
  - New business models

Our approach to reduce scope 3 emissions

Decarbonizing products through different steps of their life cycle



Product Design to End-of-Life

Creating EPD documents with LCA

- Status: Ongoing production of EPDs
- Expected outcome: Internally and externally verified EPDs across different product lines
- Benefit: Support our customers with providing EPDs upon their request

Raw materials

Low Carbon Products assessments

- Status: 10 high-runner products assessed, rest is ongoing
- Expected outcome: >50% of our portfolio at DCS is assessed from a carbon emission perspective on the upstream materials of products
- Benefit: Better overview of our products, able to implement product development that supports our customers' decarbonization

Packaging

Packaging Decarbonization and Cicularity

- Less single use ofpackaging
- Increase share of returnable packaging solutions
- Less use of plastic in packaging

One of the first worldwide heavy duty Electric Trucks

TAKE AWAY

- **Commitment** to see **Decarbonization** as part of the **DNA and License to operate in Value Chains**
- **Design** for **low carbon** at a manageable cost by **partnering Value Chains**
- **Making** product **portfolio more circular to decarbonize** in **Value Chains**
- **Technology and Data** are **Key enabler**

It is happening ***NOW***

Thank you for listening!