



Energiemanagement und Dekarbonisierung als Teil der Nachhaltigkeitsstrategie

Markus Schumm

42.641

Beschäftigte

40

Industriebranchen

77

Produktionsstandorte

129

Länder

15

Technologiezentren

>17,000

Vertragshändler



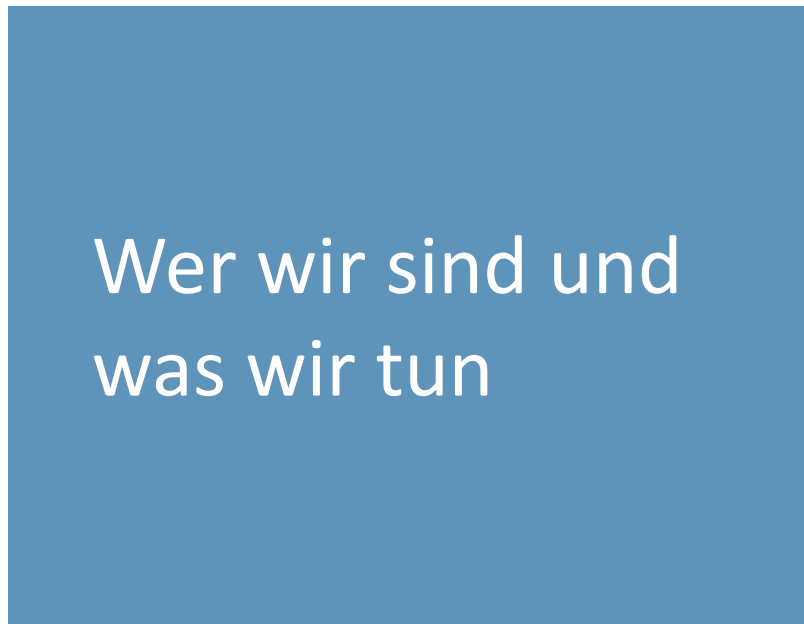
Wälzlager und Lagereinheiten



Dichtungen



Schmiersysteme



Wer wir sind und
was wir tun



Zustandsüberwachung



Dienstleistungen

SKF Care – our sustainability framework



SKF Care along the value chain

The way we make business



Supply chain



SKF operations



Transport



Use by customers



End of use

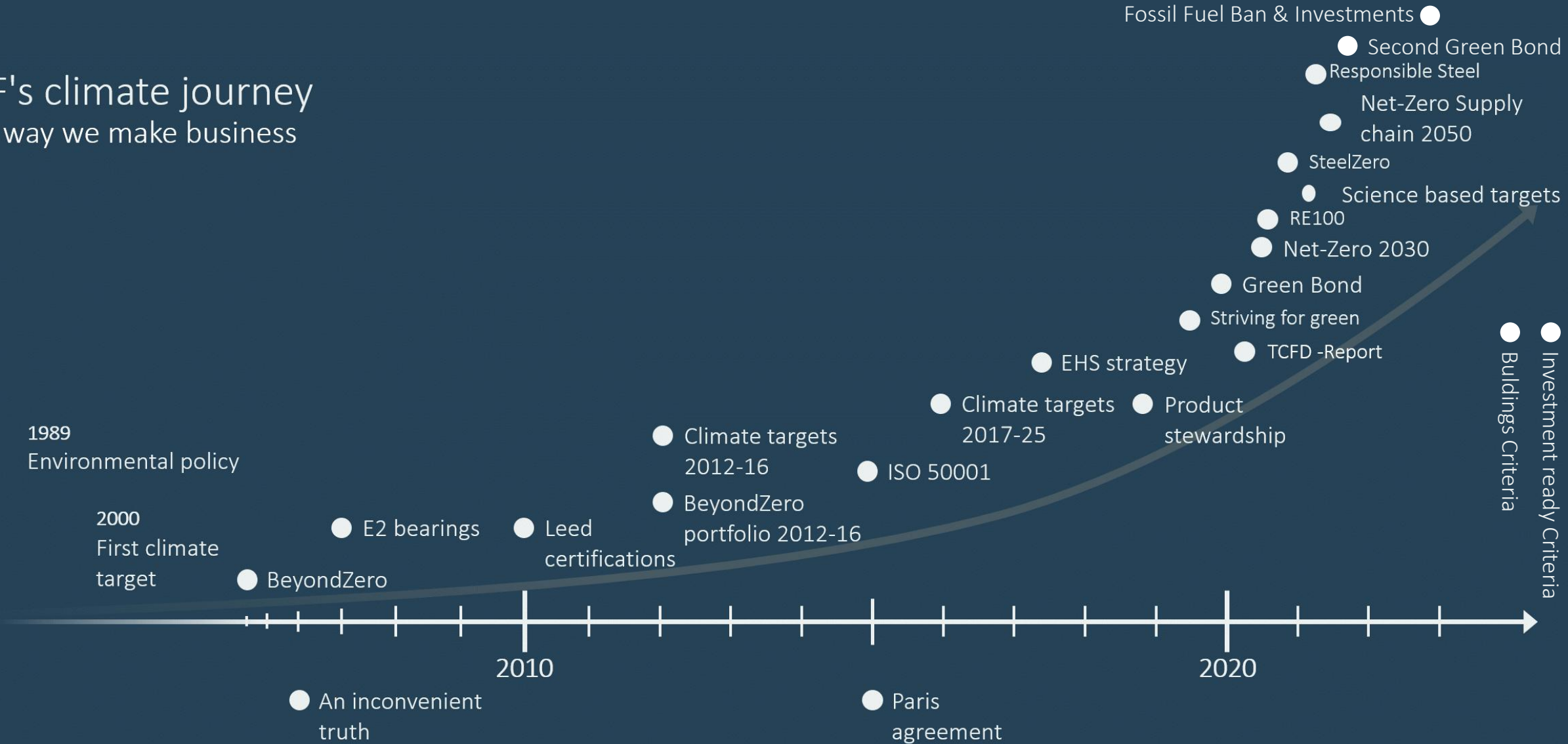
Safe workplaces, health and wellbeing
 Ethics and anti-corruption
 Energy, environment and emissions
 Diversity and equal opportunities
 Training and education
 Responsible sourcing
 Product material compliance
 Human rights
 Collaboration and sponsorship

Enabling cleantech
 Optimising systems and processes
 Developing sustainable business models

SKF has a long history of addressing climate change



SKF's climate journey
The way we make business

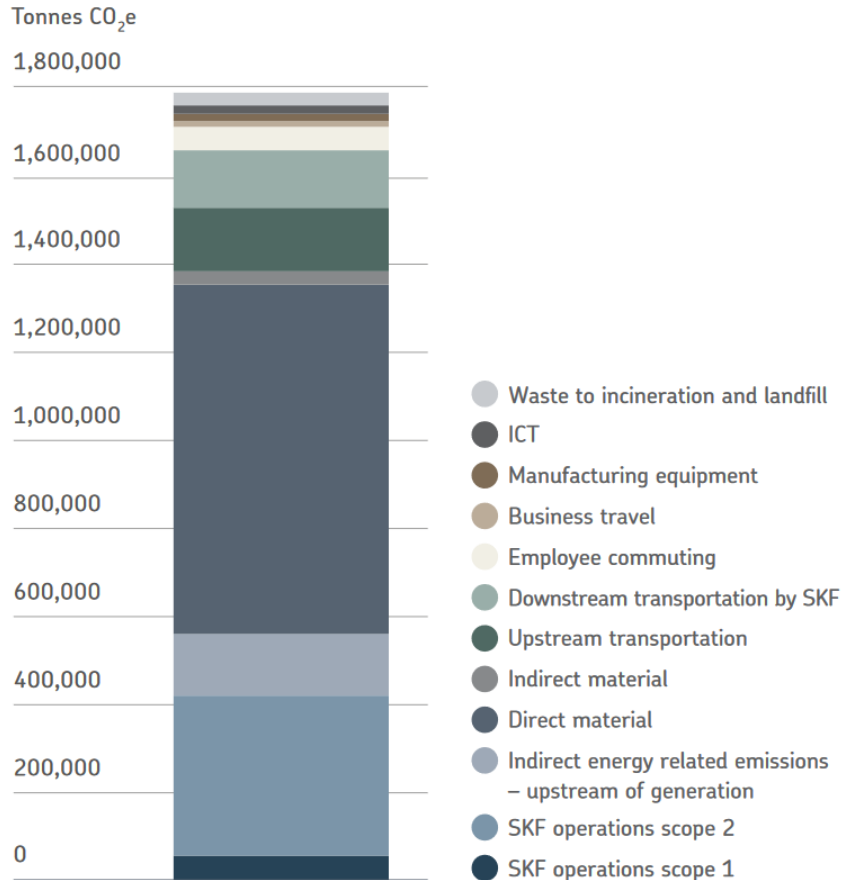


Multi-stakeholder initiatives in which SKF participates



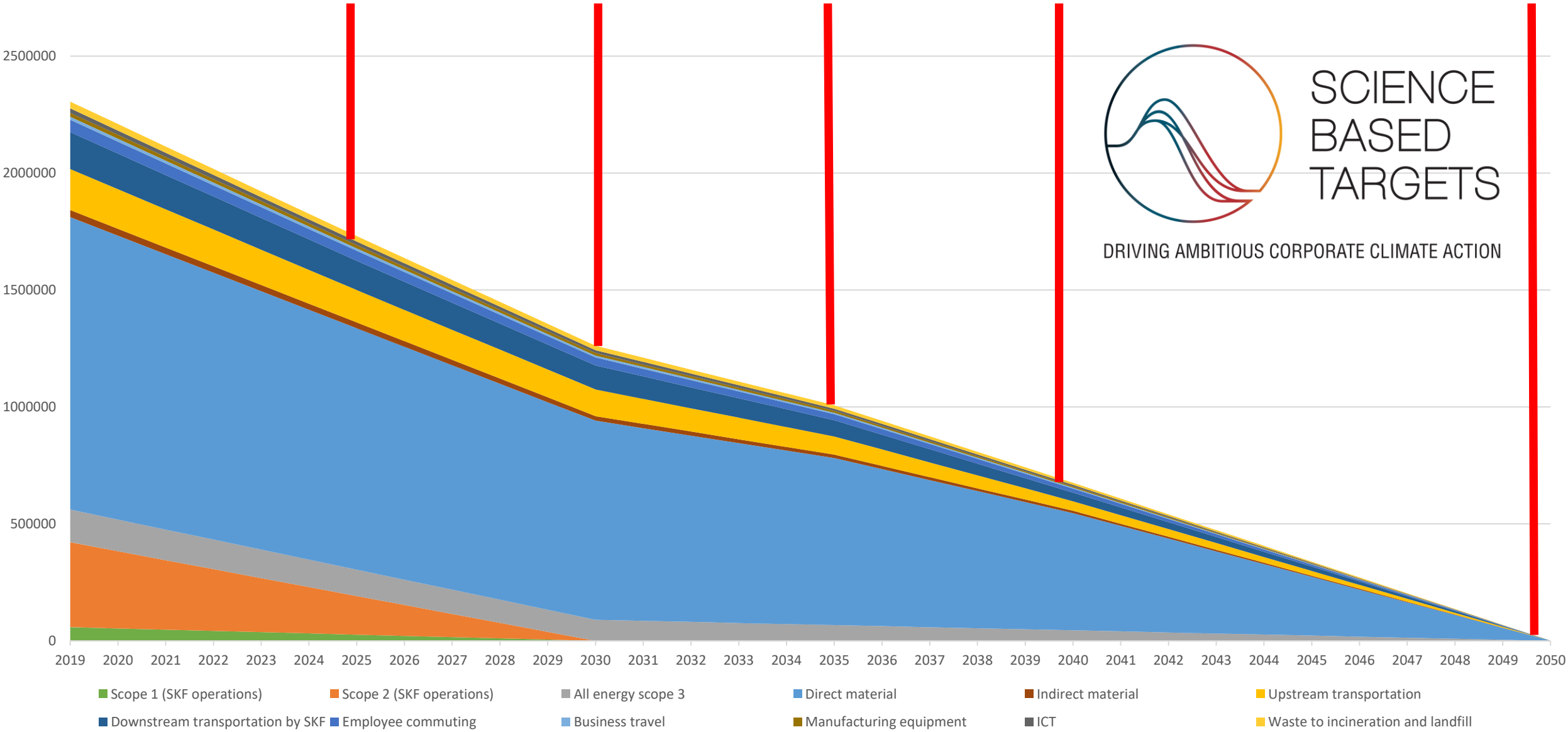
Transparency & Targets

Estimated GHG emissions (tonnes), base year 2019



	Purchased direct material	Logistics	Other up-stream impacts	SKF operations
GHG Reporting Scope	Scope 3 – upstream, except logistics both upstream and downstream			Scope 1 & 2
2025	• ISO 50001 for energy intensive suppliers. • 15% reduction in emissions from forging and ring suppliers, base year 2019.	• 40% reduction in CO₂ emissions per tonne of goods shipped to end customer, base year 2015.	• Ambition to limit GHG for business travel to <50% of 2019 figure. • Goals and follow up defined for all other relevant emissions.	• 40% reduction of CO₂ emissions from manufacturing per tonne of bearings sold, base year 2015. • 5% year on year improvement in energy efficiency.
2030	• 32% reduction in emissions from direct material, base year 2019. • SteelZero goals met or exceeded for steel suppliers.	35% reduction in transport related greenhouse gas emissions, base year 2019.	TBD	Net zero emissions for all SKF operations.
2035	43% reduction in emissions from direct material, base year 2019.	55% reduction in transport related greenhouse gas emissions, base year 2019.	TBD	
2040	60% reduction in emissions from direct material, base year 2019.	77% reduction in transport related greenhouse gas emissions, base year 2019.	TBD	
2050	Net zero emissions			

SKF's Climate Trajectory



Increasing requirements from customers

Compliance info

- Product material compliance (REACH, RoHS, etc.)
- Code of Conduct
- Management systems (ISO etc.)

Qualitative company data

- Strategy and targets
- Policies
- Surveys and ratings



ecovadis



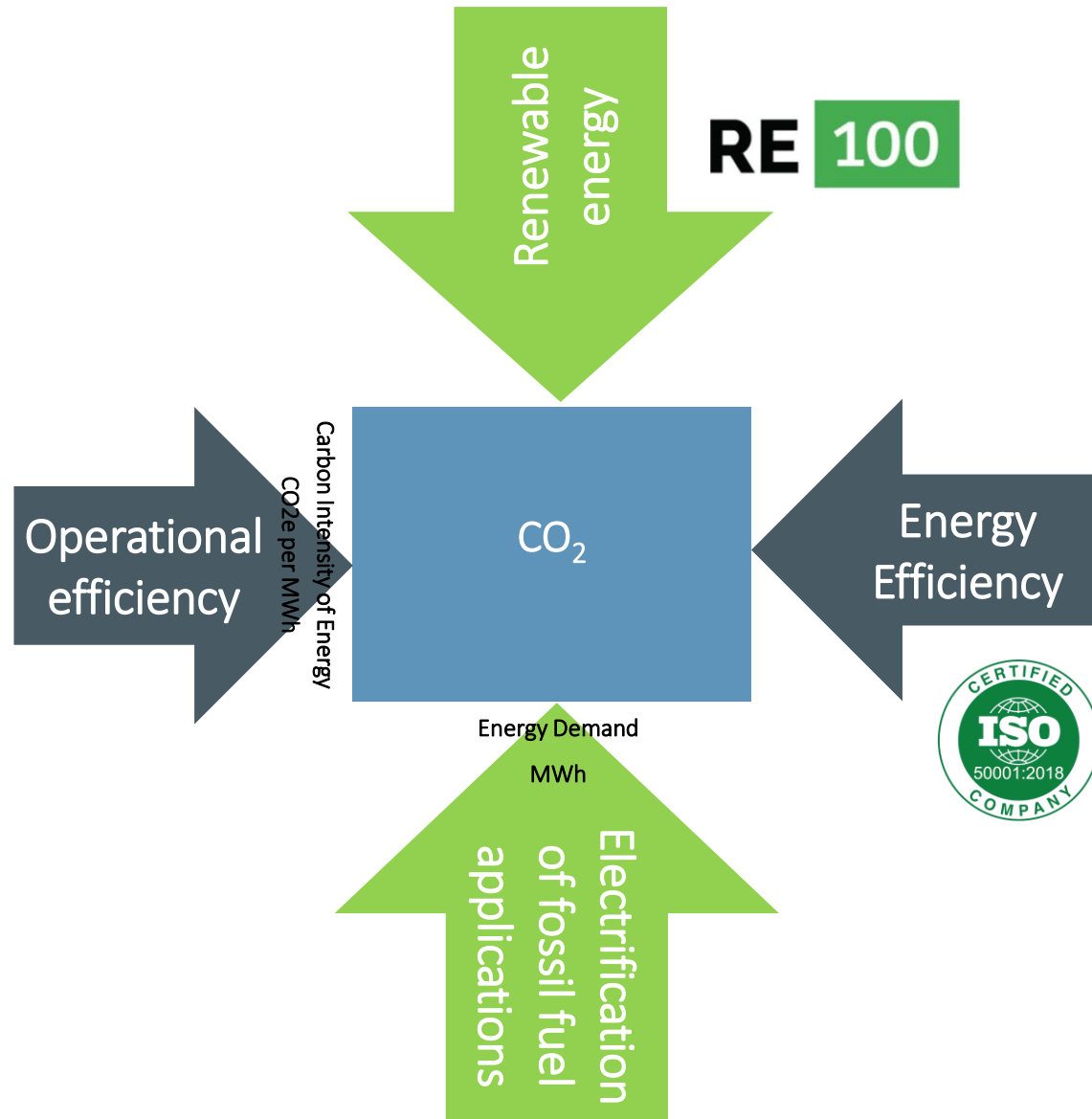
Quantitative data for information

- Corporate scope 1, 2, 3 emissions
- Recycled content
- Environmental performance (energy, water, waste, etc.)

Quantitative data for decision-making

- Product carbon footprint
- Life cycle assessment results
- Environmental product declaration

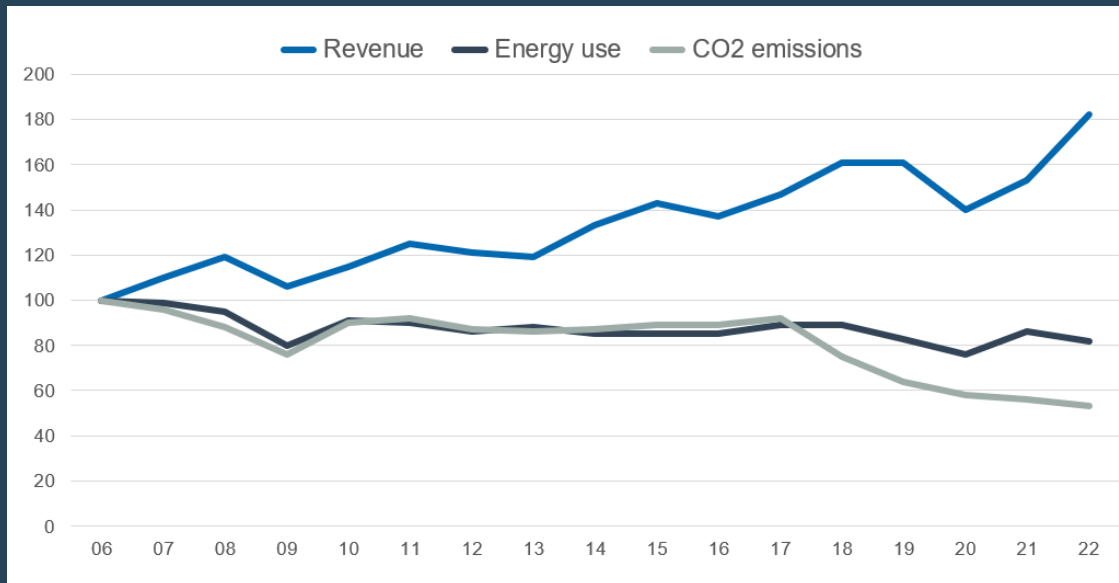
Strategy for Decarbonized manufacturing operations by 2030



SKF Action & Ambition – Scope 1 & 2

Track record

- Targets (and reporting of) Scope 1,2 emissions for 20 years+
- Globally certified to ISO 50001 (major units)
- Energy efficiency targets defined and delivered (2021=2% improvement)
- In 2021 50% of all electricity sourced globally is renewable (70%+ in Europe)
- 3 SKF factories already Carbon Neutral
- Driving reductions of up-stream emissions (direct material supplier ISO 50001, logistics etc.) for 10 years +
- Conducting and using LCA and Carbon footprint for 20 years +



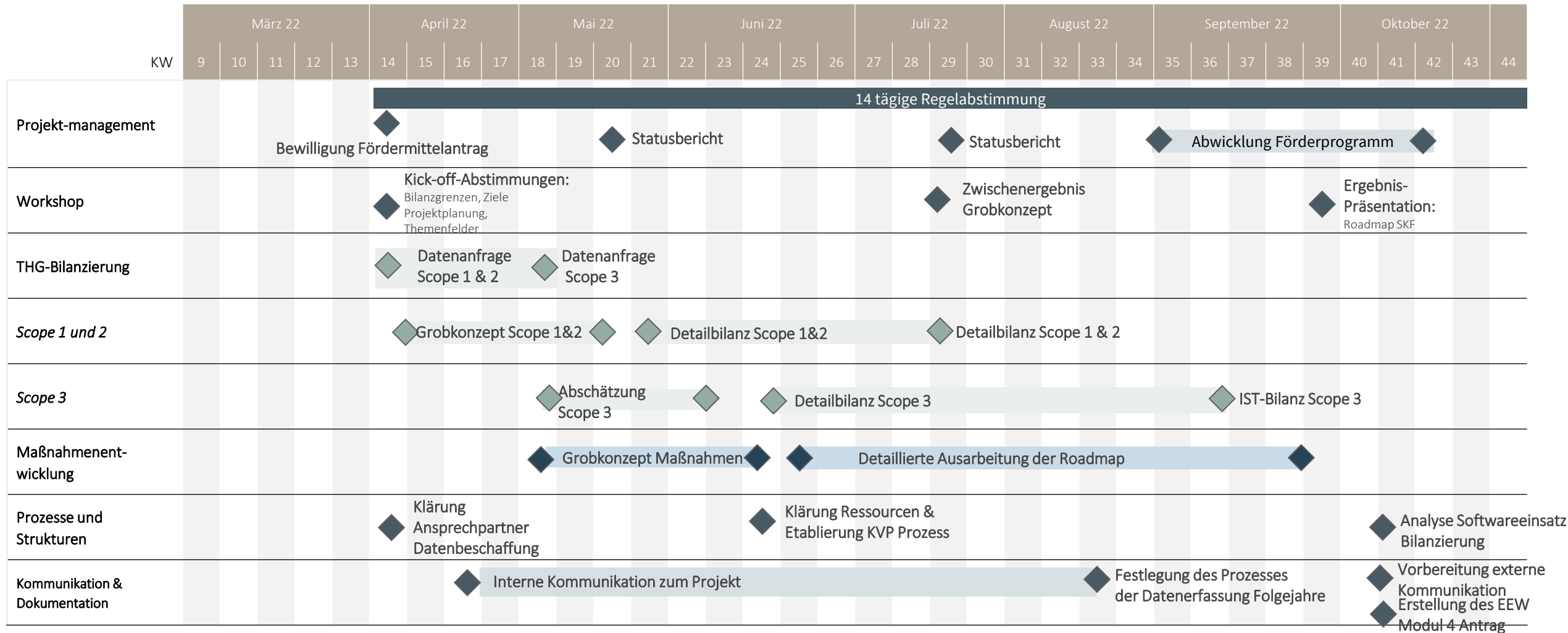
Ambition



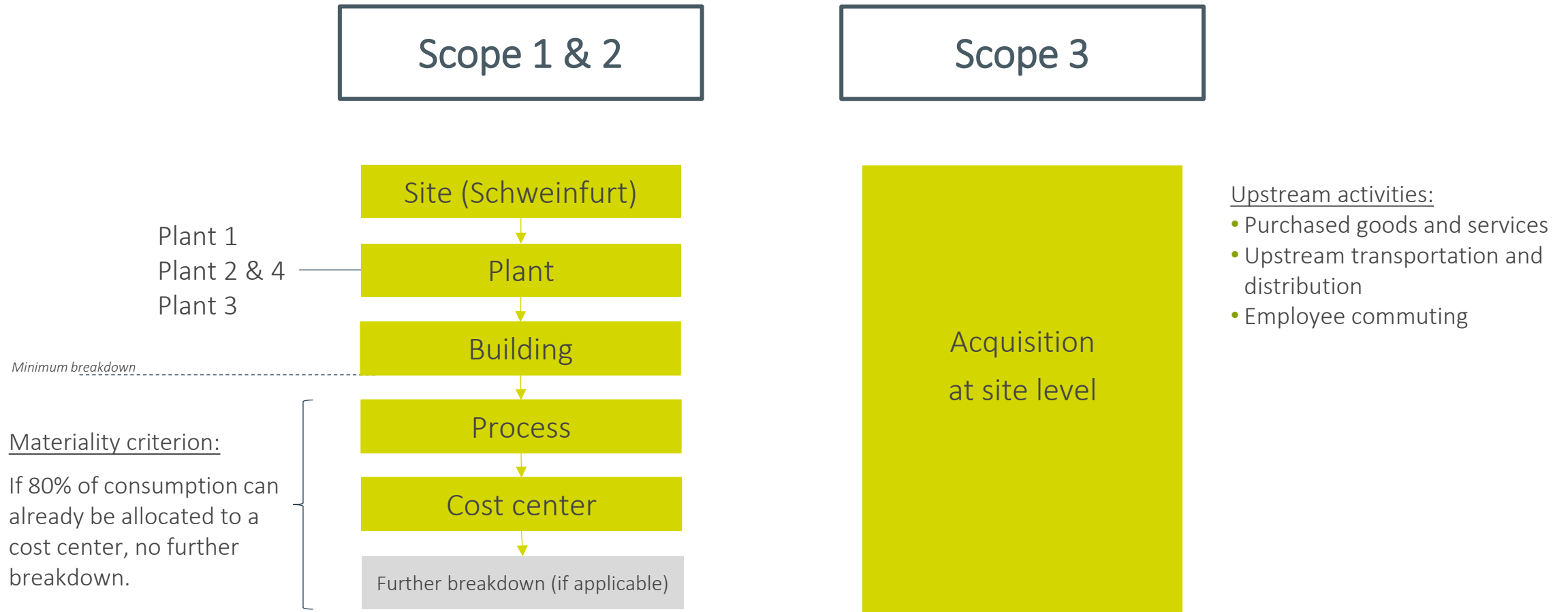
- Decarbonize all factories (Scope 1 &2) by 2030
- 5% Year on Year improvement in manufacturing energy efficiency.
- Decarbonize building and process heat by 2030
- 100% green electricity by 2030 (SKF is part of RE100 initiative)

LOCAL STRATEGY PLANT SCHWEINFURT

Project Plan Transformation Concept



Procedure at Plant Schweinfurt



Task definition and solution approaches

Identify energy efficiency potentials

Optimization of the ventilation systems

Reduction of power consumption through base load reduction

LED Lighting

Use renewable energy

Use of a PV system

Use of a heat pump (air / brine) → following project

Reducing local combustion

Electrification/H2 of ovens

Electrification of forklifts

Electrification of cars

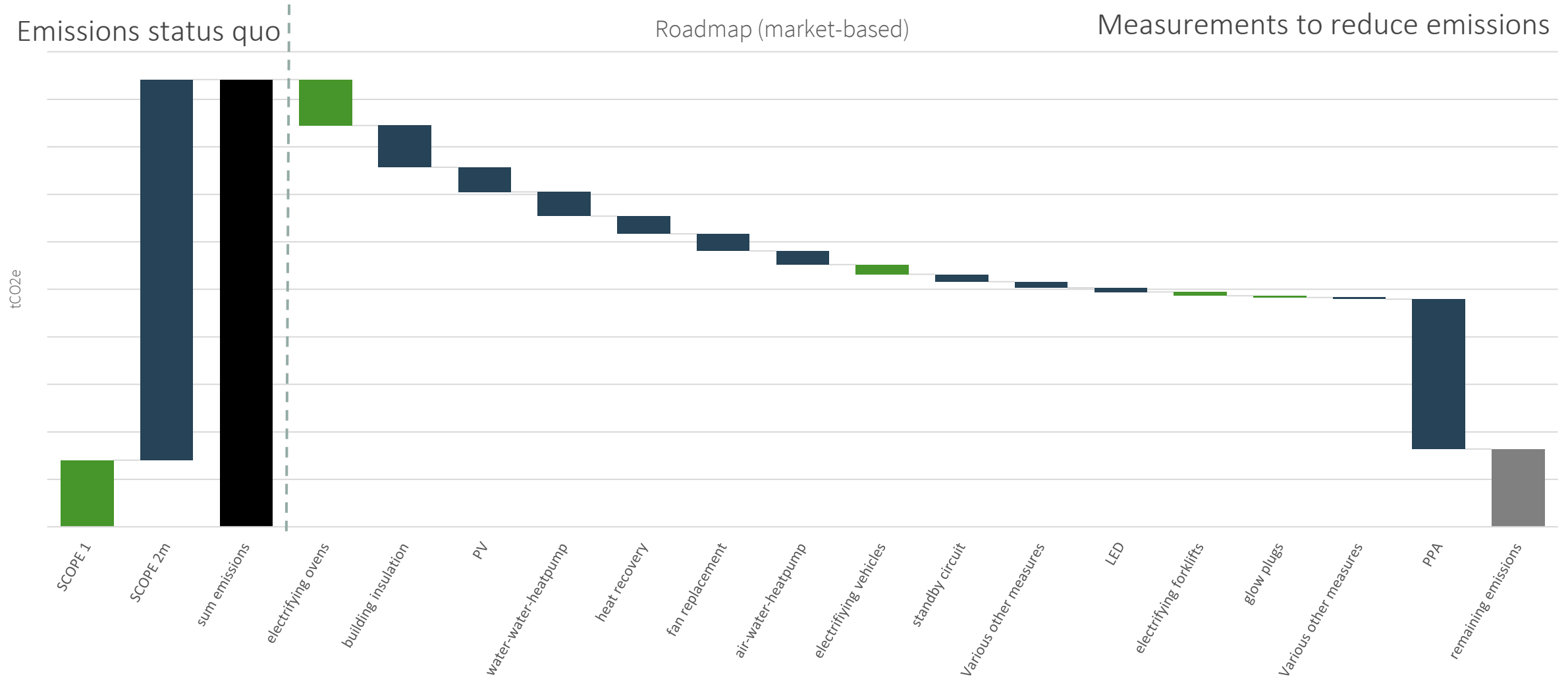
Reduction of heat losses / Energetic refurbishment

Waste heat recovery

Roof and facade renovation

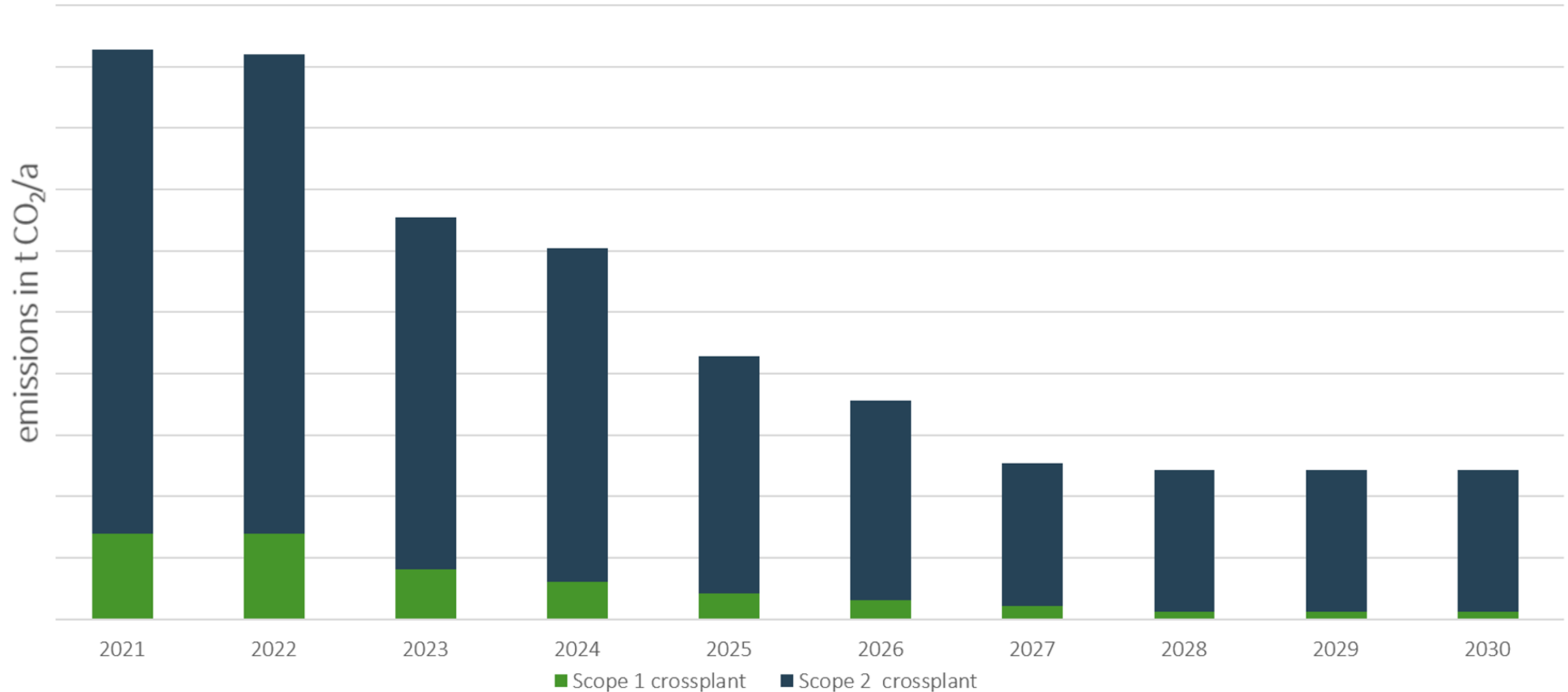
Window replacement

Roadmap Scope 1 & 2 (market-based)

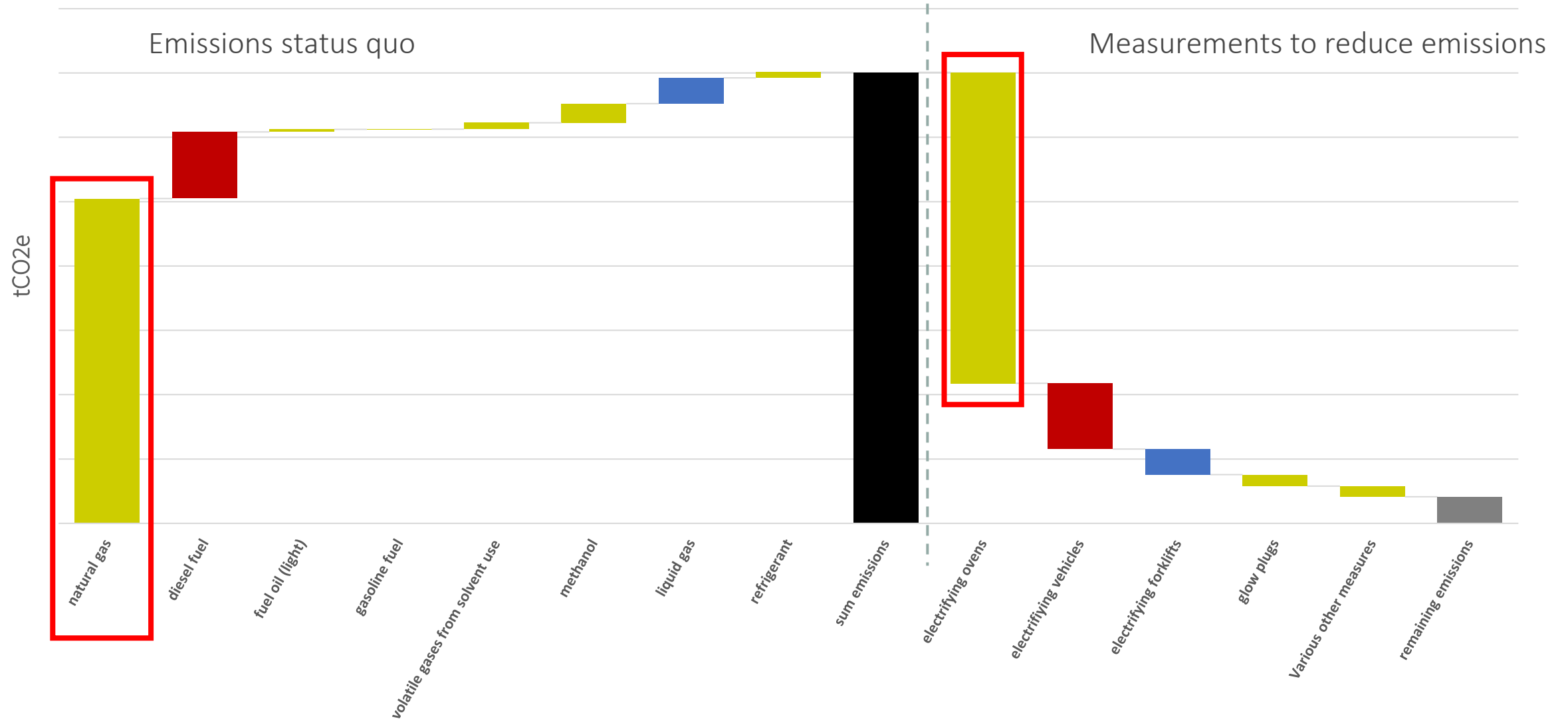


Development of emissions in Scope 1 & 2 (cross-plant)

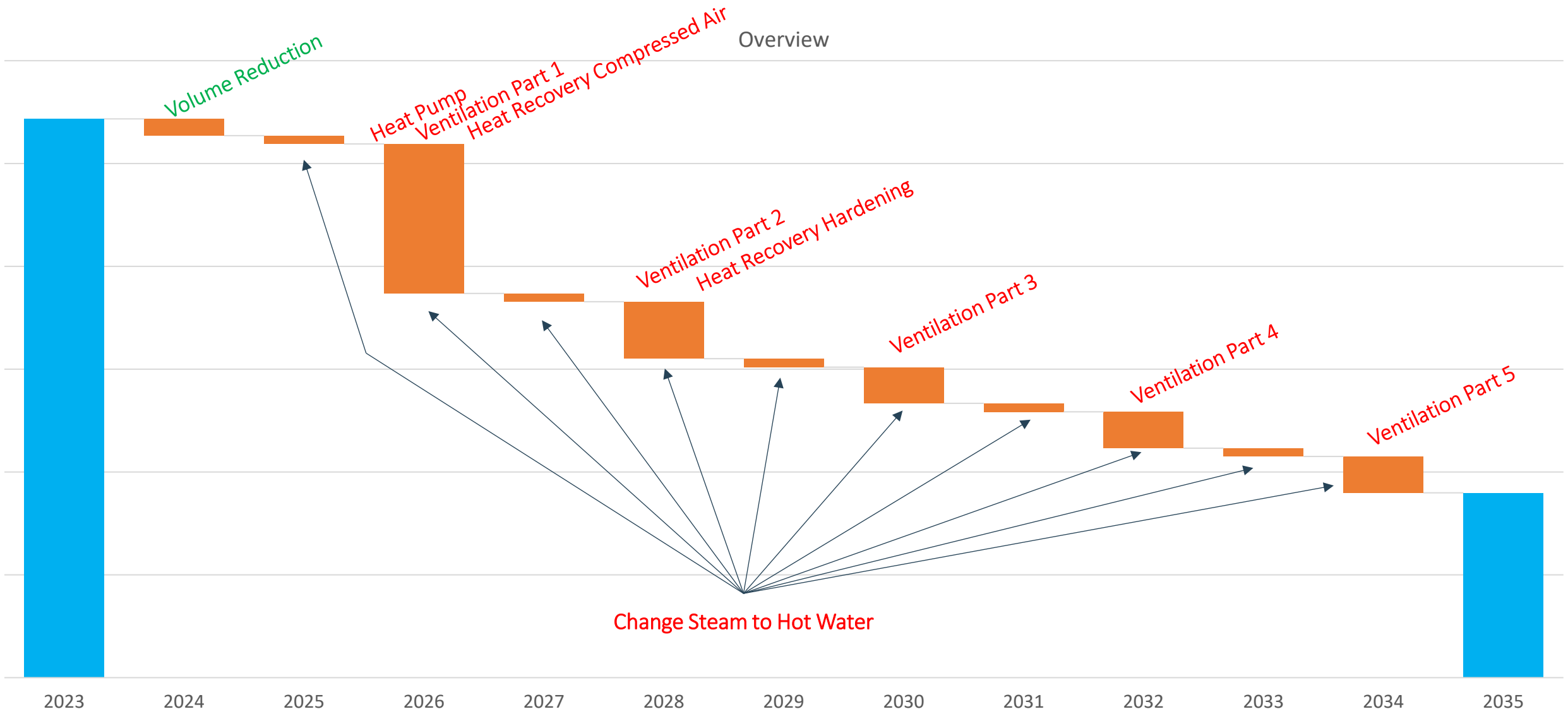
Scope 1 & 2 emissions in t CO₂



Roadmap Scope 1



District Heat – Expected Development



CHALLENGES

Emission sources in Scope 3

Upstream emissions		
1		Purchased Goods and Services
2		Capital Goods
3		Fuel- and Energy-Related Activities
4		Upstream Transportation and Distribution
5		Waste generated in Operations
6		Business Travel
7		Employee commuting
8		Upstream leased Assets

Downstream emissions		
9		Downstream Transportation and Distribution
10		Processing of sold Products
11		Use of sold Products
12		End-of-Life Treatment of sold Products
13		Downstream leased Assets
14		Franchising
15		Investments

Product Carbon Footprint

Kegelrollenlager



Name des Produktes: Kegelrollenlager

Standort: Schweinfurt

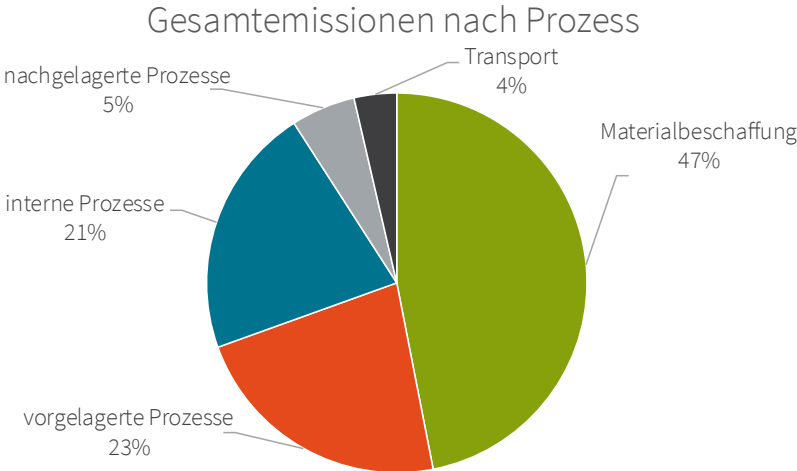
Material & Fertigung: Stahl, Kunststoff, Verpackung

Bilanzierungsregel: Cradle-to-Gate

Product Carbon Footprint:

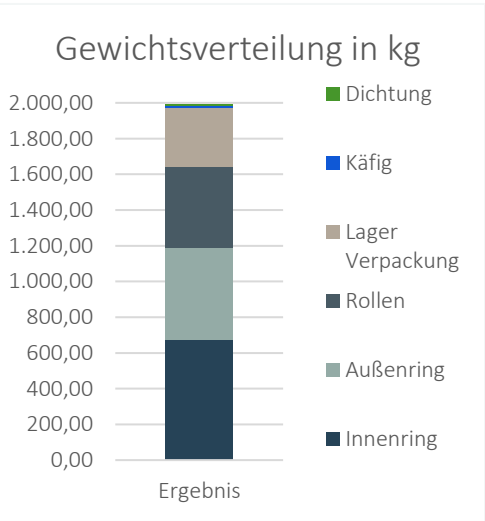
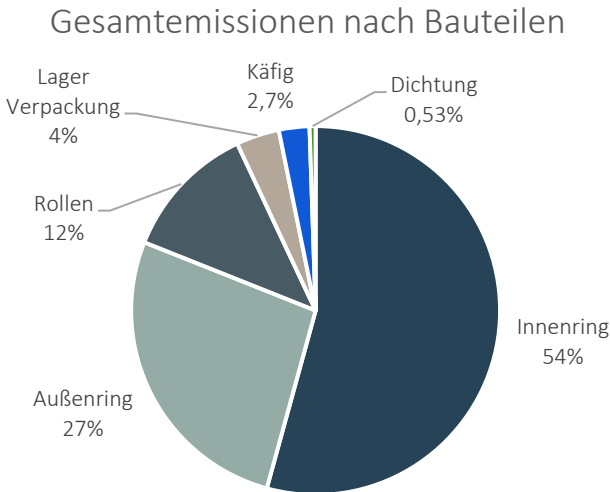
4.201 kg CO₂e/Stück

2,25 kg CO₂e/kg Produkt



Informationen und Quellen zur Ermittlung der Daten:

- vorwiegend Verwendung von market based Emissionsfaktoren (Strom, Fernwärme, Material)
- Stromverbräuche für Hallenbeleuchtung, -lüftung & -heizung wurden über die benötigte Hallenfläche und die Laufzeiten der Maschinen für das Lager ermittelt
- Der Stromverbrauch für die Druckluftbereitstellung wurde über die jährlichen Betriebsstunden der Maschinen und die Laufzeiten für das Lager ermittelt
- Berücksichtigung von externen Transporten für alle eingekauften Materialien
- Prozesse mit jährlichem Energieverbrauch von unter 5 MWh werden vernachlässigt
- vorgelagerte Prozesse (externe Wärmebehandlung) wurden mit Werten aus internen Prozessen berechnet



Plan vs. Realisation

- Multi-Mio. Projects
- Internal Ressources
- External Support
- Daily Business
- Profitability



Saving Examples Heat Treatment



Natural gas pilot burner on the exhaust of a pit furnace for case carburizing. Natural gas consumption: 0,6 m³/h
Running hours per year: ~7000

Natural Gas consumption per year: 4200 m³

Active Energy per year: 47 MWh

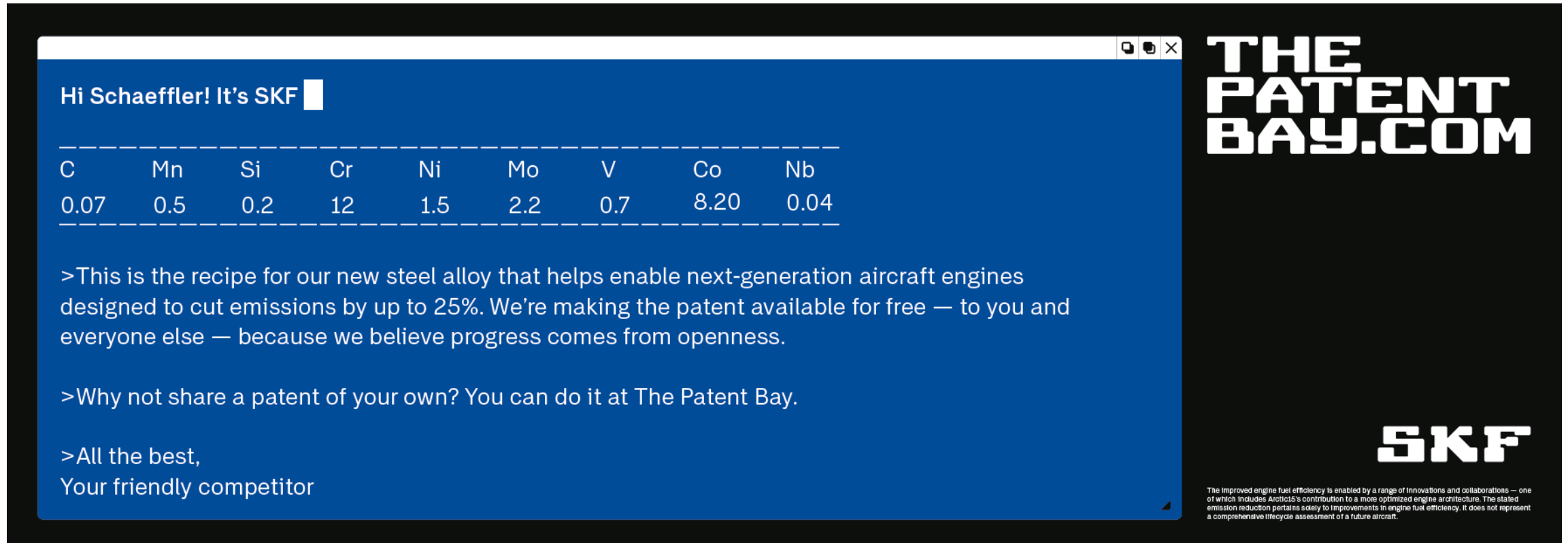


Renewable Energy – Lightweight PV



Platform to fight corporate protectionism

→ patents for sustainability-advancing technology



Hi Schaeffler! It's SKF

C	Mn	Si	Cr	Ni	Mo	V	Co	Nb
0.07	0.5	0.2	12	1.5	2.2	0.7	8.20	0.04

>This is the recipe for our new steel alloy that helps enable next-generation aircraft engines designed to cut emissions by up to 25%. We're making the patent available for free — to you and everyone else — because we believe progress comes from openness.

>Why not share a patent of your own? You can do it at The Patent Bay.

>All the best,
Your friendly competitor

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SKF

The improved engine fuel efficiency is enabled by a range of innovations and collaborations — one of which includes Arctic15's contribution to a more optimized engine architecture. The stated emission reduction pertains solely to improvements in engine fuel efficiency. It does not represent a comprehensive lifecycle assessment of a future aircraft.



SKF®