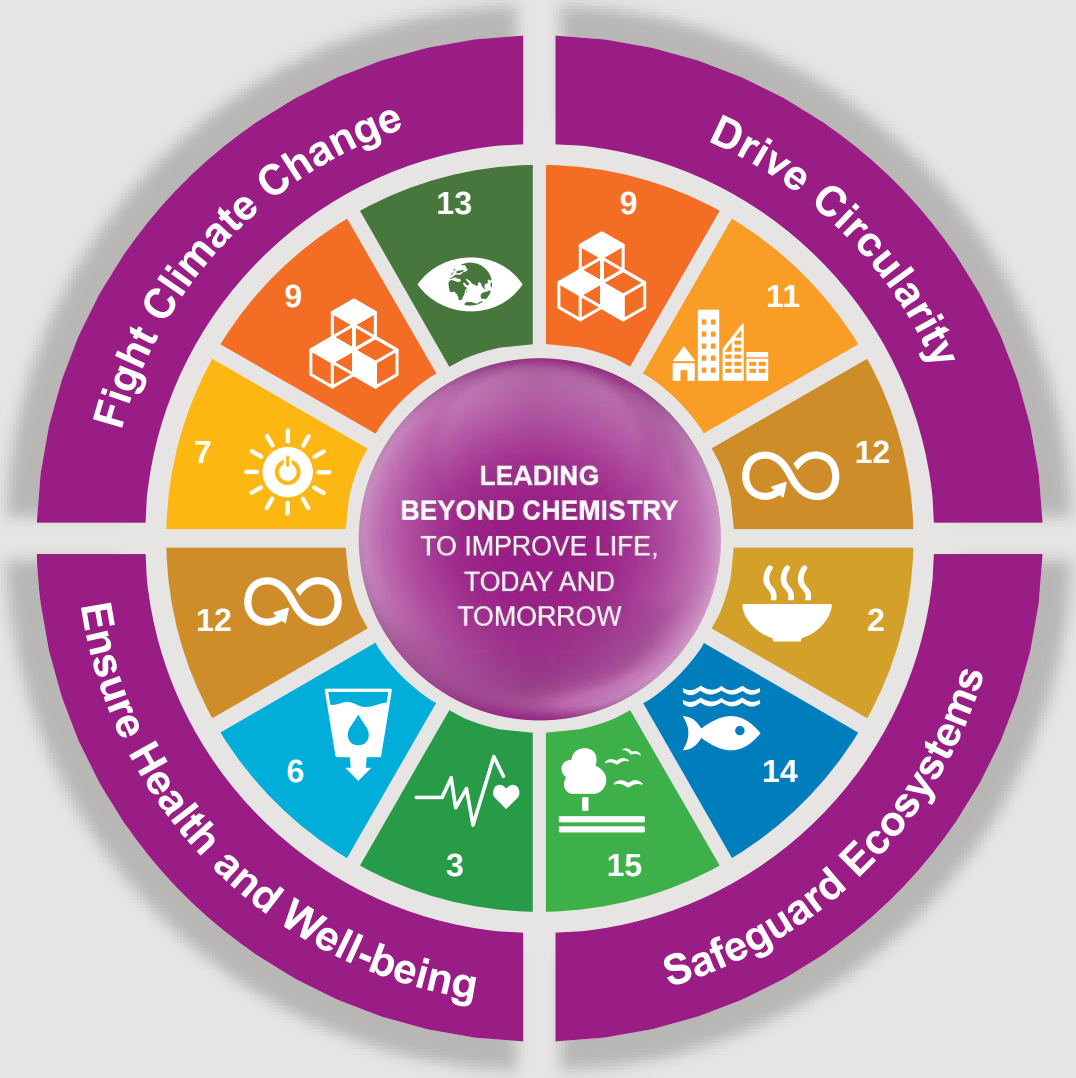
To improve life, today and tomorrow.

Capital Markets Day
May 11, 2022

Thomas Wessel, CHRO

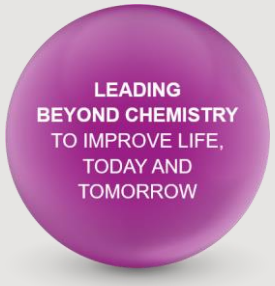
Next Generation Sustainability



EVONIK
Leading Beyond Chemistry

Sustainability as backbone of Evonik's purpose and strategy
Setting the frame

Sustainability is an integral part of our purpose



"We see profitable growth and assuming responsibility as **two sides of the same coin**."

Key growth driver…

Our Handprint

"**Sustainability is a key growth driver** and the cornerstone of our product portfolio, our investments and our innovation management."

…and saving resources

Our Footprint

"We **take responsibility** by **caring about our resources**."

Core elements of our sustainability approach

1 Evonik fully integrates sustainability in its **Strategic Management Process**

2 Evonik intends to **increase the portfolio share** of products with **sustainability benefits**

3 Evonik is committed to foresighted **resource management**

4 Evonik with high standards for **governance** and continuous **improvement of its reporting**

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1. **Full integration into Strategic Management Process**
2. Increase the portfolio share of products with sustainability benefits
3. Committed to foresighted resource management
4. Setting high standards for governance




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Our Sustainability Focus Areas defining footprint & handprint measures

Result of external views and Evonik portfolio and competencies

Our Sustainability Focus Areas

External view: "Outside-in"

UN Sustainable Development Goals

Material sustainability topics we can influence

Capital market **ratings and rankings**

AAA
AA
A
BBB
BB
B
CCC

FIGHT CLIMATE CHANGE

DRIVE CIRCULARITY

SAFEGUARD ECOSYSTEMS

ENSURE HEALTH & WELL-BEING

Value Chains with hot spots and our area of influence

Portfolio Sustainability Assessment

Core Competences

Internal analysis: "Inside-out"

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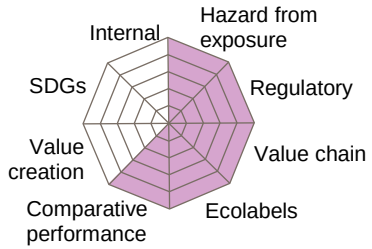
Sustainability fully integrated in corporate strategy

PSA and Emission Data Cube: core tools for strategic management process

"Portfolio Sustainability Analysis" (PSA)

Assessing products vs. market signals

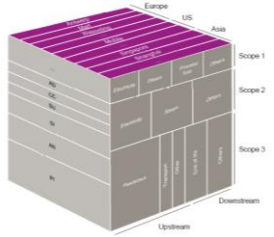


Categorization of product portfolio

- >500 PARC[1]s analyzed
- Classification into 5 product sustainability clusters with ranking from C-- to A++

"Emissions Data Cube" (Evonik GHG summary)

Emissions' analysis



3-dimensional emission data

- By business lines and divisions
- By type: scope 1-3 emissions, up- & downstream
- By site and region

Outcomes for Strategic Management Process

- Portfolio circle with sustainability clusters, to be aligned with strategic roles of product groups
- Portfolio guidelines for product and innovation steering

- Targets considered in asset strategy and accounted for in resource planning
- Simulation of scenarios in all dimensions (e.g. portfolio moves, regional choices)

Portfolio management | **Innovation management** | **Capital allocation**

1. PARC: product-application-region combinations

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Portfolio management: Adding sustainability as integral dimension

Alignment of sustainability clusters and strategic roles in strategy dialogues

Bringing together two approaches

Strategic roles in portfolio

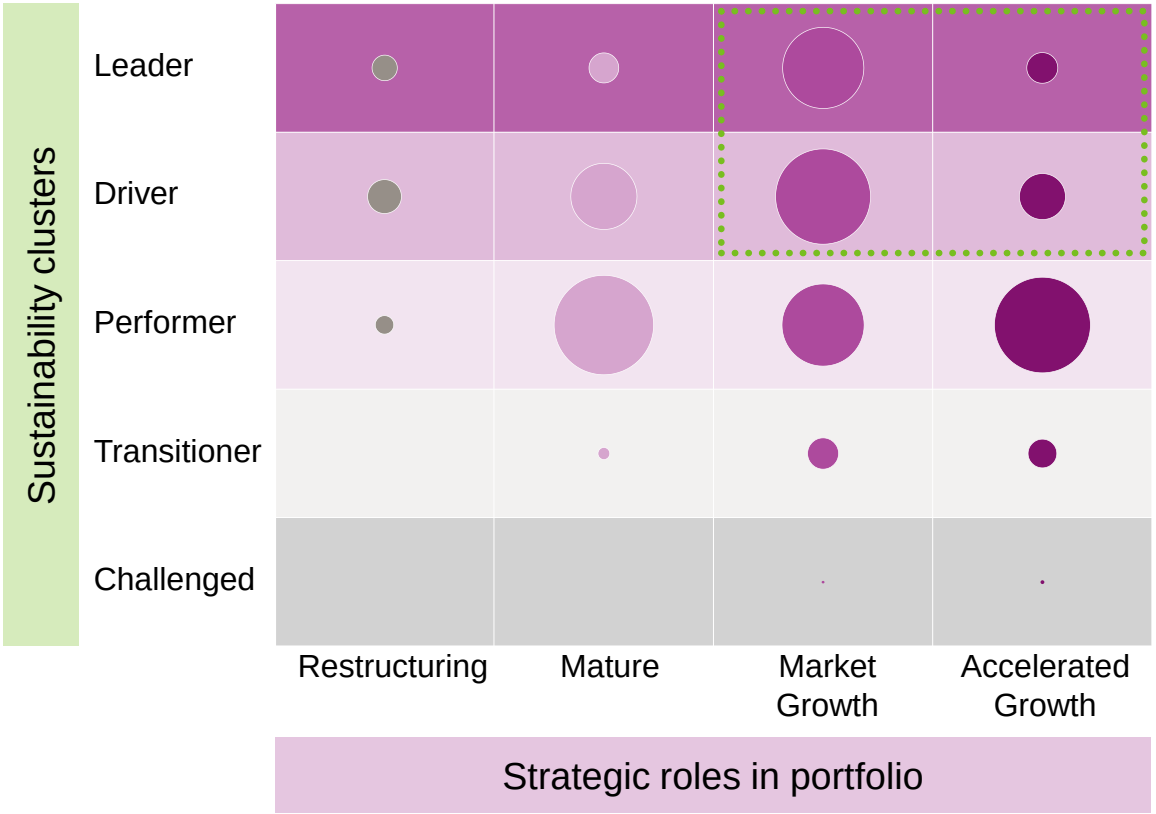
Traditional strategy matrix

+

"Portfolio Sustainability Analysis"

Sustainability clusters

To derive new strategic actions



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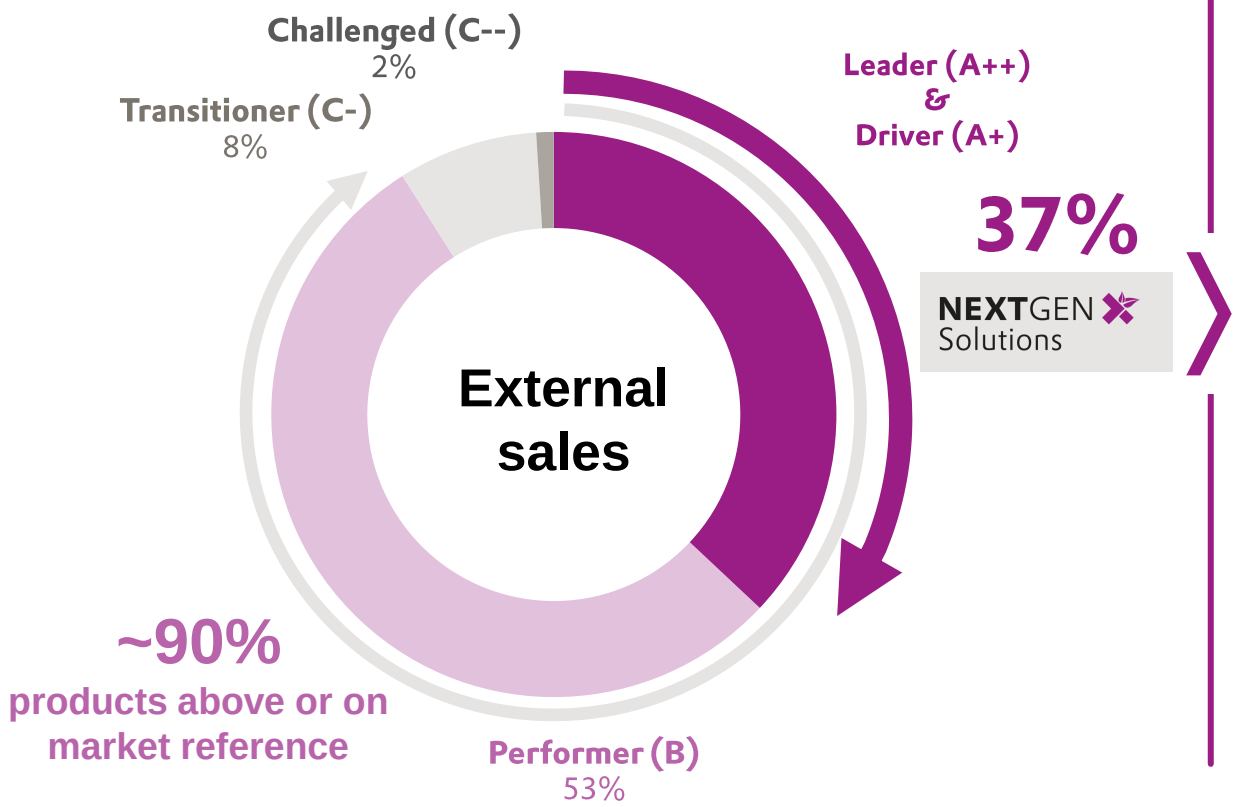
Handprint: “Next Generation Solutions”
37% of Evonik’s portfolio with superior sustainability benefits

Result of PSA analysis



Best-in-class products in Evonik’s portfolio which…

…deliver **above-average growth**

…address **increasing customer demand** for sustainable solutions

NEXTGEN Solutions

…deliver **superior sustainability benefits** to our customers

NGS: “Next Generation Solutions” include “Leader” (A++) and “Driver” (A+) products and solutions

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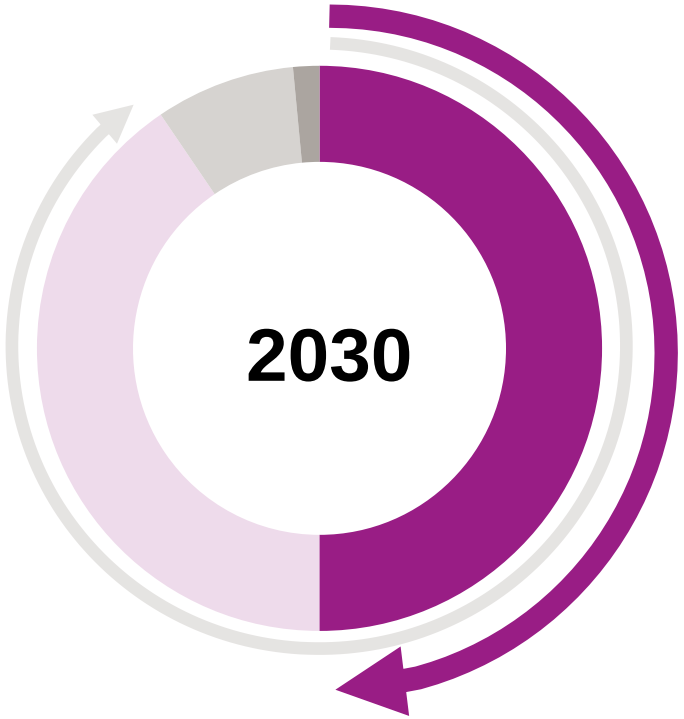
Handprint: “Next Generation Solutions” to grow beyond 50% by 2030

Ambitious new sales share target to be achieved through three levers

Increase “Next Generation Solutions”



>50%

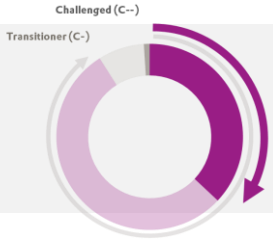
NEXTGEN Solutions

Three levers to increase the share of NGS

Existing “Next Generation Solutions” with **superior sales growth rates**

New sales from **innovations** becoming “Next Generation Solutions”

“**Challenged**” and “**Transitioner**” products exiting or with new formulations



NGS: “Next Generation Solutions” include “Leader” (A++) and “Driver” (A+) products and solutions

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Above-average growth of existing “Next Generation Solutions”
Selected examples addressing our four Sustainability Focus Areas

Future Mobility solutions

- Lightweight applications: PA12 portfolio
- Batteries: additives for electrodes / separators
- “Green tire” technology

Additives for durability in construction

- Water-repellents for building materials
- Additives for integrated protection and self-healing of concrete structures

Drug Delivery Systems

- Global development partner & solutions provider for delivery systems for effective drugs and vaccinations
- Evonik as pioneer in Lipid Nano Particle (LNP) field for mRNA technology

Modern aquaculture solutions

- High-quality proteins with essential amino acids
- Production of omega-3 fatty acids from microalgae
- AQUAVI® Met-Met as methionine source for shrimp and prawns

% values: Target CAGR 2021-2030 defined in Strategy Dialogue

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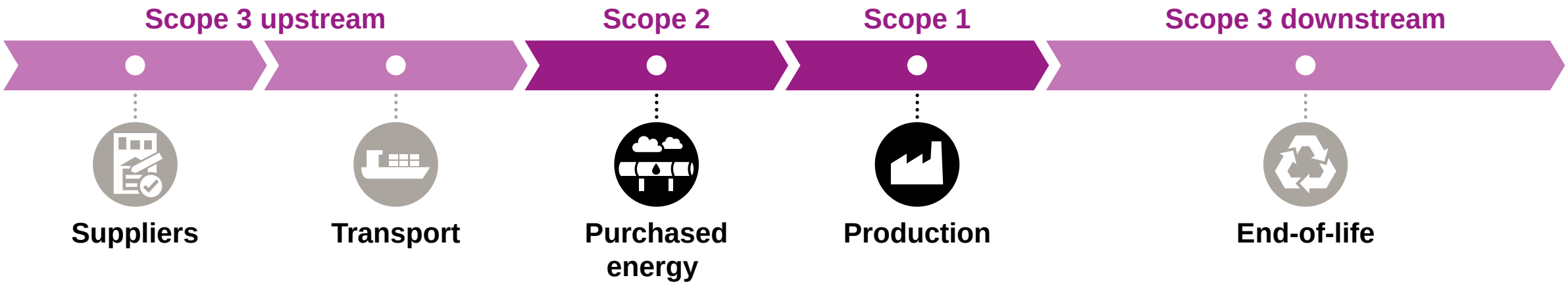
Footprint: Evonik Carbon Footprint 2021

Focus on Scope 1&2, intensifying efforts on Scope 3



14.6m tons	6.5m tons	7.3m tons
▪ Raw materials as biggest contributor ▪ Intensifying collaboration with existing & new suppliers ▪ Increasing availability of low-carbon raw materials and break-through technologies beyond 2030	▪ **Scope 1 & 2 in our focus** due to direct influence ▪ 50% of emissions at 4 biggest sites – Marl, Antwerp, Mobile and Wesseling ▪ ~80% of emissions at 20 top sites	▪ Intensified activities regarding circular economy, e.g. Circular Plastics Program

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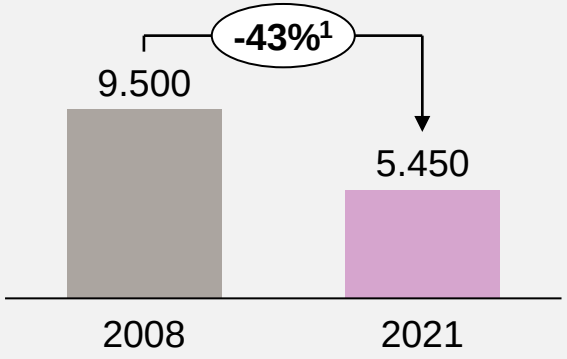
Our commitments to reaching the Paris Climate Agreement

Evonik will be climate neutral by 2050. Committed to SBTi.

Achievements on GHG emissions' reduction

Scope 1&2

2021 **-43%**

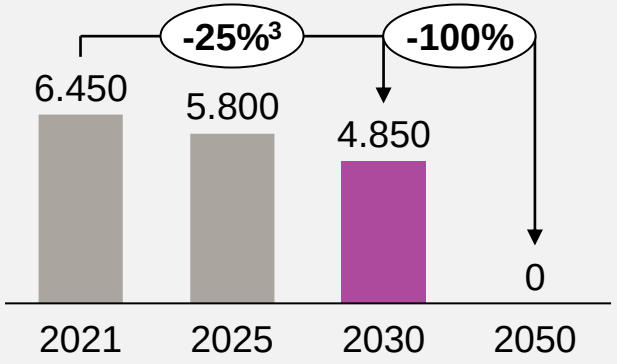


New targets for GHG emissions scope 1&2

Scope 1&2
Well below 2°C[2]

Scope 3
Committed[2]

2030 **-25%**



2050 **-100%**

1. Net emissions (= gross emissions minus power and steam sold externally); reference year 2008; on initial -50% target by year 2025
2. Commitment letter signed and handed in for SBTi, 25th April 2022
3. Gross emissions; reference year 2021, target year 2030

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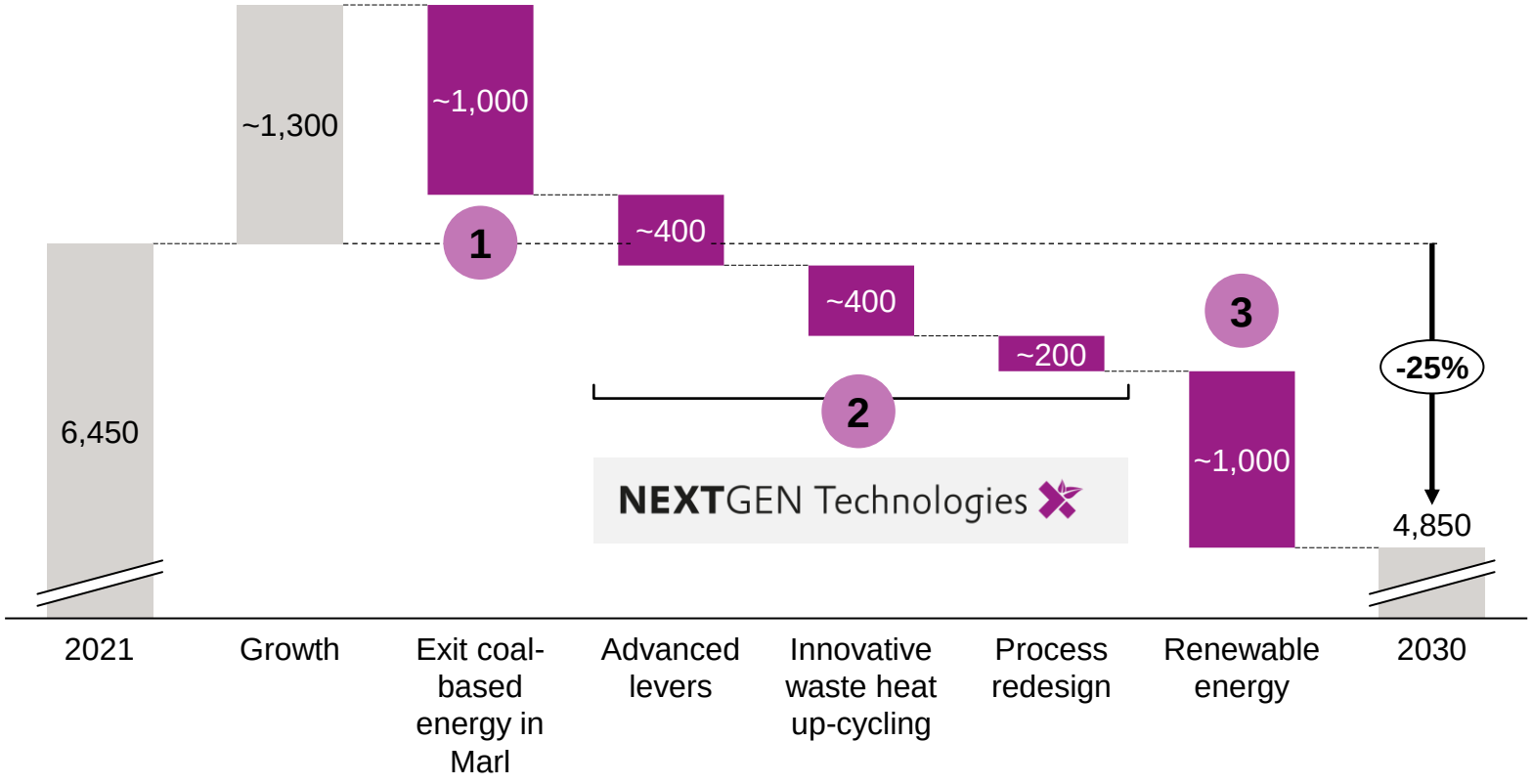
Clear roadmap to achieve Scope 1 & 2 targets by 2030

Three clusters with economically attractive measures defined

Absolute GHG emissions scope 1&2[1]



Reduction measures

1 **Exit coal-based energy in Marl**

2 **"Next Generation Technologies"**

a. Advanced levers, e.g. Adv. Process Control

b. Innovative waste heat up-cycling, e.g. heat pumps

c. Process redesign

3 **Renewable energy**, e.g. procuring green electricity

1. Gross emissions in kt CO_2e

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1 Exit coal-based energy in Marl

Modernization of Evonik's power plant park

Replacement of last coal-fired power plant at Marl Chemical Park by a **flexible combined cycle gas power plant**

Global **scope 1** GHG emissions to be cut **by ~20%**, mainly due to **annual reduction of up to 1 million metric tons CO_2**

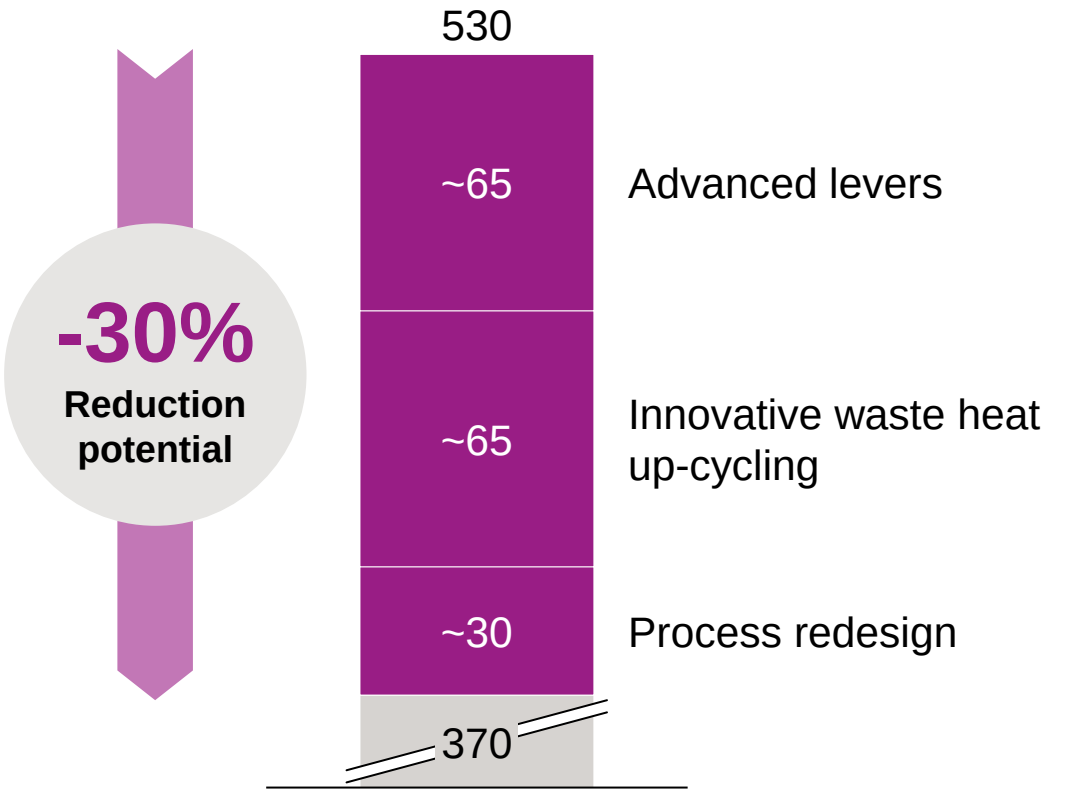
Plant expected to come on stream in **Q2 2022**, an additional generating unit scheduled to be connected to the grid shortly thereafter

Total power output of 270 megawatts with an **efficiency exceeding 90%**

Flexibility due to current energy market situation:
Temporary prolongation of runtime of coal-fired power plant under evaluation in order to increase security of supply, before readopting initial plan to replace coal with gas

2 “Next Generation Technologies”
Example Antwerp as blueprint for other sites

Reduction[1] by economically attractive measures



“Next Generation Technologies” (selected examples)

2a
- Advanced Process Control (APC) ensuring production at ideal operating point
- Heat exchangers for improved heat integration

2b
- High temperature heat pumps for valorization of waste heat
- Mechanical vapor recompression

2c
- CO_2 reuse in production processes
- Adaptation of reaction conditions for increased energy efficiency

1. Gross emissions in kt CO_2e

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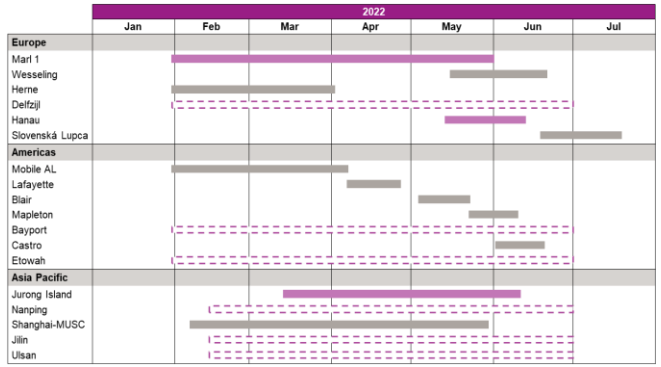
2 New EAGER program to assess main CO_2 emitting sites
Definition of 2030 implementation plan with reduction measures

2021: Starting point

- Detailed analysis of options for Antwerp and Rheinfelden sites
- Definition of most important reduction levers with necessary investments
- Blueprint for other sites

2022: On-going

- Project EAGER[1] to develop a clear perspective for top sites to collect and prioritize suitable reduction measures
- New data collection on waste & water



2022-2030

- "Next Generation Technologies" implementation plan ready end of 2022
- Investment into selected projects
- Execution of CO_2 reduction measures

NEXTGEN Technologies

IMPLEMENTATION PLAN

1. EAGER: Evonik Assessment of Greenhouse Gas Emission Reduction

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3 Renewable energy

Increase share of renewable grid electricity

- Advanced negotiations for first photovoltaic-based PPAs (Power Purchase Agreements)
- Increasing electrification of processes e.g. by heat pumps leading to increasing demand of green electricity

Other renewable energy sources

Other options for renewable energy include:

- Biomethane or biomass for self-generation of steam and electricity[1]
- Green hydrogen supplementing or replacing natural gas

1. CO_2 reduction occurs in GHG protocol scope 1 or 3, dependent on selected accounting methodology (incl. or excl. biogenic carbon removals and emissions)

Reducing our footprint in all our sustainability focus areas

Measurable set of KPIs in place, more to come with EAGER results

Footprint reduction	Fight Climate Change	Drive Circularity	Safeguard Ecosystems	Ensure Health & Wellbeing
KPI	**-25%** reduction of Scope 1 and Scope 2 emission by 2030 (vs. 2021)	**>10%** significant increase in bio-based and circular raw materials	**100%** RSPO MB certified palm oil and derivatives as of 2023	**-20%** reduction of other emissions to air by 2030 (vs. 2021)
Further ambitions	▪ Increase share of renewable, sourced, grid electricity ▪ Committed to SBTi on Scope 3 ▪ Be climate neutral for all emission scopes by 2050	▪ Reduce amount of non-hazardous waste sent to landfill	▪ Site-specific action plans for water-stress production sites ▪ Minimize freshwater intake in water-stress production sites ▪ Reduce water intake in water-intensive sites	▪ Minimize hazardous production waste ▪ Maintain low risk exposure to “Hazardous Chemicals of High Concern”

1. RSPO MB: Roundtable on Sustainable Palm Oil Mass Balance

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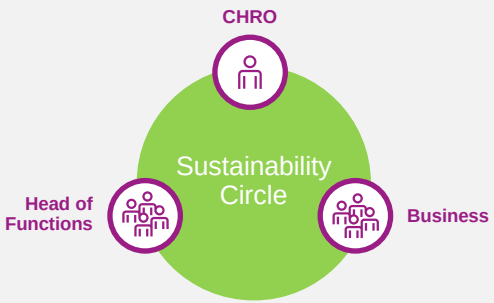
Complementing the governance on ESG
Reflected in organizational set-up and remuneration

Clear responsibilities

- **Executive Board** has overall **responsibility** for sustainability
- Setting **strategic framework** and **executing measures** in close cooperation with operating divisions

Cross-functional & business alignment



Steering & decision-making

Part of remuneration

- Occupational safety part of remuneration of the executive board since more than a decade
- New ESG goals to be **integrated in remuneration schemes** of Executive Board

New element for approval at AGM 2022

20%
ESG

Long-term incentives based on strategic ESG KPIs, e.g.:

- **Sales share of "Next Generation Solutions"**
- **CO_2 emission reduction**

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Sustainability strategy - Key take-aways

To improve life, today and tomorrow.

Sustainability is an **integral part of our purpose** – four focus areas as guiding principle for Evonik

Sustainability is fully integrated into strategic management processes: portfolio & innovation steering, capital allocation

Handprint: increase NGS[1] sales share to **>50% by 2030**

Footprint: reduce CO_2 emissions by **25% by 2030**[2]

Complementing **ESG governance**

NEXTGEN Solutions

>50%

-25%

1. NGS: “Next Generation Solutions”
2. Commitment letter signed and handed in for SBTi, 25th April 2022, gross emissions reduction with reference year 2021, target year 2030

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Our top ESG targets

		Status 2021	Target
Strategy and growth	▪ Sales share to be generated from “Next Generation Solutions” by 2030	37%	**>50%**
	▪ Generate >€1 bn in additional sales[1] in our six innovation growth fields by 2025	>€500 m	**>€1 bn**
Value chain and products	▪ TfS assessments of all raw materials suppliers with annual procurement volume >€100.000 by year-end 2025	69%	**100%**
	▪ RSPO MB certified palm oil and derivatives as of 2023	>70% (Care Sol.) >10% (Oil Add.)	**100%**
The environment	▪ Reduce green house gas emissions		
	– absolute scope 1 and scope 2 emissions by 2030 (reference: 2021)	--	**-25%**
	▪ Reduce other emissions to air[2] by 2030 (vs. 2021)	--	**-20%**
Employees	▪ Intercultural mix[3] in top management by 2023	14.6%	**20%**
	▪ Women in top and senior management by 2023	17.7% / 17.6%	**23%**
Safety	▪ Safety		
	– Accident frequency rate[4]	0.19	**≤0.26**
	– Incident frequency rate[5]	0.48	**≤0.40**
	▪ Occupational health performance index	5.6	**≥5.0**
Governance and compliance	▪ Sustainability Council reporting directly to CEO	--	✓
	▪ 20% of Long-Term Incentive linked to Sustainability targets[6]	--	✓

1. With products introduced in or after 2015 | 2. See table T12 in Sustainability Report | 3. Non-German Employees |
4. New reference parameter from 2021 | 5. Modified calculation basis from 2021 | 6. to be approved at AGM 2022

Handprint: Fight Climate Change

Focus “Future mobility”

Cooling and A/C

Lightweight through metal / rubber replacement

- Weight reduction supports CO_2 and NO_x reduction
- Smart battery temperature management

Materials for Li-Ion-Batteries

Nanostructured high-quality metal oxide and silicon particles improve safety, lifetime and energy density

- Metal oxides extend cathode lifetime by ~50%

Silica / Silane “green tires”

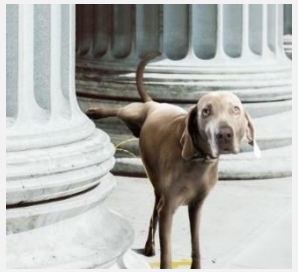
First Silica/Silane system for natural-rubber-based truck tires

- Fuel savings as high as 8%
- Pilot plant quantities available Q1/2022

Handprint: Drive Circularity

Focus “Durability”

TEGOVISIN®



Water-repellents for building materials:

- Strong reduction of water uptake and efflorescence
- Long lasting stability and aesthetics reduce the need for resource and emission intensive maintenance

SITREN®

Additives for integral protection of concrete structure:

- Durability for new and renovated concrete surfaces by protection against environmental influences
- Less emissions and reduced resource use by longer lifetime of constructions

WallCraft – Upcoming launch

Self-healing concrete:

- Bacteria-based additive extends the longevity of concrete by stimulating its self-healing properties
- Cracks can grow together again resulting in a durable construction

Handprint: Safeguard Eco-systems

Focus “Aquaculture”

Essential amino acids

The key to high quality proteins

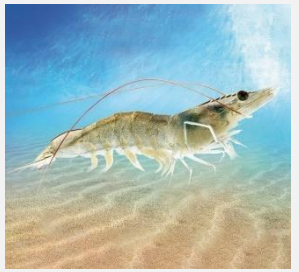
- Modern, environmentally sound formulation techniques based on nutrient value, on supplementation with crystalline EAAs, and on animal nutrient requirement

Veramaris

Production of omega-3 fatty acids from microalgae

- Potential to reduce the fish-in-fish-out ratio to zero
- 1 ton EPA DHA replaces 60 Tons wild-caught fish

AQUAVI® Met-Met



Ideal solution for precision protein dosing, especially for bottom feeders

- Higher nutritional value than any other Methionine source available today
- Reduces fishmeal use; reduction of overfishing

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Handprint: Ensure Health & Well-Being

Focus “Drug Delivery Systems”

Drug Delivery Systems

- Global development partner & solutions provider for delivery systems for effective drugs and vaccinations
- Evonik as pioneer in Lipid nanoparticles (LNP) field for mRNA technology

Next generations of LNP-based gene therapies

Vaccines	**Cancer immunotherapy** expected to be the next breakthrough of mRNA therapeutics
Protein therapeutics	mRNA-based therapies can potentially **treat hereditary diseases**
Gene editing	**In-vivo modification of genes** to prevent diseases expected to be commercial within the next years

Innovation with clear focus on Sustainability Focus Areas

Evonik Innovation Growth Fields		Creavis New Growth Areas
Membranes	**FIGHT CLIMATE CHANGE**	Hydrogen Economy Renewable Carbon
Cosmetic Solutions	**DRIVE CIRCULARITY**	Circularity New Formulation Business
Sustainable Nutrition	**SAFEGUARD ECOSYSTEMS**	Farm to Fork New Data Business
Healthcare Solutions Advanced Food Ingredients	**ENSURE HEALTH & SAFETY**	Novel Therapeutic Concepts Prevention & Wellbeing

>€1 bn sales by 2025

Potential beyond 2025

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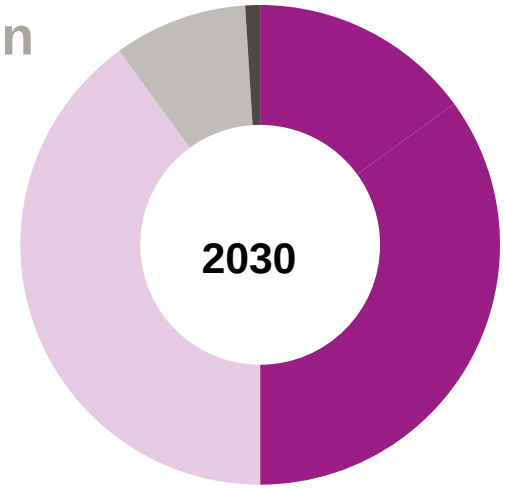
Actively managing “Transitioners” & phase-out “Challenged” products
Either improvement or exit

Exit plans for CHALLENGED

TRANSITIONER trigger innovation



“Challenged” products addressed with exit strategies

- Alternative, new product solutions without any negative signals are offered
- “Challenged” products included in financial risk-management

“Transitioners” as driver for innovation

- Early identification of negative sustainability signals
- Valuable trigger for innovation and customer engagement in reformulation

Further products will be exposed to negative signals as higher sustainability requirements develop

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EAGER to support sound decision making on site investments

Program EAGER[1]

Setup

Organization

Cross-functional approach allows for fast and flexible execution

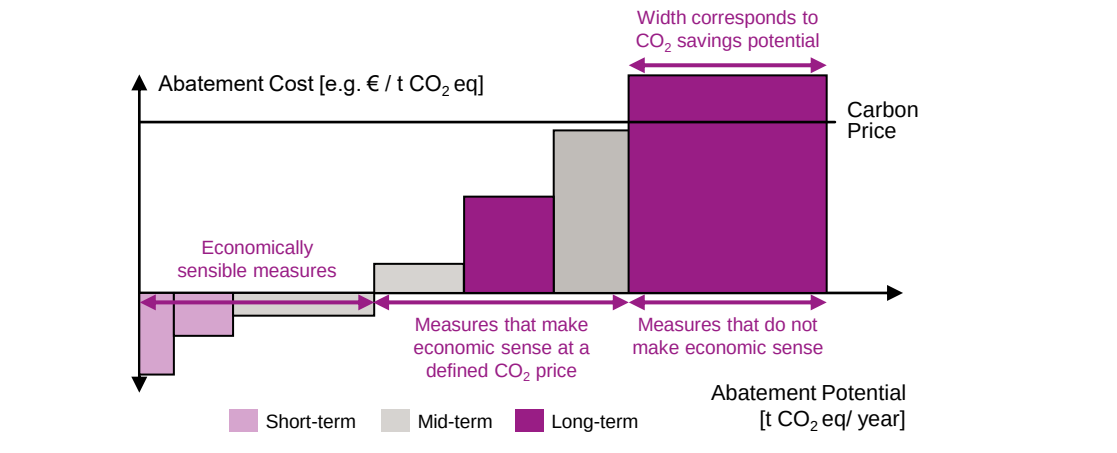
Methodology

Holistic assessment of top 20 sites, incorporating existing ideas, analyses and measures

Calibrated Point of Truth

Ensuring a harmonized approach to allow for cross-site comparison

Results

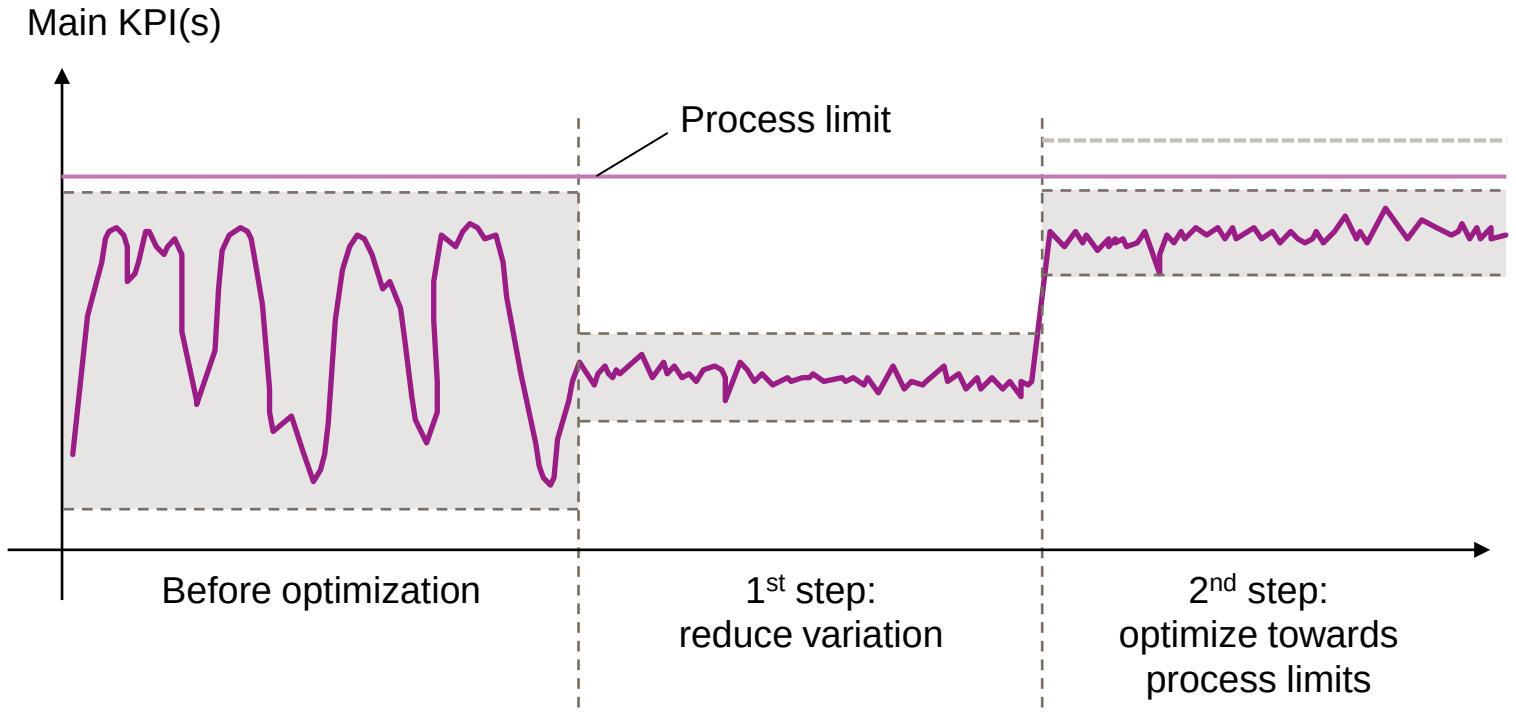


- Abatement Cost Curve: Specific measures on site level
- Validated CapEx/OpEx requirements considering real values and typical estimate accuracy
- Additional findings on water and waste data

1. EAGER: Evonik Assessment of Greenhouse Gas Emission Reduction

2a “Next Generation Technologies”: Advanced levers
Example

Advanced Process Control (APC)



APC optimizes complex production processes under consideration of many process parameters and ensures production at the **ideal operating point**

- Before optimization: High fluctuation
- 1st step: Reduce variation up to 50%
- 2nd step: Optimize towards process limits, typical benefit 5 % (throughput increase, specific energy/raw material consumption)

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2b “Next Generation Technologies”: Innovative waste heat up-cycling
Example

Heat Pump deployment to switch entire site to renewable steam generation

Today

Heat source of multiple plants at 97°C (e.g. condensers)

- Cooling water (e.g. 20°C)
- Cooling water send to canal (e.g. 24°C) **Heat lost**

Site steam boiler

- Natural Gas
- 6 bar steam

Future

Heat sources at 97°C (e.g. condensers)

Heat pump

Green electricity added

6 bar steam to supply site

- **High-temperature heat pumps** for steam generation out of waste heat at chemical multi-user sites
- **65% energy saving** by heat recovery
- Substantial **CO_2 reduction** through total avoidance of natural gas boiler
- Central step for **CO_2 neutral production site**
- Project under discussion with Siemens Energy

2c “Next Generation Technologies”: Process redesign
Example

Partnering with RWE in order to replace steam methane reforming by electrolysis

Green hydrogen production by RWE in Eemshaven, NL

- Evonik currently uses steam methane reforming for (grey) hydrogen production at its site in Delfzijl, Netherlands
- MOU[1] signed with RWE for (green) hydrogen supply from their 50 MW electrolyzer, largest to have been granted a license in the Netherlands
- Powered by RWE’s Westereems, NL, wind farm
- RWE received environmental permit in January 2022
- Electrolyzer planned to be operational in 2024

1. MOU: Memorandum Of Understanding

Picture from https://benelux.rwe.com/en/press/2020-11-06-rwes-innovative-electrolysis-project-eemshydrogen-enters-next-phase

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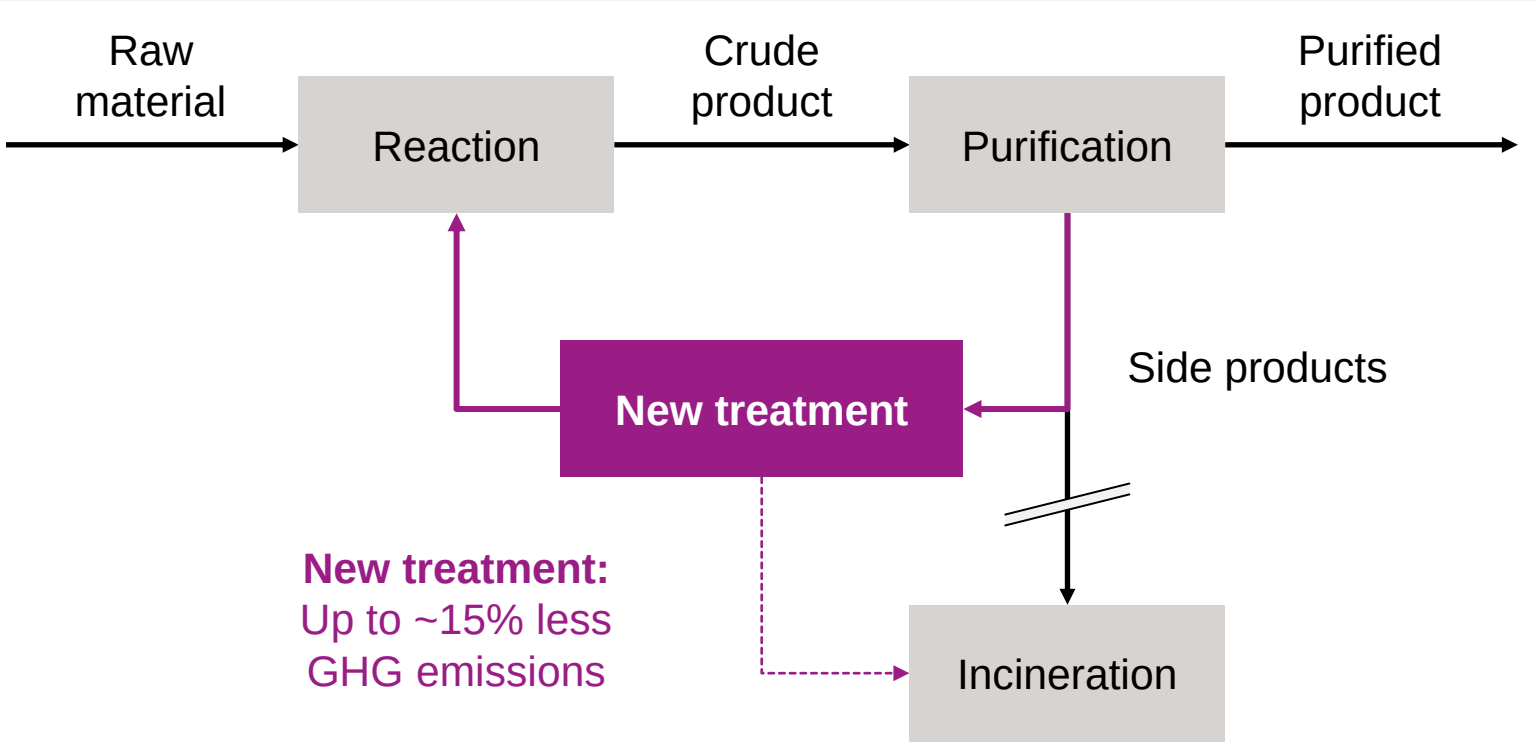
2c “Next Generation Technologies”: Process redesign
Example

Sustainable processes via electrochemical pH-shift

- Development of **sustainable processes** avoiding acids, bases and salt containing waste streams
- pH induced reactions by applying electrochemical process steps – **“electrons replace chemicals”**
- Technology as enabler to minimize carbon footprint

2c “Next Generation Technologies”: Process redesign
Example

Increased re-use of side products at our Herne site



- In the current process, all side products are incinerated
- A new side product treatment – as experimentally demonstrated for a single stream – would lead to GHG emission reduction of up to ~15 % in this process step
- Further CO_2 reduction potential by holistic network optimization

EVONIK Leading Beyond Chemistry

Evonik's Scope 3 approach

Different levers to deliver outcome that matters to our customers

Incremental Improvement

- Supplier engagement for raw materials and services investing in energy efficiency and use of renewable energy
- Turn electricity trading green
- Water stewardship and avoiding of production waste in alignment with scope 1&2 emission reduction pathway

Continuous reduction of product carbon footprints based on certified, market-based data

Green Opportunities

- For existing products access renewable raw materials and energy to deliver green(er) products for high market pull applications
- New products based on renewable carbon and green energy without significant harm to other environmental or social sustainability topics

Evonik able to serve market segments with high demand for credible green solutions

Back-Integration

- Backwards integration levering efficiency, green energy, carbon capture opportunities
- Reduce storage and transport of toxic chemicals
- Sites & technologies without high-carbon lock-in risk
- Access to raw materials with competitive green future

Improve resilience, profitability and competitiveness along the path to climate neutrality

Asset Transformation

- Identify lock-in risks (portfolio / technology / site / raw material) and ensure that capital allocation and innovation are steered towards climate-neutrality, circularity and "safe & sustainable by design" chemicals
- Collaborate with, or transfer of business to best owner for an asset-heavy business model

Secure financial resources, technology, and raw materials for products, the world will need

Highlight – Water

Methodology

- Distinction between water Scarcity Sites and Water Intensive Sites
- Development of Contextual Water Targets
- Introduction of the Sustainable Baseline Water Stress methodology in addition to AWARE[1]
- Assessment according to Physical, Regulatory and Reputational Risks

Understand water as a place dependent and shared resource (Basin risks)	Understand Evonik's impact on local basins (Operational risks)	Assess and prioritize water-related risks	Optimize water governance, improve water efficiency and reduce pollution and footprint	Reduce water demand in water-stress areas to a sustainable level

Example

Multi-User Site Shanghai (MUSC) – Implementation for 2022

- Demineralization of purge water from a cooling unit
- Usage in chemical processes
- Replacement of 250.000m³ freshwater

Potential targets depending on the results of the EAGER analysis

water-stress sites

- Minimize freshwater intake in water-stress production sites

water-intensive sites

- Reduce water intake in water-intensive sites

1. AWARE: available water remaining

Highlight – Waste

Methodology

- Alignment with two of our sustainability focus areas

DRIVE CIRCULARITY

ENSURE HEALTH & WELL-BEING

Goal for waste management:

- Promote the environmentally sound treatment of waste generated by Evonik

Goal for waste reduction:

- Reduction of waste generated at Evonik

Example

Hanau-Wolfgang

- Recycling of solvent from a chemical process
- Usage in other chemical processes
- Adapted by other Evonik site in China

Potential targets depending on the results of the EAGER analysis

Non-hazardous waste

- Reduce amount of non-hazardous waste sent to landfill

Hazardous-waste

- Minimize hazardous production waste

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