



LANXESS
Energizing Chemistry

Time to prove our strengths

Meeting the Management – 15 November 2019

Matthias Zachert, CEO

The way forward – Providing direction from four perspectives



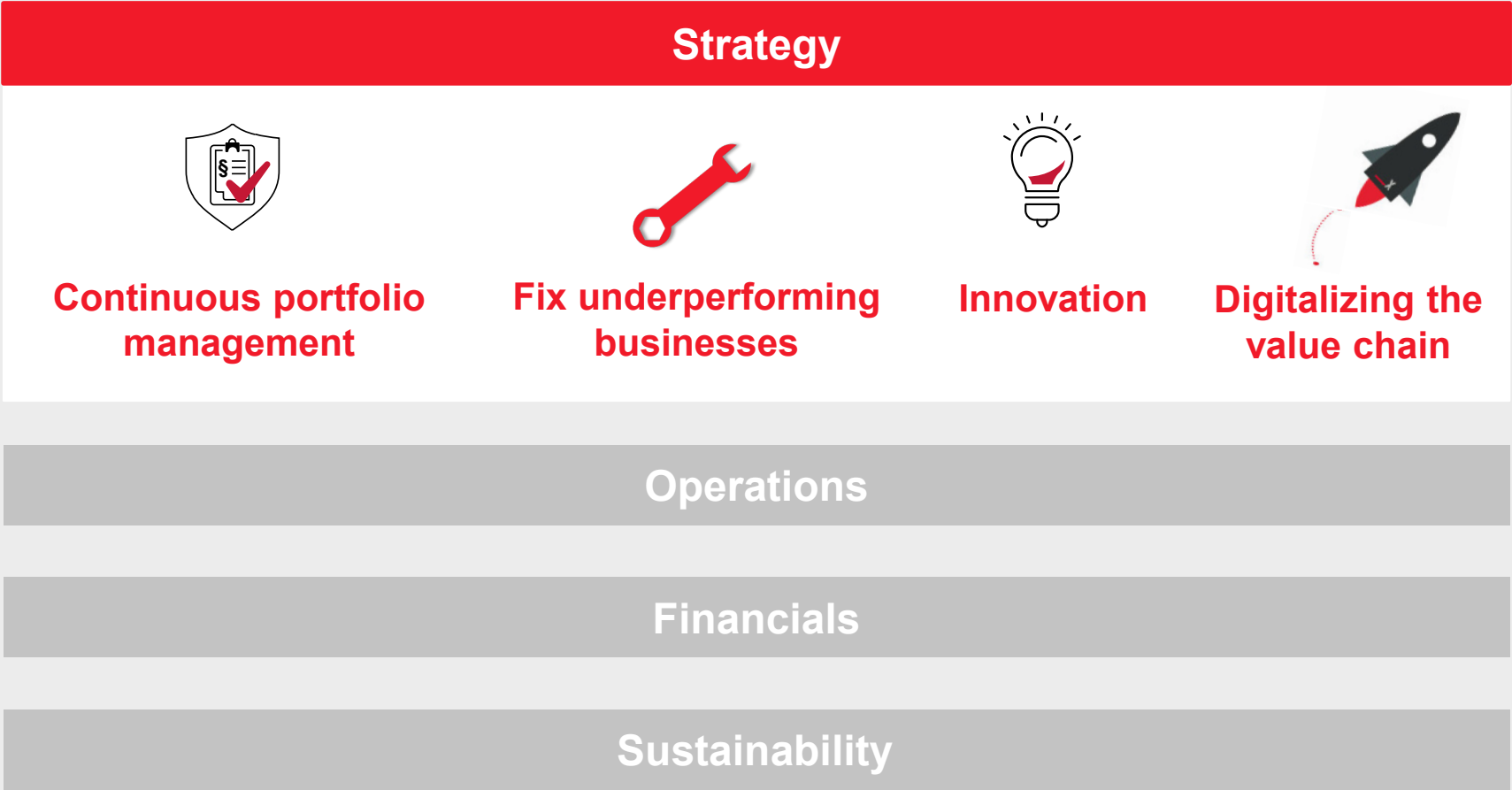
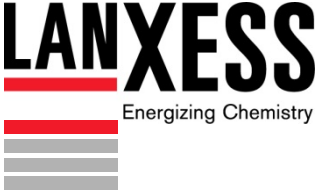
Strategy

Operations

Financials

Sustainability

The way forward – Providing direction from four perspectives



LANXESS Portfolio Transformation

2016

Rubber

Intermediates

**Engineering
Materials**

**Performance
Chemicals**

LANXESS Portfolio Transformation

2016

Rubber

Intermediates

**Engineering
Materials**

**Performance
Chemicals**

LANXESS Portfolio Transformation

Intermediates

**Specialty
Additives**

Chemtura

**Engineering
Materials**

**Performance
Chemicals**

LANXESS Portfolio Transformation

2019

Intermediates

**Specialty
Additives**

**Engineering
Materials**

**Performance
Chemicals**

Inorganic Pigments

Material Protection Products

Liquid Purification
Technologies

Leather

LANXESS Portfolio Transformation

2019

Intermediates

**Specialty
Additives**

**Engineering
Materials**

**Consumer Protection
Chemicals**

The way forward – Continuous Portfolio Management

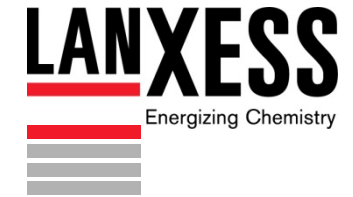


Strategy



**Why do we like Consumer
Protection Chemicals?**

Perfect match: The characteristics of Consumer Protection Chemicals and our competences



Characteristics:

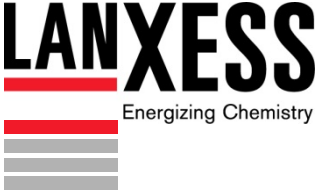
- **High entry barriers** due to increasing regulation
- Strong **expertise in Regulatory Affairs**
- **Data ownership*** essential for product registration
- Attractive **secular growth**, independent of industry cycles



Our competences:

- **Global set-up in Regulatory Affairs**
- **Regulatory competence:** One of the largest global expert teams in the industry
- **Unique portfolio** in Animal Protection Chemicals
- One of the **strongest water purification technologies**

LANXESS Consumer Protection: Our products follow strong application-driven trends



Food Safety



X_Velcorin[®]



Water Purification



X_Lewatit[®]



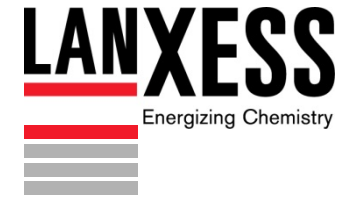
Biosecurity



>Virkon[™]



Velcorin: The solution provider for beverage stabilization ensures food chain safety



Strong market presence

- Over 500 customers including global top brands
- >1,500 Velcorin® dosing units (DT) in the market

Full solution offering

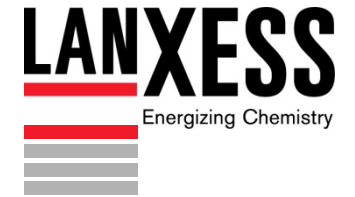
- Comprehensive application-specific advice and service
- Extensive regulatory support on food law and legislation

Product benefits

- Highly effective against bacteria and fungi without impacting color and taste
- Cost-effective for the customer
- Dissolves into naturally occurring components



Lewatit: Unique process knowledge allows top performance in high-end applications



Strong market presence

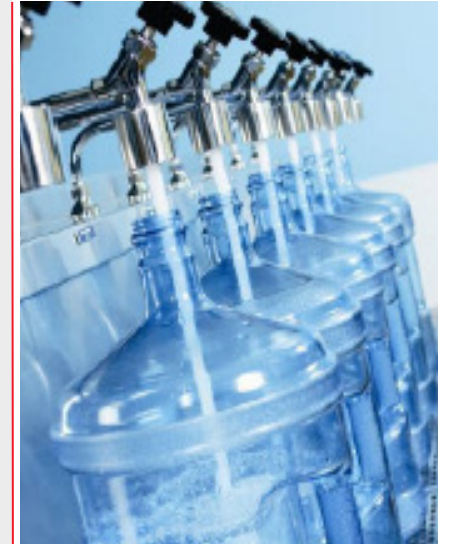
- Complete ion exchange resins portfolio focused on high value applications
- LANXESS among the top four players worldwide

Matching growing demand driven by global water trend

- Water scarcity is a global threat
- Therefore, more and more countries are increasing regulation to accelerate industrial water recycling

Product benefits

- Our ion exchange resins have high cleaning efficiency at moderate customer operating costs
- LANXESS products suitable for high end applications (e.g. selective removal of heavy metals in mining)



We help to counter fight African Swine Fever outbreak

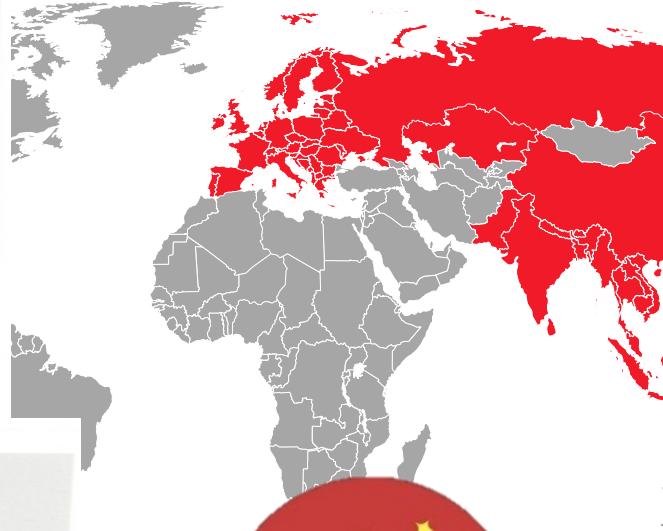


Americas: Not yet infected by ASF, but preparatory measures increase

- **Washington Post** (Oct 16th) US begins preparations aimed at fending off ASF
- **FT** (May 6th) Tyson Foods chief warns African swine fever could reach US
- **Forbes** (May 6th (...)) earlier this year, the U.S. National Pork Producers' Council canceled its annual World Pork Expo in Des Moines, Iowa

Europe: Directly and indirectly affected

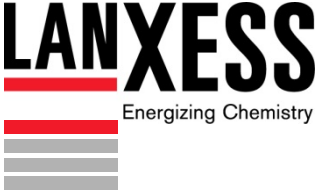
- **Financial Times** (Oct 14th) ASF drives up European pork prices
- **Poland:** (Oct 10th) ASF infects 46th Polish farm
- **ZEIT** (June 3rd) around 150-200 million animals will be infected until end of 2019, prices for pork will increase also in Europe



Asia: Epicenter for ASF, the disease is now spreading rapidly

- **Reuters** (Oct 14th) Philippines detects ASF infections in two more provinces
- **The guardian** (Oct 12th) ASF: The deadly virus that has landed on Australia's doorstep
- **Reuters** (Sep 23rd): China reports new African swine fever case in Guangxi region
- **ABC News** (Sep 18th)
One quarter of world's pigs killed by African swine fever as disease spreads to South Korea
- **The guardian** (Sep 17th): South Korea confirms African swine fever outbreak
- **CNN** (May 15th): Fever could kill a third of China's pigs. That's almost as many as are farmed in the US and Europe
- **New York Times** (May 14th) Vietnam culls 1.2 million pigs over African swine fever

The way forward – Fix underperforming businesses



Strategy



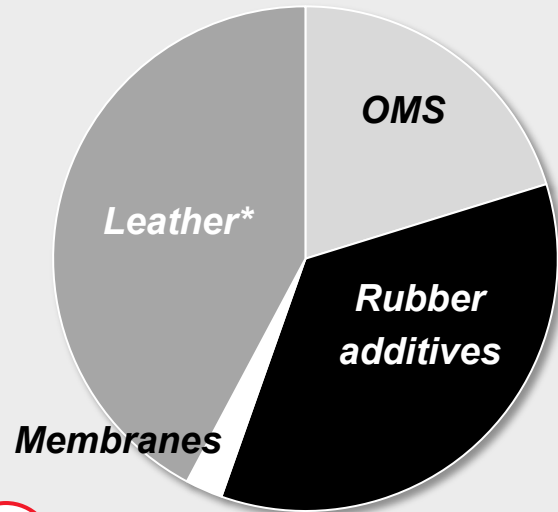
**Which businesses
are we addressing?**

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Rigorously addressing under-performing businesses across our portfolio



Sales of businesses to be addressed
~€800 m



Margin Level:
~8%



Transforming action

- Solving the Chrome problem
- Accelerating OMS performance to peer level
- Turnaround Rubber Additives and Membrane businesses

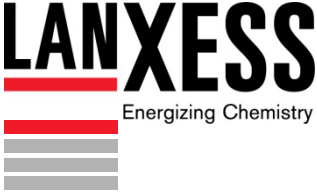


Target structure
~€500 m



Margin Level:
>15%

Strong progress in solving the Chrome problem



Structure
Business Unit Leather

Chrome Ore

South Africa



Exit

IN PROGRESS

Chrome Chemicals

South Africa



Sold*



Organic Leather Chemicals

EMEA, China



*Reposition
2020-2022*

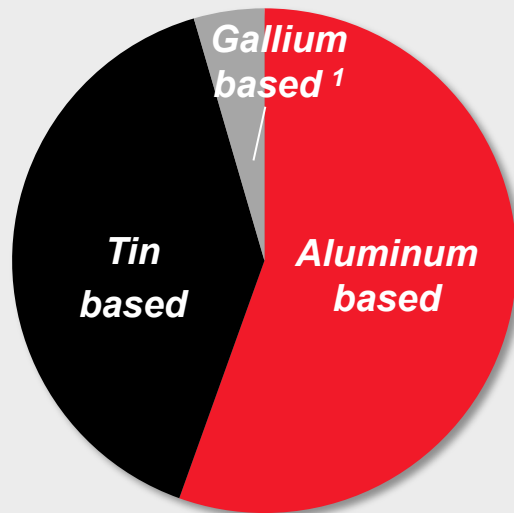


Improving Organometallics' performance to competitive peer level



Organometallics Sales

2018:
~€160 m



%

Margin Level:
0-5%



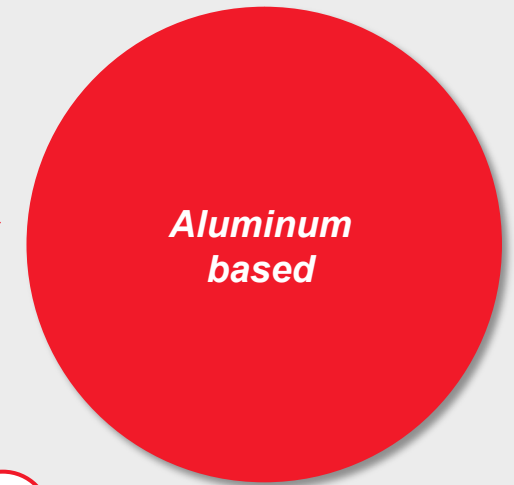
Transforming action

Aluminum based Organometallics:
Set for organic growth

Tin based Organometallics:
Exit partner found with PMC²

Gallium based Organometallics¹:
Exit in preparation

Target structure
~€100 m



%

Margin Level:
15-20%

The way forward – Innovation

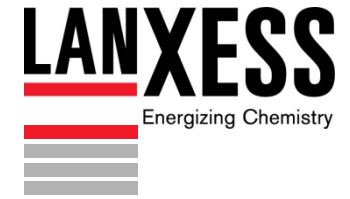


Strategy



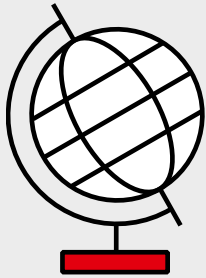
**What innovations are we
working on?**

We focus on product, process and technology innovation



Our philosophy

- Result-oriented product innovation
- Process innovation with focus on energy & resource efficiency
- Technology innovation that will change chemical business models (esp. digitalization)



Global innovation platform

- 33 application centers in 14 countries focusing on product innovation
- Dedicated task force teams continuously optimize production processes worldwide
- Centralized digital team to introduce new technologies and change business models



Strong alliances

- More than 150 research cooperations with customers, universities and other research institutes worldwide
- Collaboration with leading AI specialists Citrine, Palantir, et al.



Some examples...

Identifying innovations that fit to our business – A natural preservative derived from an edible fungus



**BU
MPP**

Acquisition of IMD Natural Solutions completed in 2017

- 9 FTE with a lab in Dortmund, Germany

Rationale

- Strong trend to replace chemicals with natural preservatives
- LANXESS has a global sales force and regulatory expertise
- Currently no comparable natural product on the market

Potential:

- Key market: USA; FDA approval received in 2018, further market approvals in preparation
- First meaningful sales in 2020
- Full potential to be reached 2025-2030



**Accessible
initial
market
(USA)**

**~ €200-
250 m**

Identifying innovations that fit to our business – Tepex: Fiber reinforced high performance plastic



BU
HPM

Acquisition of Bond Laminates completed in 2012

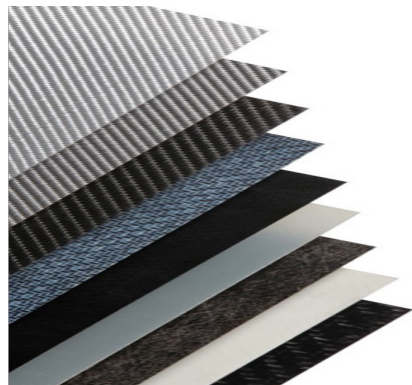
- ~80 FTE
- Purchase Price: ~€35 m, additional investments to follow

Rationale

- Leading manufacturer of thermoplastic composites
- Customer advantages:
 - Easier product handling
 - Potential to reduce production costs
 - Product functionality (strength and stiffness)

Potential:

- Strong market potential e.g. in automotive, consumer electronics, industry, and sports (e.g. solar panels, helmets)



X Tepex®

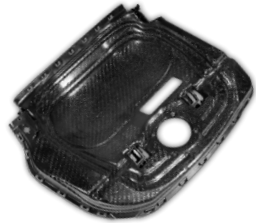
~€300 m

**LXS sales
potential
in 2030**

Tepex: Application examples



Audi Seat Shell



- 45% weight reduction

Mercedes Front End Carrier



- 30% weight reduction

Dell Laptop Casings



- Very thin but also very stiff and strong

We consider E-Mobility as a major opportunity



E-Mobility: Key driver for battery growth

- Battery demand grew by 30% p.a. (2010-2018) to 180 GWh¹
- Globally, E-Mobility will account for >85% of total battery demand²

High share of chemicals

- Chemicals account for **>50% of total cost** of battery cells
- Announced cell capacities lead to **€8-9 bn p.a.**³ chemicals demand

Growth markets

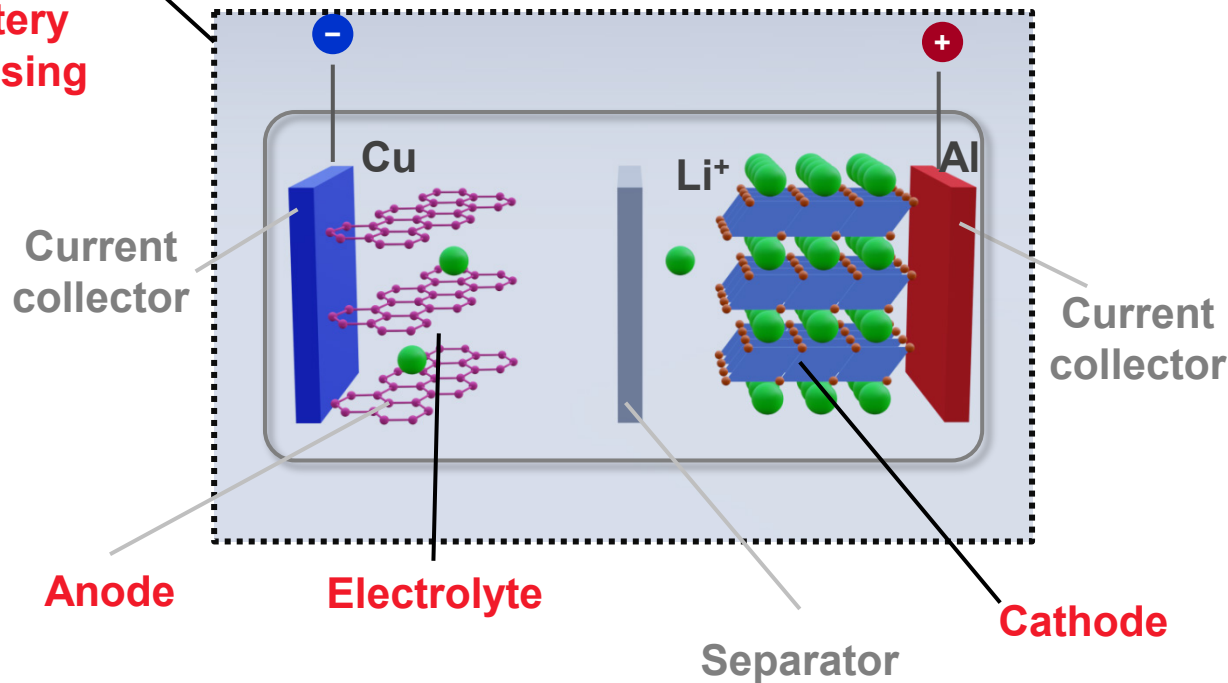
- Changing battery market: An Asia dominated market will turn into a global market with increasing shares for EU & US
- E-Mobility growth drives ramp-up of cell production sites in Europe
- Supportive governmental regulation



LANXESS offers key products for Li-Ion batteries



Battery housing



Battery housing

- PA/PBT compounds for components of the e-powertrain (BU HPM)

Electrolyte

- Key materials (Hydrofluoric acid, phosphorus chemicals) for electrolyte salt (LiPF_6) (BU AII/BU PLA)
- Flame retardants (BU PLA)

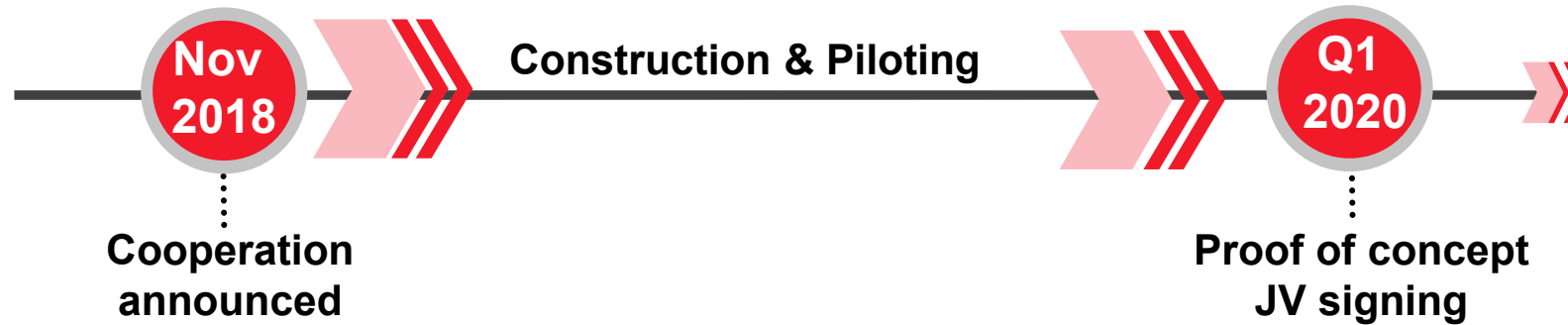
Cathode & Anode

- Iron oxide as precursor for cathode active materials (BU IPG)
- Ion-exchange resins for refining battery grade cobalt, nickel and lithium (BU LPT)
- Lithium chemicals from tail-brine (BU PLA)*

Cooperation with Standard Lithium could deliver upside in a promising market



**BU
PLA**



JV characteristics*

- 60-70% LANXESS ownership
- Exclusive access to technology in Smackover formation
- Absorption of El Dorado infrastructure cost

Project rationale

- Use existing site infrastructure
- Brines from bromine wells in El Dorado contain Lithium
- Lithium demand growing double digit
- Limited additional cost during piloting
- In case of successful pilot project: €100-400 m capex possible**

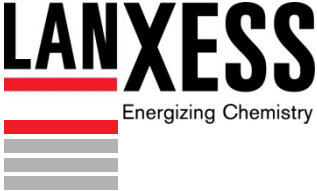
Cooperation with Standard Lithium: Pilot plant status update



Current status

- All 18 modules are installed on site in El Dorado
- Freedom to operate analysis completed
- Lab and finalization of installation taking place end of November
- Commissioning: end of November/beginning of December
- Proof of concept within Q1 2020

The way forward – Digitalizing the value chain



Strategy

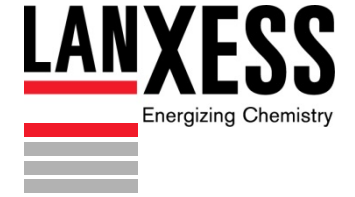


**What are we
focusing on?**

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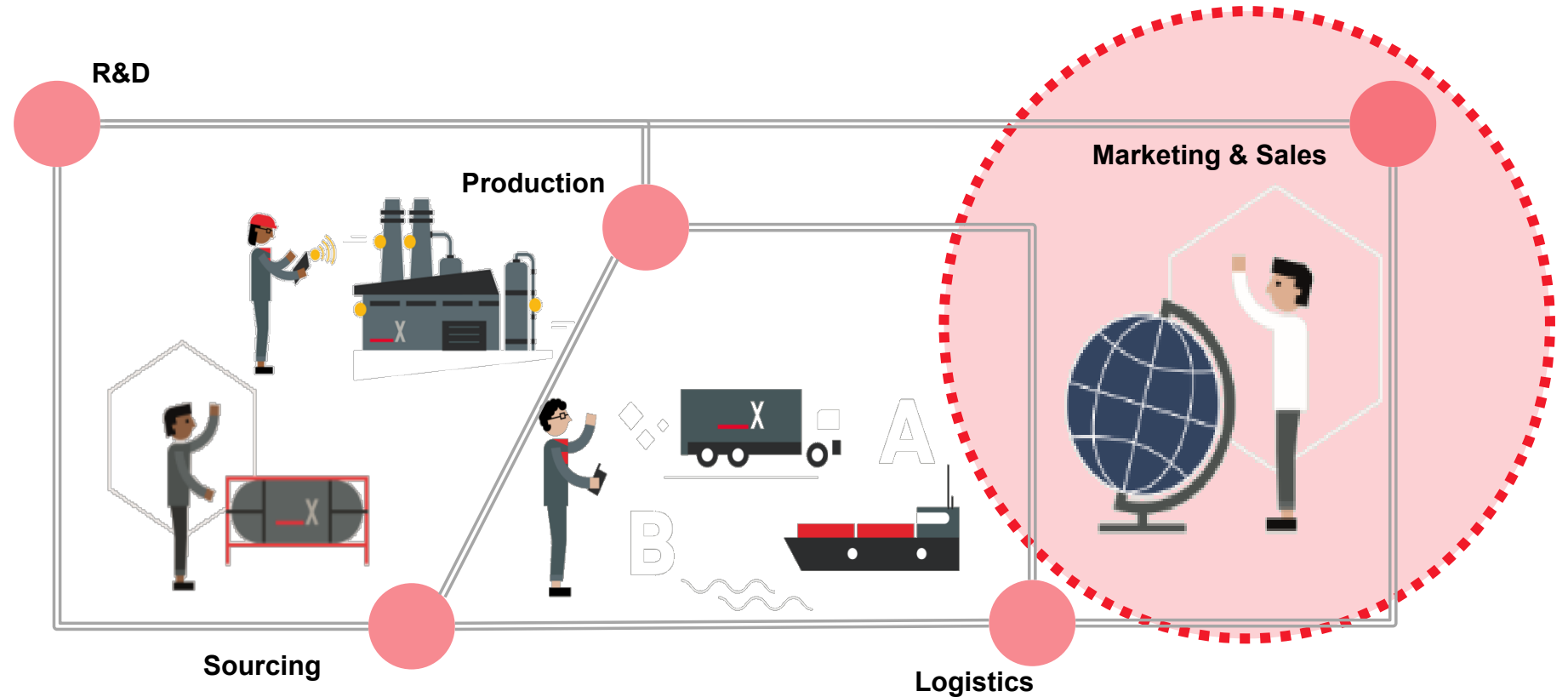
Digitalizing the value chain

LANXESS to be digital leader in the chemical industry



From itemized elements ...

... towards a fully integrated digitalized value chain:



Digitalizing the value chain: CheMondis

Paving the way to the future of trading chemicals



CheMondis

Project start in 2017:
LANXESS' chemical industry knowledge combined with
external digital experts

Pioneering into digital trading platform for chemicals to get
ready for digital future

First minimal viable product (MVP) created in 2018,
preparation of fully separated industry platform

Largest and fastest growing B2B marketplace for industrial
chemicals in the western world

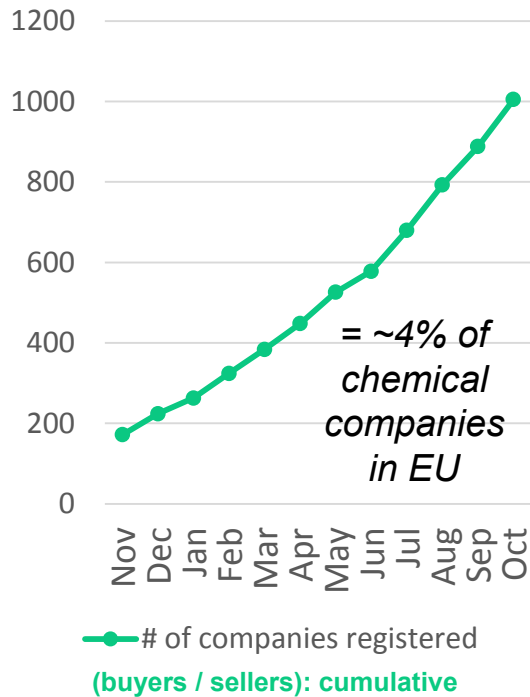
Exceptional team of skilled and dedicated experts combining
chemical, digital and technical know-how

Unique setup, backed by industry know-how and capital

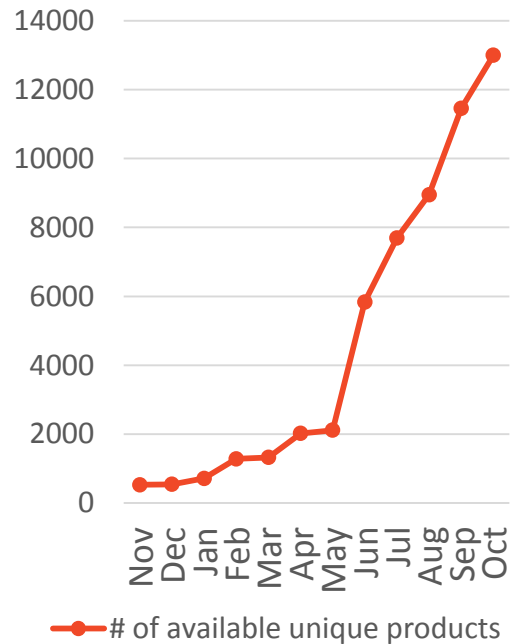
CheMondis is the largest and fastest growing B2B marketplace for industrial chemicals in the western world



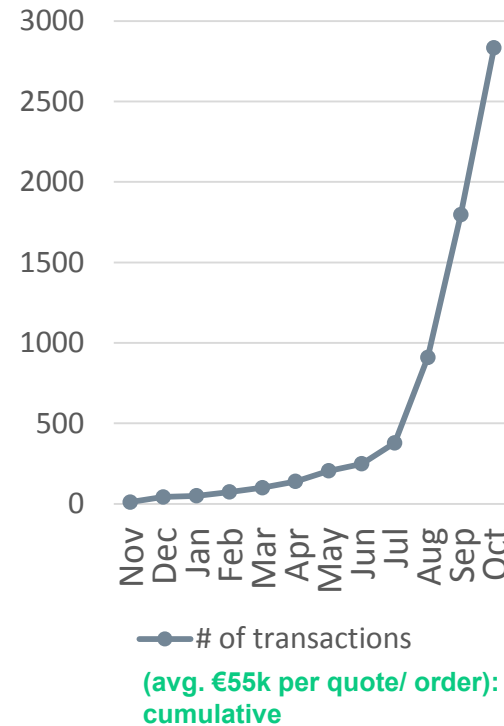
of companies signed up



of active products



of transactions



Fact #1

>1,000 companies active (65% buyer, 35% supplier)



Fact #2

13,000+ products for use in >15 different industries



Fact #3

~€150 m transaction value (cumulated, YTD '19)

The way forward – Providing direction from four perspectives



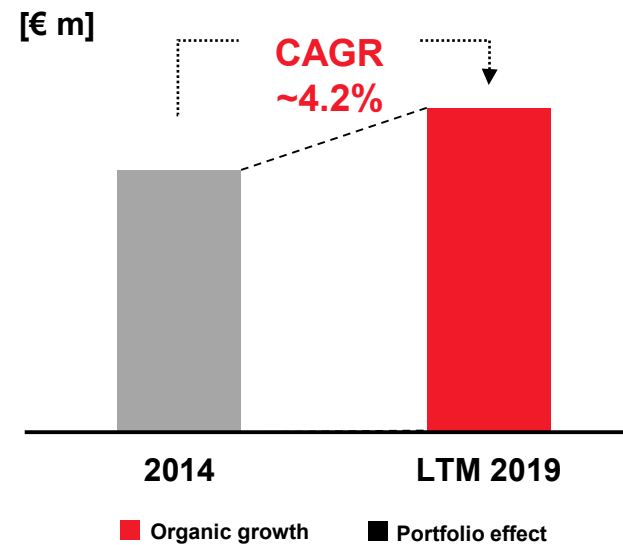
Advanced Intermediates – Focus on additional organic growth



Key differentiators

- Cost, technology and process leadership
- Leading market position
- Proven resilience

EBITDA pre development



Value drivers



- Debottlenecking

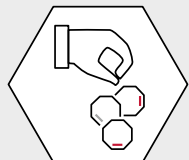


- Fix Organometallics



- Benefit from agro recovery

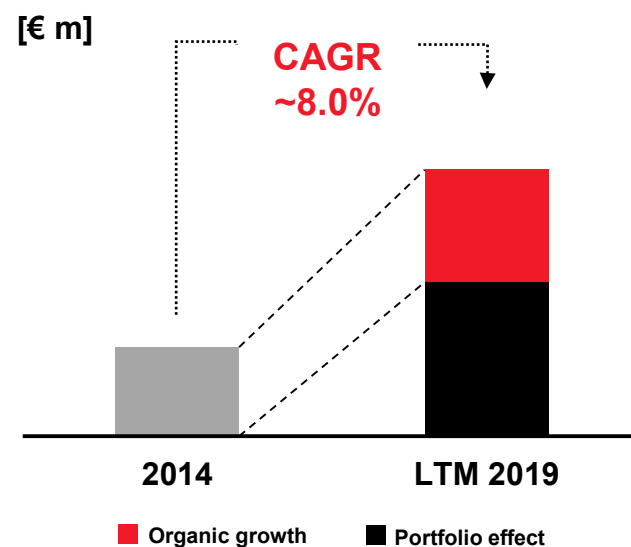
Specialty Additives – Consolidate, benefit from regulation, exploit growth trends



Key differentiators

- Small volume, high impact
- Leading market position
- Integrated value chains
- Broad product portfolio
- Small to medium-sized competitors

EBITDA pre development



Value drivers



- Synergies & optimization of production footprint



- Innovation: Exploit regulatory trends, e.g. Emerald 3000



- Benefit from market consolidation

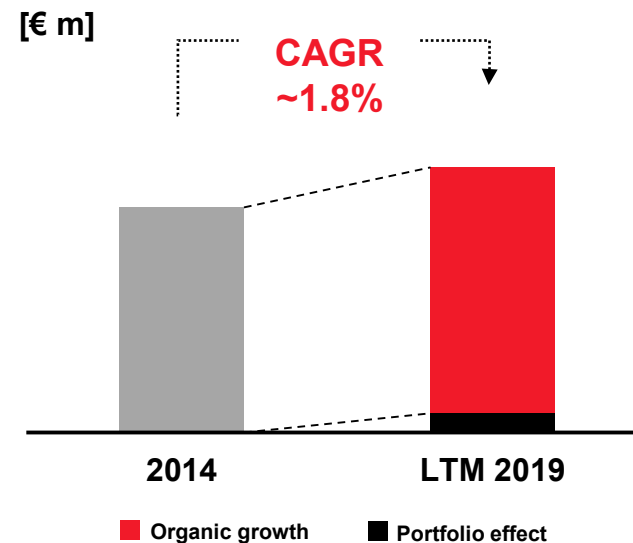
Performance Chemicals – Segment realignment and focus on Consumer Protection Chemicals



Key differentiators

- Leading regulatory affairs as strategic competence
- Global reach & scale
- Strong products and brands
- Asset light, capex primarily for data generation

EBITDA pre development



Value drivers



- Growth trend Consumer Protection Chemicals



- Benefit from market consolidation



- Fix chrome value chain and membrane business

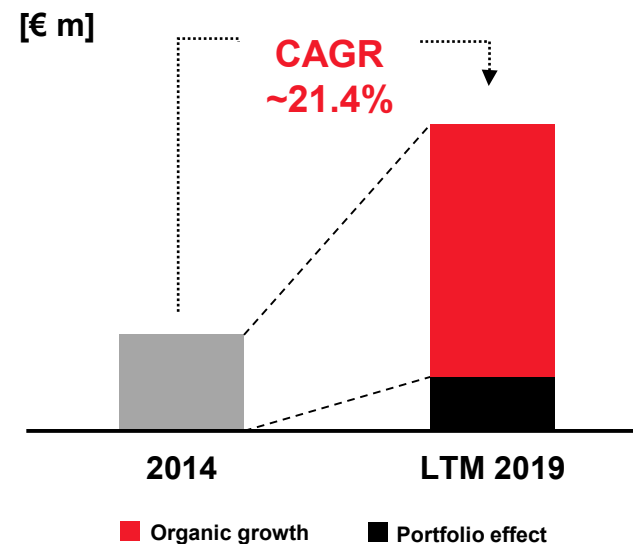
Engineering Materials – Exploit additional chances from lightweight trend



Key differentiators

- Cost-advantage due to integrated value chain
- Competitive market position
- High-tech application know-how
- Customer proximity (regionally)

EBITDA pre development



Value drivers



- Innovation & new applications

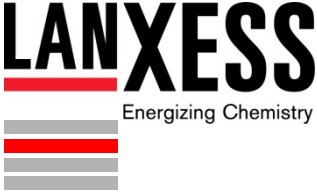





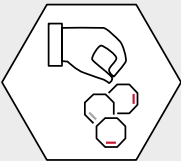





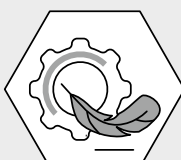


- Strong trends: E-Mobility, light-weight, sustainable production



- Continue to optimize value chain (additional compounding capacity)

Capital allocation follows clear individual strategies for each business



	Organic growth / Capex	Likelihood for M&A	Turnaround
 Advanced Intermediates			Organometallics
 Specialty Additives			Rubber additives
 Performance Chemicals			Chrome value chain Membranes business
 Engineering Materials			

The way forward – Providing direction from four perspectives



Strategy

Operations

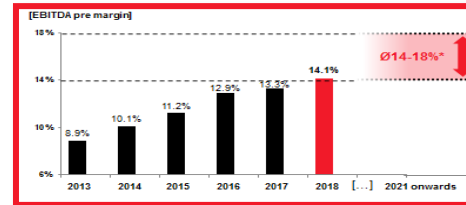
Financials

Sustainability

Despite a challenging environment we are well on track to achieve our goals

EBITDA pre margin
(group, Ø through the cycle)

14-18%



on track

EBITDA margin volatility

2-3%pts

YTD stable vs. previous year

on track

Cash conversion

>60%

Details by CFO

in progress

Capital allocation: Maximizing the benefit of our investors based on best value creation

In line with our shareholders' interests whilst committed to a solid investment grade rating



Growth

- **Organic** growth with attractive returns
- **External** growth along disciplined M&A criteria



Shareholder value

- **Increase dividend** or at least keep it at **stable level**
- Share **buyback**



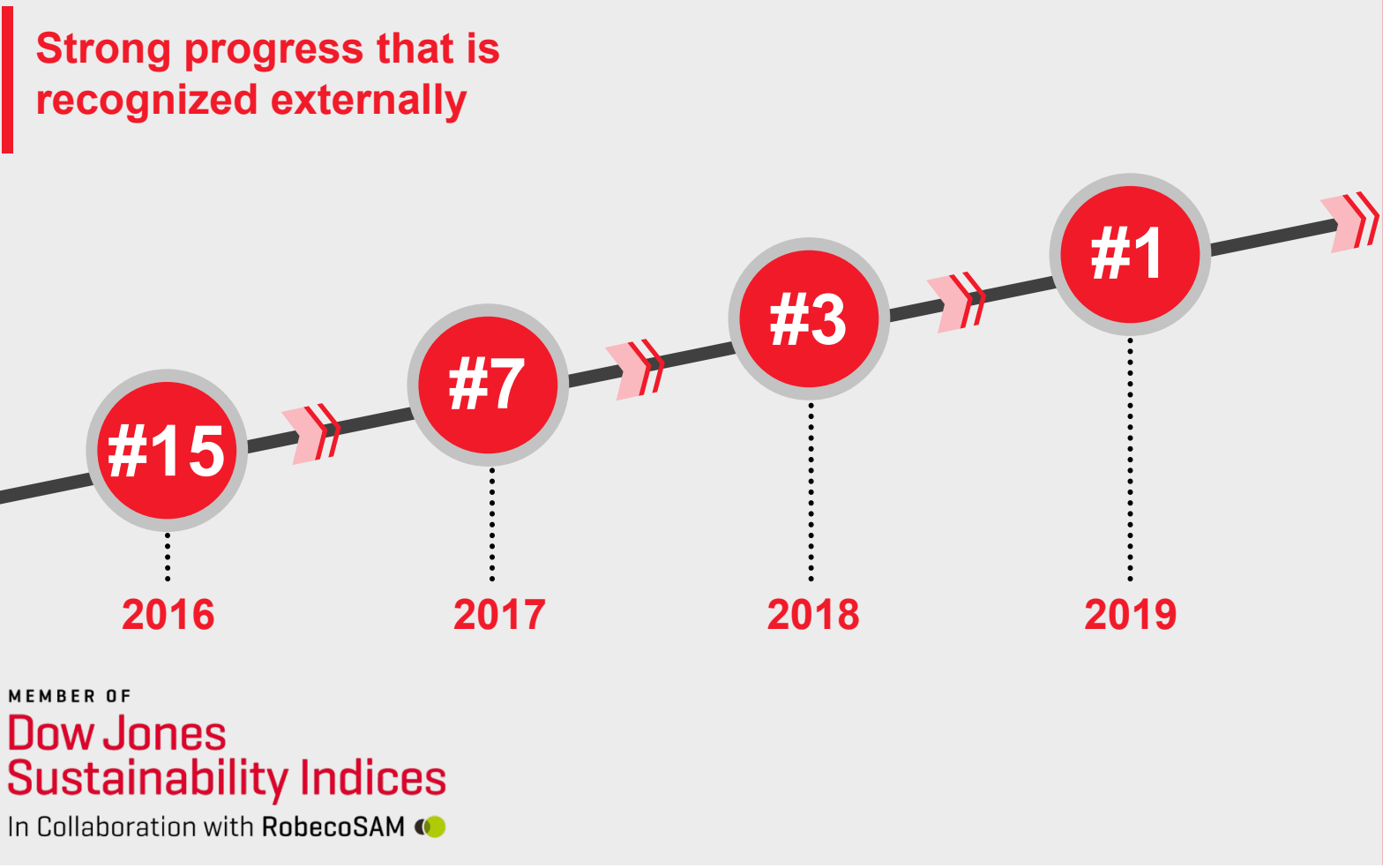
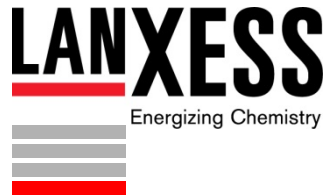
Debt profile

- **Debt repayment**
- **Pension funding**

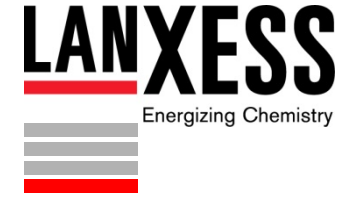
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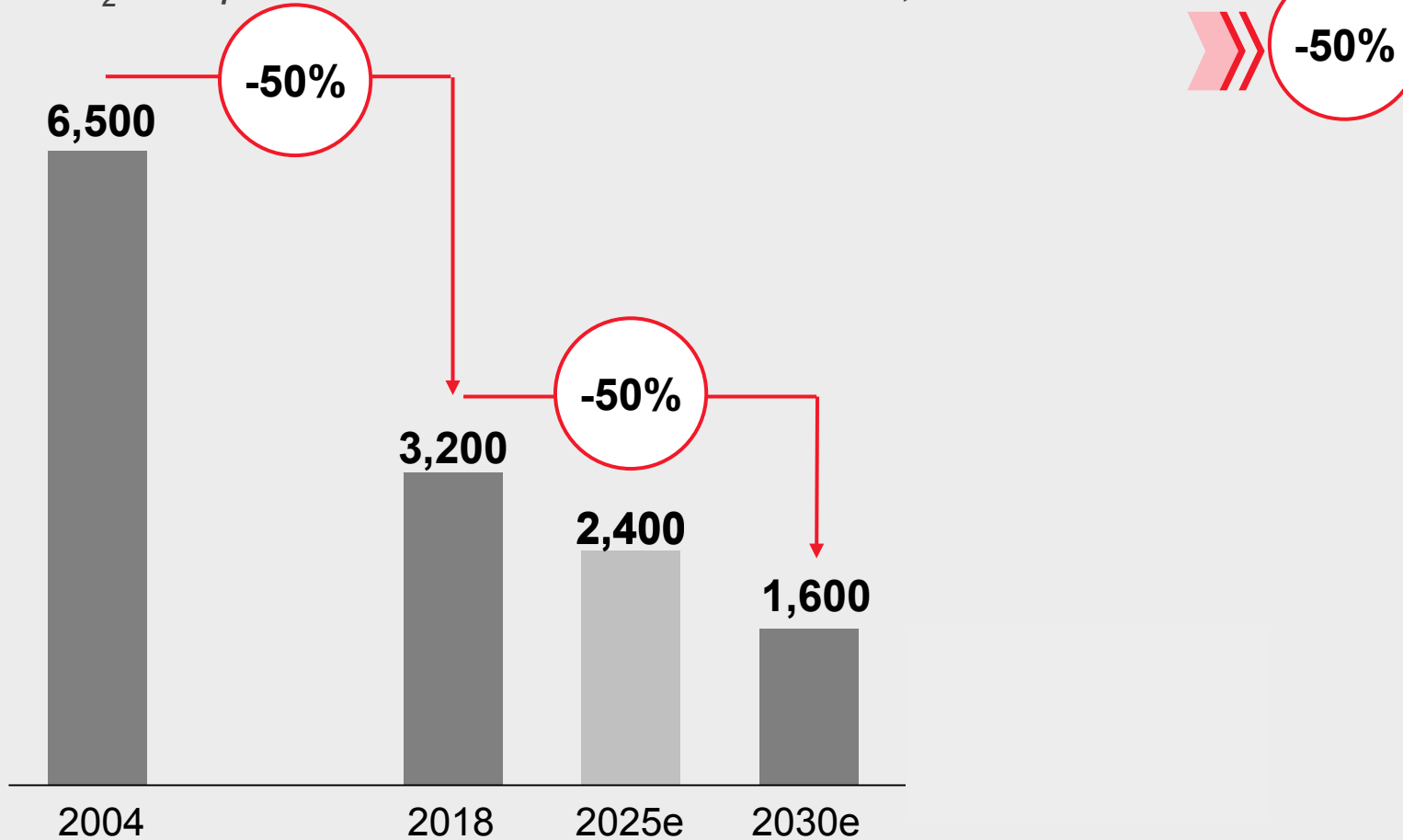
Sustainability direction – We see sustainability as a competitive advantage



We delivered strongly on emission reduction and aim high for 2030



CO₂e scope 1+2 emissions in thousand tons, LXS*



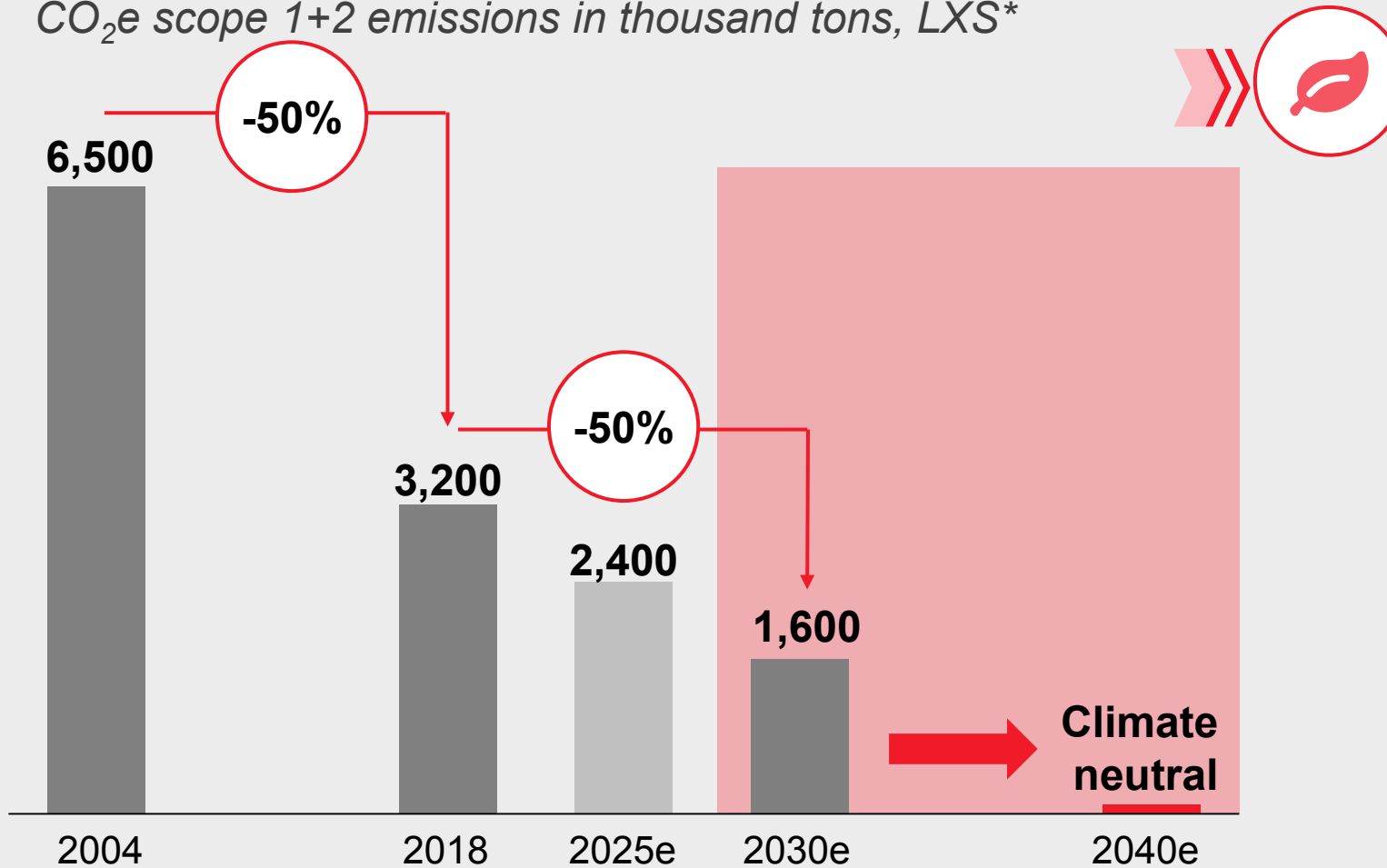
Clearly defined measures to reduce today's emissions:

- Maximize reduction of N₂O emissions
 - Implement process changes in our "Verbund" structures
 - Exit coal-based power generation wherever possible
- ## Compensate growth effects with efficiency

LANXESS goes climate neutral by 2040 – New long-term commitment

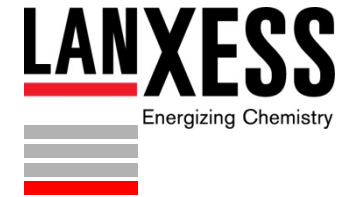


CO₂e scope 1+2 emissions in thousand tons, LXS*

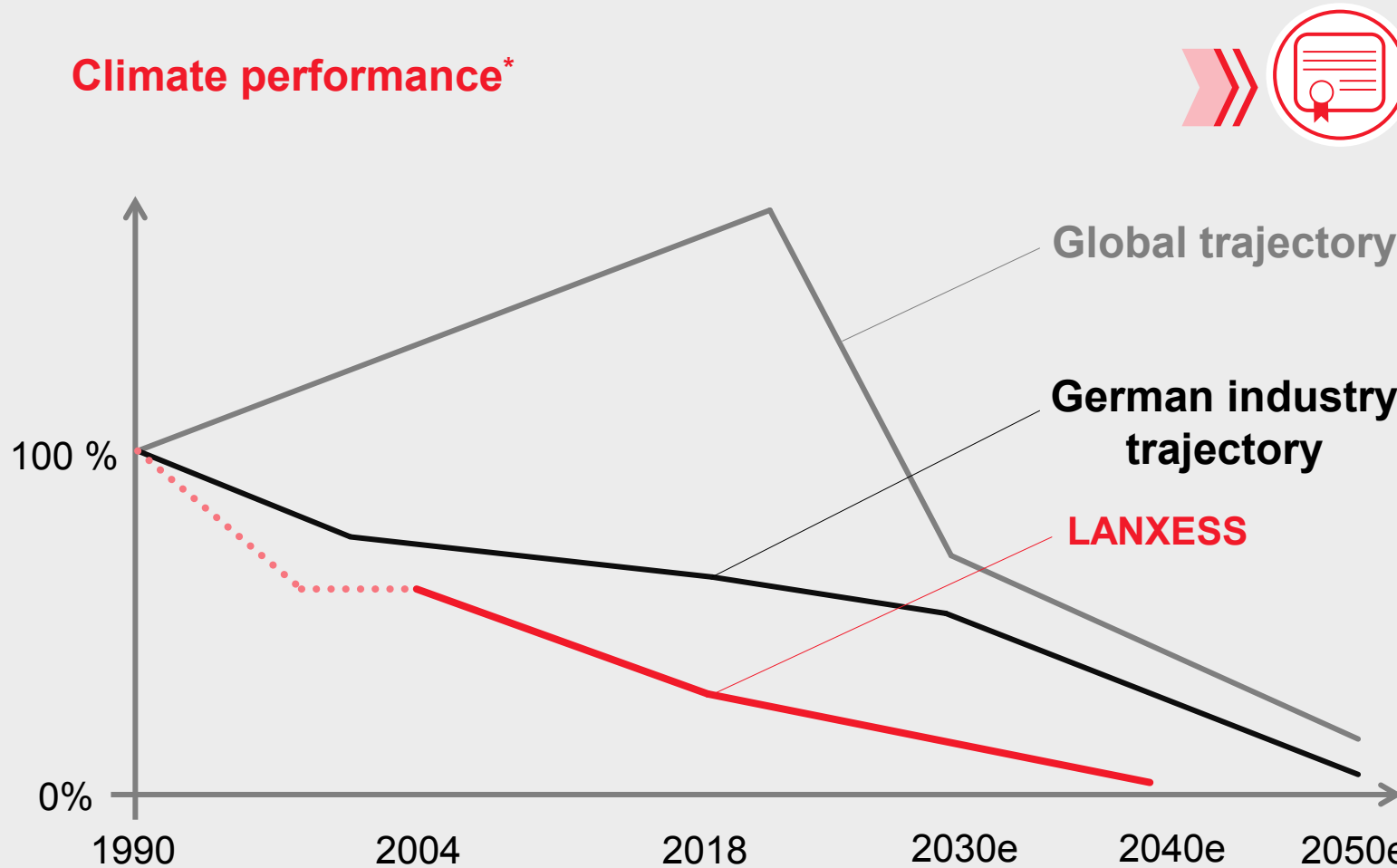


- Strong ambition!
- Majority of projects with reasonable investment costs
- **Good for LANXESS, good for our customers, good for our planet!**

LANXESS ahead of regulation and far sighted in management of ETS certificates



Climate performance*



- LANXESS actively reduced CO₂e emissions in line with Emission Trading Scheme (ETS) reduction targets
- Cost effect from ETS is currently neutral
- We will continue to reduce CO₂e emissions and remain ahead of ETS reduction targets

*Increase of existing specific 2025 Scope 2 and energy efficiency target from -25% to -40%, compared to 2015; existing business parameters, in case of significant M&A timeline to be adjusted; performance calculated versus 2004 level (foundation of LANXESS); performance compared to 1990 level even higher (-65%), but not fully in our responsibility due to pre-spin-off set-up, trajectories based on BDI: „Klimapfade für Deutschland, Existing business parameters, in case of significant M&A timeline to be adjusted

Sustainability counts!



Sustainability targets...

- ...have been incorporated into our **strategic KPIs**
- ...will be incorporated into **top management remuneration**

The way forward – Strongest set of opportunities since spin-off



Strategy	Well defined strategy that we will rigorously execute
Operations	We outlined clear growth paths for each segment and continuously optimize operations
Financials	We are on track and committed to deliver
Sustainability	Sustainability is a priority to us and we will seize this competitive advantage

LANXESS

Energizing Chemistry