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

Strategy

- Continuous portfolio management
- Fix underperforming businesses
- Innovation
- Digitalizing the value chain

Operations
Financials
Sustainability
LANXESS Portfolio Transformation
2016

- Rubber
- Intermediates
- Engineering Materials
- Performance Chemicals
LANXESS Portfolio Transformation

- Intermediates
- Specialty Additives
- Engineering Materials
- Performance Chemicals
LANXESS Portfolio Transformation
2019

- Intermediates
- Specialty Additives
- Engineering Materials
- Consumer Protection Chemicals
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

* Identity, phys.-chem, analytical, methodology information
LANXESS Consumer Protection: Our products follow strong application-driven trends

<table>
<thead>
<tr>
<th></th>
<th>Food Safety</th>
<th>Water Purification</th>
<th>Biosecurity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales CAGR* (2013-2019)</td>
<td>~5%</td>
<td>~5%</td>
<td>~27%</td>
</tr>
<tr>
<td>Products</td>
<td>Velcorin®</td>
<td>Lewatit®</td>
<td>Virkon™</td>
</tr>
</tbody>
</table>

* CAGR figures represent LXS sales growth
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

Which businesses are we addressing?
Rigorously addressing under-performing businesses across our portfolio

Sales of businesses to be addressed
~€800 m

Target structure
~€500 m

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

Margin Level:
~8%

Margin Level:
>15%

*Realignment focused on Chrome value chain, sales contribution includes Chrome Chemicals, sold to Brother Enterprises, closing expected in 2019, subject to antitrust approval
Strong progress in solving the Chrome problem

Structure
Business Unit Leather

Chrome Ore
South Africa

Chrome Chemicals
South Africa

Organic Leather Chemicals
EMEA, China

Exit
IN PROGRESS

Sold*

Reposition
2020-2022

* Sold to Brother Enterprises, closing expected in 2019, subject to antitrust approval. LANXESS continues manufacturing at Merebank site as part of a 5 years tolling agreement.
Improving Organometallics’ performance to competitive peer level

Organometallics Sales

- **2018:** ~€160 m

  - **Aluminum based Organometallics:** Set for organic growth
  - **Tin based Organometallics:** Exit partner found with PMC
  - **Gallium based Organometallics**: Exit in preparation

**Transforming action**

**Target structure** ~€100 m

- **Aluminum based**
- **Tin based**
- **Gallium based**

**Margin Level:**

- **0-5%**
- **15-20%**

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1 LANXESS Electronic Materials, Pyeongtaek (Korea)
2 LANXESS will continue to manufacture these products on a contract basis for PMC with first exit option end of 2021
The way forward – Innovation

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

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

**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)

~€300 m LXS sales potential in 2030
## Tepex: Application examples

<table>
<thead>
<tr>
<th>Application</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audi Seat Shell</td>
<td>45% weight reduction</td>
</tr>
<tr>
<td>Mercedes Front End Carrier</td>
<td>30% weight reduction</td>
</tr>
<tr>
<td>Dell Laptop Casings</td>
<td>Very thin but also very stiff and strong</td>
</tr>
</tbody>
</table>

- 30% weight reduction
- 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 GWh\(^1\)
- Globally, E-Mobility will account for >85% of total battery demand\(^2\)

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

\(^1\) Global Battery Alliance \(^2\) relates to 2030 / McKinsey / \(^3\) VCI, from 2025 onwards
LANXESS offers key products for Li-Ion batteries

- **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)*

* In case of successful feasibility

PA = Polyamid / PBT = Polybutyleneterephthalat PLA = Polymer Additives, AII = Advanced Industrial Intermediates, IPG = Inorganic Pigments, HPM = High Performance Materials, LPT = Liquid Purification Technologies
Cooperation with Standard Lithium could deliver upside in a promising market

**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**

* In case of successful feasibility
** 100% capacity basis, across multiple phases
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?
Digitalizing the value chain
LANXESS to be digital leader in the chemical industry

From itemized elements …

… towards a fully integrated digitalized value chain:

- R&D
- Sourcing
- Production
- Logistics
- Marketing/ Sales
- General/ Administration

Marketing & Sales

Production

Sourcing

Logistics
Digitalizing the value chain: CheMondis
Paving the way to the future of trading chemicals

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 a stand-alone company, neither run, governed nor represented by LANXESS.
CheMondis is the largest and fastest growing B2B marketplace for industrial chemicals in the western world.

**Fact #1**
- >1,000 companies active (65% buyer, 35% supplier)

**Fact #2**
- 13,000+ products for use in >15 different industries

**Fact #3**
- ~\(150\text{ m}\) transaction value (cumulated, YTD ‘19)

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*CheMondis is a stand-alone company, neither run, governed nor represented by LANXESS.*

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The way forward – Providing direction from four perspectives

- Strategy
- Operations
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- Sustainability
Advanced Intermediates – Focus on additional organic growth

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

Value drivers
- Debottlenecking
- Fix Organometallics
- Benefit from agro recovery

EBITDA pre development

- CAGR ~4.2%
- Organic growth
- Portfolio effect

[€ m]
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

Value drivers

- Synergies & optimization of production footprint
- Innovation: Exploit regulatory trends, e.g. Emerald 3000
- Benefit from market consolidation

EBITDA pre development

- CAGR ~8.0%
- Organic growth
- Portfolio effect

Portfolio effect

2014

LTM 2019

[€ m]
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

Value drivers
- Growth trend Consumer Protection Chemicals
- Benefit from market consolidation
- Fix chrome value chain and membrane business

EBITDA pre development

CAGR ≈1.8%

2014 LTM 2019

Organic growth Portfolio effect

Portfolio effect

[€ m]
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)

Value drivers

- Innovation & new applications
- Strong trends: E-Mobility, light-weight, sustainable production
- Continue to optimize value chain (additional compounding capacity)

EBITDA pre development

- CAGR ~21.4%

Organic growth

Portfolio effect

2014

LTM 2019

[€ m]
Capital allocation follows clear individual strategies for each business

<table>
<thead>
<tr>
<th>Business</th>
<th>Organic growth / Capex</th>
<th>Likelihood for M&amp;A</th>
<th>Turnaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Intermediates</td>
<td>[●]</td>
<td>[●]</td>
<td>Organometallics</td>
</tr>
<tr>
<td>Specialty Additives</td>
<td>[●]</td>
<td>[●]</td>
<td>Rubber additives</td>
</tr>
<tr>
<td>Performance Chemicals</td>
<td>[●]</td>
<td>[●]</td>
<td>Chrome value chain Membranes business</td>
</tr>
<tr>
<td>Engineering Materials</td>
<td>[●]</td>
<td>[●]</td>
<td></td>
</tr>
</tbody>
</table>
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%
- **EBITDA margin volatility**: 2-3%pts, YTD stable vs. previous year
- **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
The way forward – Providing direction from four perspectives

- Strategy
- Operations
- Financials
- Sustainability
Sustainability direction –
We see sustainability as a competitive advantage

Strong progress that is recognized externally

2016 #15 2017 #7 2018 #3 2019 #1

EcoVadis "Gold Recognition Level"

CDP
Climate Change Score A-

Dow Jones Sustainability Indices
MEMBER OF

In Collaboration with RobecoSAM

Ranking refers to DJSI Europe after 2017, LANXESS is listed in DJSI Europe since 2017, DJSI World since 2009
We delivered strongly on emission reduction and aim high for 2030

\[ \text{CO}_2\text{e scope 1+2 emissions in thousand tons, LXS*} \]

-50% -50% -50%

<table>
<thead>
<tr>
<th>Year</th>
<th>CO₂e Emissions (thousand tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>6,500</td>
</tr>
<tr>
<td>2018</td>
<td>3,200</td>
</tr>
<tr>
<td>2025e</td>
<td>2,400</td>
</tr>
<tr>
<td>2030e</td>
<td>1,600</td>
</tr>
</tbody>
</table>

- 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

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

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

*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; climate neutral:<300kt CO₂e p.a.
LANXESS ahead of regulation and far sighted in management of ETS certificates

- 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

Climate performance

Global trajectory

German industry trajectory

LANXESS

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
On track to deliver 2021 financial targets
Meeting the Management

Michael Pontzen, CFO
In 2017 we set our 2021 financial targets in a favorable market environment

Despite rising political risks, global economy was robust

- **GDP**
  - Asia and USA with strong growth, Brasil recovery expected

- **Additional US growth foreseeable due to pending tax reform**

- **Main customer industries expected to continue a growth path**

<table>
<thead>
<tr>
<th>2016</th>
<th>What we aim for (≈2021)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBITDA pre margin (group, Ø through the cycle)</td>
<td>10-14%</td>
</tr>
<tr>
<td>EBITDA margin volatility</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>Cash Conversion*</td>
<td>56%</td>
</tr>
</tbody>
</table>

*Cash Conversion = EBITDA pre – CAPEX / EBITDA pre
In 2019 the world is much more challenging, but we are well on track to achieve our goals.

The political uncertainty with full negative impact on global economy

**2019**

- Asian economies with visible slowdown, Brasil recovery pending, LATAM uncertain
- Serious trade conflicts / BREXIT
- Main customer industries weak, auto in crisis mode, capital goods and agro sluggish

**We stick to our targets (~2021)**

- EBITDA pre margin (group, Ø through the cycle)
  - Specialty level
- EBITDA margin volatility
  - Resilience
- Cash Conversion
  - Strong cash generation
LANXESS self-help measures are the foundation on our way to achieve our financial targets

- Active portfolio management
- Significantly reduced auto exposure
- More balanced regional exposure
- Profitable organic growth
- Leveraging of synergies
- Streamlining asset network
- Additional organic growth with ROCE ~20%
- Further M&A and restructuring
LANXESS self-help measures are the foundation on our way to achieve our financial targets

- Active portfolio management
- Significantly reduced auto exposure
- More balanced regional exposure
- Profitable organic growth
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- Additional organic growth with ROCE ~20%
- Further M&A and restructuring
LANXESS margin improvement and resilience proven

Stable margin growth in cyclical environment

* European Peers: Arkema, DSM, Covestro, BASF, Clariant, Evonik, Solvay
LANXESS margin improvement and resilience proven

Stable margin growth in cyclical environment

* European Peers: Arkema, DSM, Covestro, BASF, Clariant, Evonik, Solvay
LANXESS margin improvement and resilience proven

Stable margin growth in cyclical environment
Margin resilience proven in recent quarters!

Index, 2014 = 100
EBITDA pre margin LTM

continuous improvement
resilience

European Peers*  LANXESS

* European Peers: Arkema, DSM, Covestro, BASF, Clariant, Evonik, Solvay
Cash Conversion target also on track – but at what price does it come?

We could deliver on our Cash Conversion target already in 2019, but give priority to profitable growth

2019 estimate in € m

\[ \text{~1,000 – 1,050} \]

\[ \text{~500} \quad \text{~50 \%} \]

\[ \text{EBITDA pre - CAPEX} = \text{Cash Conversion*} \]

* Cash Conversion = EBITDA pre – CAPEX / EBITDA pre; ** ROCE: ~20%, considering ~€10m D&A & ~30% tax
Cash Conversion target also on track – but at what price does it come?

We could deliver on our Cash Conversion target already in 2019, but give priority to profitable growth

2019 estimate in € m

~1,000 – 1,050

Growth: ~100 – 150
Restr.: ~0 – 50
Maint.: ~300 – 350

~500

EBITDA pre - CAPEX = Cash Conversion*

~50 %

~100 m

* Cash Conversion = EBITDA pre – CAPEX / EBITDA pre; ** ROCE: ~20%, considering ~€10 m D&A & ~30% tax
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2019 estimate in € m

~1,000 – 1,050

~500

~500

Growth: ~100 – 150
Restr.: ~0 – 50
Maint.: ~300 – 350

~50 %

EBITDA pre - CAPEX =

 Conscious decisions backed by sound financials

~20% ROCE

~ €30 m** additional EBITDA pre
~ €0.16** additional Earnings per Share

* Cash Conversion = EBITDA pre – CAPEX / EBITDA pre; ** ROCE: ~20%, considering ~€10 m D&A & ~30% tax
We decided to invest ~€400 m in financially attractive debottleneckings and brownfield investments

Targeted growth CAPEX until 2020, in € m

~150
~50 - 100
~50 - 100
~50 - 100
Organic investments fuel improvement of ROCE*

Adjusted ROCE* shows improved operational return profile of LANXESS

Transformation pays off:
- Divestment of ARLANXEO
- Acquisition of Chemtura
- Streamlining asset network
- Organic growth investments

* Adjusted ROCE = EBIT pre adjusted for amortization of Chemtura PPA related intangibles & assumed ARL ROCE
Strong management attention also on EPS pre*

Strong EPS pre* growth

Active EPS management:
- Operational improvement
- Lower interest expenses
- Funding of pension debt
- Tax management (tax rate from ~45% to ~30% in 2019)
- Share buyback in 2019

~30% CAGR

<table>
<thead>
<tr>
<th>Year</th>
<th>EPS (in €)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>~1.60</td>
</tr>
<tr>
<td>2015</td>
<td>~1.80</td>
</tr>
<tr>
<td>2016</td>
<td>~2.30</td>
</tr>
<tr>
<td>2017</td>
<td>3.84</td>
</tr>
<tr>
<td>2018</td>
<td>4.45</td>
</tr>
</tbody>
</table>

* Earnings per Share: net of exceptionals and amortization of intangible assets as well as attributable tax effects / figures for 2014 until 2016 exclude ARLANXEO (non audited figures)
Capital allocation follows shareholder interests

Shareholder return is the driver for capital allocation

*illustrative (€ m)*

~1000 ~120 ~300 - 350 ~550

EBITDApre Tax Maintenance CAPEX Free Cash Flow

Organic growth
Restructuring
Mergers & Acquisitions
Share buyback
Dividend
Deleveraging
Interest expenses
Our project pipeline allows us to continue our organic growth path

We keep our internal benchmark for organic growth projects: 20% ROCE

Growth CAPEX from 2021, examples

- Advanced Industrial Intermediates
  Aromatics ~€100 m
- Performance Chemicals
  Biocides, Resins ~€50 m
- High Performance Materials
  TEPEX, Resins ~€50 -100 m
- Polymer Additives
  Lithium ~€100 – 400 m

Future invest approach:

- Attractive ROCE around 20%
- Focus on debottlenecking and brownfield investments
- Strategic fit to future growth markets
- Strengthen regional presence or balance growth regions

2021
Tepex: Leveraging strong demand for continuous fiber reinforced thermoplastics

Thermoplastic composite sheets serve as powerful and cost effective substitute for traditional components

~€40 m
Investment

1H 2022
Planned operation start

Illustrative: Tepex addressable global market volume*

+24% CAGR
LANXESS strengthens its All aromatic „Verbund“ with additional synthetic menthol capacity

Clear long-term investment approach based on synergetic customer relationship

~€40 m Investment

Early 2021 Planned operation start

Investment rationale:

- Significant increase in demand for synthetic menthol
- Strong customer relation based on long-term contracts
- Downstream development of the aromatic „Verbund“
Venture investment into Lithium with low risk and potentially high return

Opportunity in cooperation with Standard Lithium

~€100 – 400 m Investments

Early 2021 Planned start of construction

Investment rationale:

- Potential lucrative yield of battery grade lithium from LANXESS' „waste material“ tail brine
- Strong growth of Lithium use based on rising demand for batteries
The journey will continue …

* European Peers: Arkema, DSM, Covestro (formerly BMS), BASF, Clariant, Evonik, Solvay
Looking ahead … energized!

- **Profitability**: Moving our way towards even more stable and attractive margin levels
- **Resilience**: Further balanced exposure to end markets and regions in the future
- **Financials**: Maintaining strong financials and balanced debt
- **Rating**: Commitment to stay solid investment grade
Meeting the Management 2019
Business Unit Material Protection Products (MPP)

Michael Schäfer, Head of Business Unit MPP
Cologne, November 15th, 2019
Material Protection Products

...more than you expect!
Material Protection Products

...more than you expect!
Material Protection Products

...more than you expect!
Material Protection Products

Preservation

Biosecurity

Biocides

Microbial Control

...more than you expect!
MPP proves its strong “specialty” financial performance

70 - 80% Cash conversion

22 - 25% EBITDA pre margin

CAGR: ~10%

Sales <€500 m

6 M&A since 2010

0% Automotive
Biocides is a highly regulated chemistry – Demanding significant resources

**Legislation**
Dedicated regulatory rules far beyond REACH

**Time and Costs**
Long duration / high costs of new registrations

**Evolving Requirements**
Global regulatory systems continuously evolve
Biocides is a highly regulated chemistry – LANXESS is all in!

- Regulatory Expertise
  With ~30 senior regulatory experts one of the world’s largest teams

- Data Creation
  ~40% of CAPEX for data creation

- Registrations
  ~50 active ingredient registrations
  ~5,000 formulation registrations
The value chain comprises both production and regulation, which constitutes MPP’s core strength.

**Value Chain**

**PRODUCTION**
- Active ingredient synthesis
- Regional formulation sites
- Technical expertise & Branding

**REGISTRATION**
- Own data / Active registration
- Formulation registration
- Regulatory support

**Value Chain Diagram**

- RM = Raw Material
- DC = Distribution Channel
Ideal strategic fit of Clean & Disinfect acquisition: Access to attractive Animal Health market

Value Chain Biosecurity

RM Active ingredients Formulations Solutions DC

Oxone™ - #1 market position Phenolics Very limited downstream position

Virkon™ - #1 in powder disinfectants

Expansion of active ingredient portfolio
Enhancement of integrated value chain
Strong forward integration

RM = Raw Material, DC = Distribution Channel
Virkon – Highly effective disinfectant solutions for disease prevention & biosecurity control

For the disinfection of surfaces, equipment, air and water in the livestock & aquaculture industry

- Continuously sets new benchmarks in livestock production biosecurity
- Proven effective in challenging real “on-farm” conditions
- Efficacy against current and emerging disease-causing organisms

CAGR: ~27%
Velcorin – Microbial control agent for the beverage industry ensuring food chain safety

- Cold sterilization agent for non-alcoholic soft drinks, beer-mixes, cider and wine
- Growth in niche markets (alcohol free wines, ciders) as well as in new regions (Africa, Asia, Central America)
- 1,500 Dosing Units at ~500 customers incl. global players

CAGR: ~5%
Sporgard – Securing mold resistant construction materials

- For the production of mold resistant wallboards
- Long-term unique protection without human health related product labeling
- Key markets: USA and Korea
- Market introduction in Europe ongoing

CAGR: ~11%
Radicides – Enabling sustainable and climate-friendly urban development

Preventol®

- For the production of root resistant bitumen membranes used in Green Roofs
- Long-term protection without affecting plant health
- Key markets: Europe and China
- US EPA registration submitted

CAGR: ~26%
Oxone – Provides powerful non-chlorine oxidation with wide application spectrum

- Strong and fast-acting oxidizing agent for a wide variety of industrial & consumer uses
- Well established in electronics, disinfection, pool & spa, denture cleansing, and many other global industries
- Key active ingredient for Virkon™
- Differentiation by safe handling and excellent environmental profile
- New applications driven by environmental and regulatory trends (e.g. water treatment)

CAGR: ~9%

Sales CAGR 2017-2019 for new applications
Nagardo – Offering a purely natural preservative to the food industry

Nagardo™

- Naturally derived beverage preservative based on edible mushroom
- Prolongs shelf life of beverages and protects from microbial spoilage
- Consumer friendly labelling with “natural” or “free from” claims
- Up to 50 times more efficient than chemical preservatives
- Key market: USA, approval in other countries in preparation
A compelling business model combining innovative products and regulatory know-how

Food Chain
Material
Microbial
Biosecurity

Control
Protection
Safety

Solutions
Products
Innovations
LANXESS
Energizing Chemistry
Beauty of Additives in a nutshell
Meeting the Management

Anno Borkowsky, Member of the Board
Agenda

1. Beauty of Additives in a nutshell
2. Why Polymer Additives are attractive
3. Why Lubricant Additives are amazing
Additives constitute a very attractive product group in the specialty chemical industry. LANXESS Additives “DNA” with very attractive business characteristics:

- Meets enforced regulation
- Solution provider
- Relatively low asset intensity, high return
- Leading innovation driver
- Highest customer value add
Specialty Additives cater various end markets with a balanced global footprint

Leading players in diverse and growing end markets

Well balanced end market split

Strong footprint in growth regions

Sales 2018

- Rhein Chemie
- Polymer Additives
- TOP #1
- TOP #2
- Lubricant Additives
- TOP #2/ #3

True focus on specialties & innovations

Further strengthening of APAC & NAFTA footprint

Build on & expand leadership positions
Specialty Additives – Successful business set-up with a clear strategic approach

BU Polymer Additives
Leverage growth from higher regulation & batteries

BU Lubricant Additives
Further innovate and specialize the portfolio

BU Rhein Chemie
Reduce auto dependency and further realignment

Sales by 2018

Plasticizers & Others

Other Specialties

Flame Retardants

~20% Commodities

~80% Specialties

Automotive

Industrial Specialties

~50% auto exposure

Colorants

Additives for Technical Rubber
Agenda

1. Beauty of Additives in a nutshell
2. Why Polymer Additives are attractive
3. Why Lubricant Additives are amazing
Leading manufacturer of phosphorus derivatives

Comprehensive supply for rising demand in phosphorus flame retardants and batteries

Phosphor value chain

- **Raw Materials**: Phosphorus (secured with long-term supply contracts)
- **P-Intermediates**: Phosphorus chlorides & oxides
- **P-Derivatives and applications**: e.g. Flame retardants, Batterie chemistry

Expectation:

Phosphorus portfolio by 2025

- P-flame retardants
- P-battery chemistry
- Other P-Derivatives
Extracting value by pursuing the whole value chain from one of the most efficient bromine resources

**Bromine reserves**
- Bromine well, El Dorado, Arkansas, USA
- Reserves for >70 years

**Elemental bromine**
- Chlorine and steam
- Elemental bromine production El Dorado, Arkansas, USA
- Brine fluids
- Merchant sales

**Bromine derivatives**
- Flame retardants
- Sodium-/calcium bromides
- HBr/alkyl bromides

**End use**
- Construction
- E&E
- Biocides
- Oil drilling
- Mercury control
- Agro
- Pharma
- Industrial

Products sold by LANXESS
LANXESS benefits from structural changes in the Chinese bromine market

Chinese bromine resources continuously exhaust and face rising regulatory pressure

APAC with attractive growth opportunities:

- Chinese bromine demand grows while resources continuously decline
- LANXESS meets rising environmental standards in China
- Huge logistics infrastructure for bromine transportation

* SAWR: Seasonally adjusted weekly rate
Flame retardants well prepared for tightening regulation
Strategic focus on developing sustainable FR

**Illustrative on flame retardants**

- **Market today**
  - Oligomeric
  - Polymeric + Reactive
  - Monomeric

- **Technology development**

**LANXESS flame retardants portfolio mix:**

- Reactive
- Polymeric
- Oligomeric
- Monomeric

Focus on polymeric and reactive flame retardants to fight toxicity and leaching risk
There is no alternative to the powerful characteristics of flame retardants
LANXESS provides cutting-edge plasticizers and phosphorus specialties

Mesamoll™
The only real phthalate free plasticizer in the world!

Stabaxol™
Advanced hydrolysis protection for sport shoes and other applications
Polymer Additives even goes one step further…

**Levagard 2100™**
Emission free reactive flame retardant

**Stabaxol P110™**
Hydrolysis protection with best in class characteristics
Polymer Additives sees growth opportunities driven by demand for batteries

Electrolyte (e.g. LiPF6)
- Key raw materials for LiPF$_6$ production
- Flame Retardants

Anode

Separator

Cathode (e.g. NMC, LFP)
- Li from brine
- IX for refining Co, Ni, Li
- FEO precursor for LFP cathode material

Battery housing & e-powertrain components
- PA/PBT compounds
- Flame retardants

PLA = Polymer Additives, All = Advanced Industrial Intermediates, IPG = Inorganic Pigments, HPM = High Performance Materials, LPT = Liquid Purification Technologies
Polymer Additives to strengthen its leadership position in flame retardants and battery solutions

**Strategy execution**
Foster leadership position in flame retardants by leveraging regulatory challenges with innovative solutions

**Applied innovation**
Leverage on strong R&D pipeline to expand application portfolio and further reduce volatile organic emissions

**Growth driver**
Focus on future growth areas of bromine and phosphorus chemistry in APAC region

LANXESS saves your life
Agenda

1 Beauty of Additives in a nutshell

2 Why Polymer Additives are attractive

3 Why Lubricant Additives are amazing
Lubricant Additives benefit from unique integrated value chain and innovation power

Backward integrated one-stop-shop for specialized industrial additive solutions with leading market positions

Customers

Intermediates
We have them!

Additives
We add them!

Finished Fluids
We provide them, too!

Basestocks
We make them!

Packages
We mix them!

Customers

Lubricant Additives Sales 2018

Basestocks

Intermediates

Additives/Packages

Finished Fluids
Increasing regulation and higher performance requirements drive growth for specialty lubricants

LANXESS focuses on growing specialty product segments

- **Basestock demand**
  - Total: 1.1%
  - Specialties: 2.6%
  - LANXESS: 1.1%
  - e.g. PAO, POE

- **Additives demand**
  - Total: 0.7%
  - Specialties: 4.5%
  - LANXESS: 0.7%
  - e.g. Metal working, Protect expensive tools

- **Finished Fluids demand**
  - Total: 0.8%
  - Specialties: 4.0%
  - LANXESS: 0.8%
  - e.g. Aviation, Refrigeration

*Source: Kline, LANXESS Research; PAO = Polyalphaolefines, POE = Polyolester

**Lubricant Additives Sales 2018**

- **Commodities**
  - ~20%
- **Automotive**
- **Industrial Specialties**
  - ~80%
- **Specialities**

*Market growth CAGR 2017 - 2022*
General industry applications provide a variety of independent growth sources

- **Turbines**: Highest safety standards
- **Windmills**: Alternative energy drives growth
- **Gear Boxes**: Highest temperatures and abrasion protection
- **Metal Working**: Highest endurance and abrasion protection

Any questions? One time fill required

- **Highest abrasion resistance**
- **Less replacement cycles**
Innovative lubricant technology leverages growth offering synergistic customers’ advantages

Royco™ Greases

Leader in synthetic aviation turbine oils

Hybrid Greases

A unique solution attracting key global customers' interests
Lubricant Additives builds on its leading market positions through innovation and strong growth

Strategy execution
Leverage full value chain to grow in key product lines & tech transfer in adjacent markets & expand into Asia

Applied innovation
Succeed on key product launches to fulfill low friction, high temperature and corrosion protection requirements

Growth driver
Harvest growth in APAC region

LANXESS lubricates your world
Chemicals trading made easy
CheMondis

Sebastian Brenner
Managing Director
15 November 2019

CheMondis is a stand-alone company, neither run, governed nor represented by LANXESS
In 2019, the Chemicals market is still largely offline.

Chemicals is a $4.7 tr global B2B industry, 80% is offline

This is reality in buying and selling Chemicals.
CheMondis is an open marketplace to connect professional suppliers and buyers of chemical products
How we started CheMondis

CheMondis was launched only one year ago

Start-up setting, completely independent from LANXESS group structures

Already accomplished a lot...
CheMondis is gaining traction month by month

**Fact #1**

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

**Fact #2**

13,000+ products for use in >15 different

**Fact #3**

~€150 m transaction value (cumulated, YTD ‘19)
Using CheMondis is as easy as B2C online shopping

- Professional buyers’ behavior is shifting towards online channels
- CheMondis customer experience comparable to well known B2C platforms
- All steps of the transaction take place on CheMondis platform
CheMondis is constantly expanding its feature set, working 100% customer centric.

**Current features:**
- Online Marketing (SEA)
- Search
- Deal making
- Agreement management
- Order EDI
- Collection
- Credit Rating
- Data & Analytics

**Future potential additional features:**
- Product Roadmap: (>100 product hypothesis)
- Logistics / Warehousing
- Payment
- Technical Advice
- And much more…
Various ways to monetize trading on CheMondis

- Fee per deal
- Fee for trading
- Membership fee
- Data & Analytics
- Fee for value adding services
CheMondis developed a MVP within 3 months to begin the process of learning as soon as possible...

= minimum viable product (MVP)  = advanced product
Our Objective: Fast execution and continuous learning
Propylene Glycol

CAS: 57-55-6
Molecular Formula: C3H8O2
Molar Weight (g/mol): 76.106

Synonyms: 1,2-dihydroxypropane; (+/-)-1,2-propanediol; 1,2-propanediol; 1,2-propylene glycol; aroplus(r); arctic plus(r); dowfrost(tm); glycol-propylene; methyl glycol; methylene glycol; mono propylene glycol; propane-1,2-diol


- Blanovo® Propylene Glycol 1,2 EP / USP
  - Supplier: Azela Deutschland Kosmetik GmbH
  - Delivery Form: Liquid

- Cooltrans Plus CTL
  - Supplier: VitoChem B.V.

- Cooltrans Plus CTP
  - Supplier: VitoChem B.V.

- Glicole Propilico 99.7% USP/EP
  - Supplier: ML LAB SRL

- Mono Propylene Glycol
  - Supplier: International Solvent Solutions BV

- Mono Propylene Glycol (MPG)
  - Supplier: Preparados Quimicos De Navarra S.L
  - Delivery Form: Liquid

- Mono Propylene Glycol (MPG)
  - Supplier: Same Chemicals BV
  - Delivery Form: Liquid

- Mono Propylene Glycol (MPG)
  - Supplier: International Solvent Solutions BV

- Mono Propylene Glycol Double Distilled (MPG)
  - Supplier: Rathnis
  - Delivery Form: Liquid

- Monopropylene glycol
  - Supplier: VitoChem B.V.
Reasons to love CheMondis

- Largest and fastest growing B2B marketplace for industrial chemicals in the western world, with strong customer centric offers along the value chain
- Exceptional team of skilled and dedicated experts combining chemical, digital and tech know-how
- Unique setup, backed by industry know-how and capital
Thank you.
Meeting the Management 2019
Thank you for joining and have a safe trip home!

Cologne, 15 November 2019