

## ESG @ Covestro

September 2018

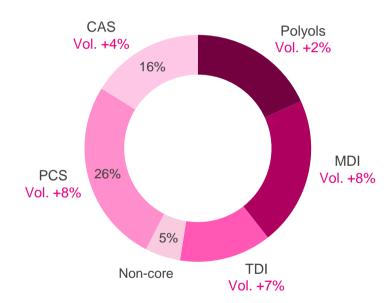
### Global leader in high-tech material solutions

#### Covestro at a glance



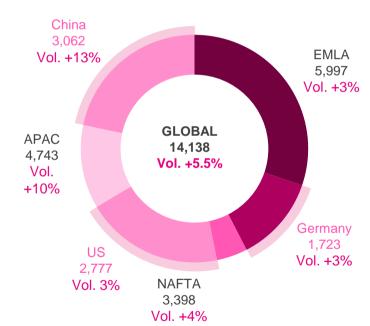
#### Sales split by segments

% of 2017 Group sales Core volume growth, CAGR 2015-2017



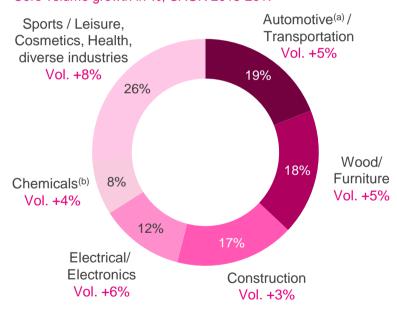
#### Sales split by regions

2017 Group sales in € million Core volume growth in %, CAGR 2015-2017



#### Sales split by end-markets

% of 2017 Group sales
Core volume growth in %, CAGR 2015-2017



~5 million tons
PUR and PCS nameplate capacity

Employees: ~16,000 FTEs

Headquarters in Leverkusen, Germany

From €3.4bn EBITDA to €1.8bn FOCF

High cash conversion

Notes:

Based on Covestro Annual Report 2017; EMLA = Europe, Middle East, Africa, Latin America; NAFTA = USA, Canada, Mexico; APAC = Asia, Pacific Adjusted prior-year figures to reflect the transfer of the specialty elastomers business from the Polyurethanes segment to the Coatings, Adhesives, Specialties segment as of January 1, 2018

## Inventor and global leader with almost half of sales in resilient businesses



Polyurethanes (PUR) at a glance



Polyols grades for differentiation



Producer and inventor of PU globally<sup>(a)</sup>



Core volume CAGR in 2015-2017



Sales 2017<sup>(b)</sup>



FOCF 2017<sup>(b)</sup>













Cold chain e.g. refrigerator

**Construction** e.g. metal panel

Cost leadership e.g. process technology

**Comfort**e.g. furniture
upholstery

Automotive e.g. instrument panel

**Sustainability** e.g. CO<sub>2</sub>-based polyether polyols

## Inventor and global leader with strategic focus on increasing resilience



Polycarbonates (PCS) at a glance



PC grades for broadest offering



Producer and inventor of PC globally<sup>(a)</sup>



Core volume CAGR in 2015-2017



Sales 2017



FOCF 2017













**Mobility** e.g. exterior

**Electronics** e.g. robot housing

Consumer electronics e.g. adapter

Electrical
e.g. LED street
lamp

Mobility
e.g. charging
station

**Healthcare** e.g. drug delivery

## Global leader with high and resilient profitability

Coatings, Adhesives, Specialties (CAS) at a glance





Products based primarily on 6 monomers



Customers in 10+ high-end industries



Core volume CAGR in 2015-2017



Sales 2017<sup>(a)</sup>



FOCF 2017<sup>(a)</sup>





Ingredients for surface coatings





Ingredients for adhesives and sealants

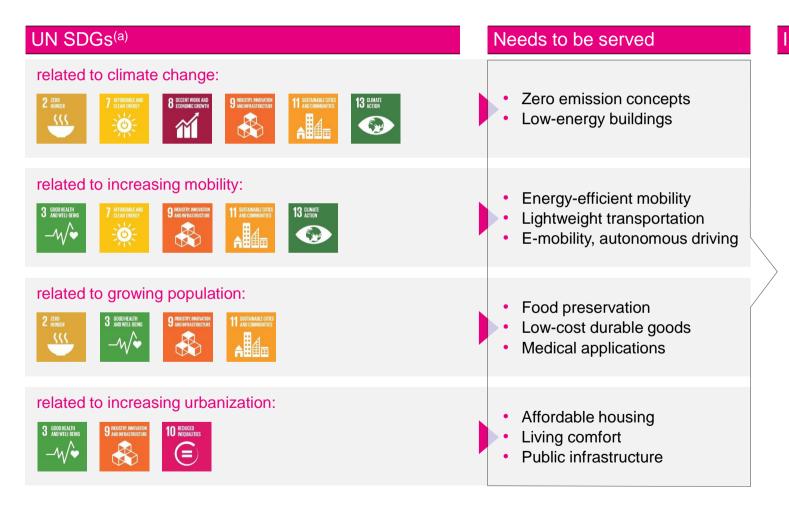


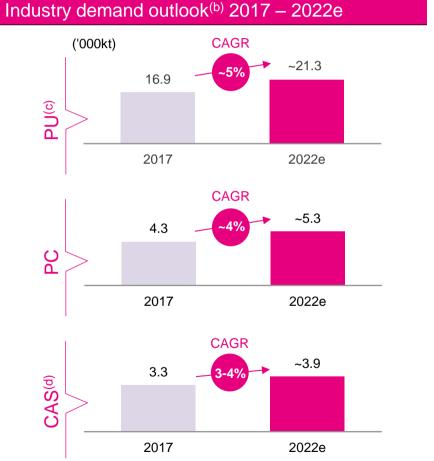


## Sustainability trends drive structural growth above GDP

#### Structural growth drivers



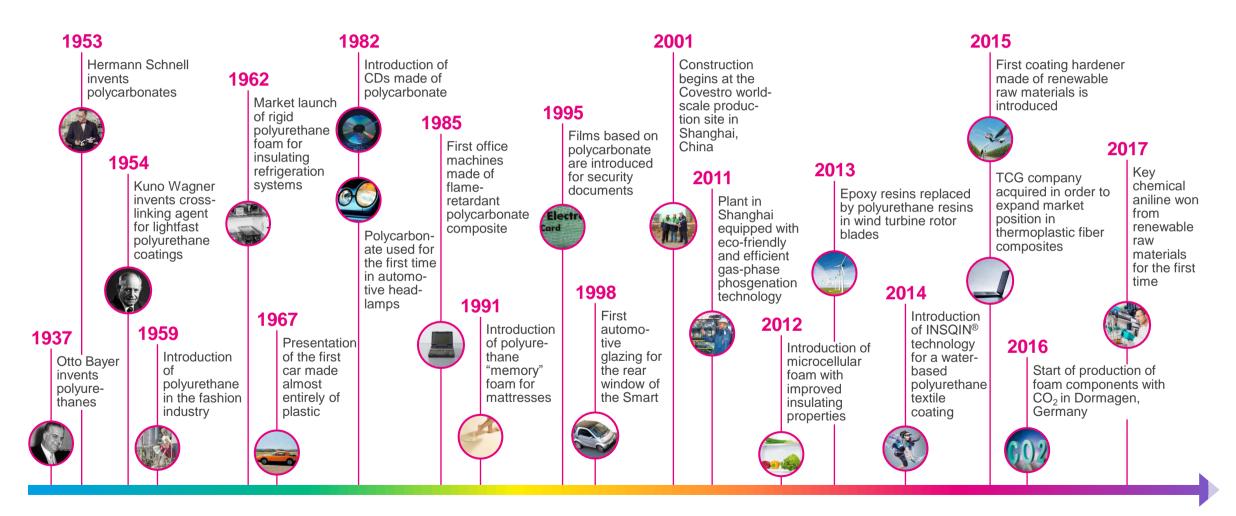




#### Inventions at the core of Covestro

#### 80 years of ideas and research





## Innovation and sustainability driving growth



#### Key investment highlights



#### Above GDP volume growth

driven by innovation and sustainability trends, embodied also by non-financial targets



#### Leading and defendable global industry positions

as innovation and cost leader



#### More than half of sales generated by resilient businesses

as global leader in highly attractive niches



#### Balanced supply and demand outlook for all our businesses

inline with mid-term debottlenecking plans and preparation of world-scale investment



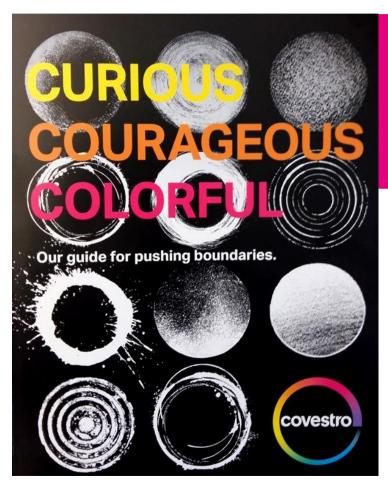
#### Attractive growth fuels solid cash generation

with use of cash focused on shareholder value

## ESG elements are integral part of Covestro's strategy

#### Summary of Covestro policies

















Value creation

Sustainability

Innovation

People

HSEQ

**Compliance** 

- We believe in the principle of the three Ps (PPP): **People, Planet and Profit**
- We always consider the **product life cycle** in its entirety
- We are committed to finding ways of contributing towards reaching the United Nations Sustainable Development Goals (SDGs)
- We develop and foster collaborations with external partners
- We set high standards that are applicable globally
- We are signatories of the United Nations' Global Compact



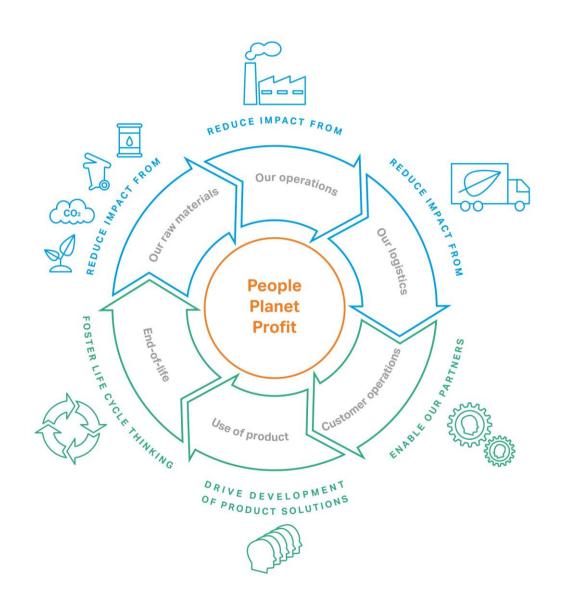
# Environment @ Covestro

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## People, Planet, Profit (PPP)

## Covestro's approach





## We think in full life cycles

#### Sustainability along the value chain



**Global trends** 

R&D

Raw materials

**Production** 

**Products to markets** 



R&D resources allocated based on benefits for:

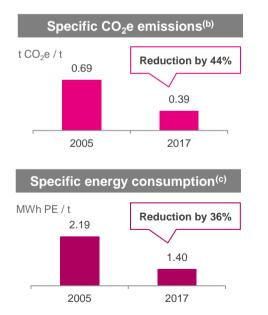
- People
- Planet
- Profit

More sustainable input addressing customer needs and profit improvement:

#### Examples:

- C1 feedstock (e.g. CO<sub>2</sub>)
- Bio-based feedstock (e.g. BDO<sup>(a)</sup>)
- Low carbon energy

Cost efficiencies by energy-efficient process



Address customer needs for more sustainable solutions (e.g. lightweight, durable, bio-based)

#### Examples:

- INSQIN®, artificial leather
- Desmodur® Eco, coating hardener
- Baytherm® Microcell, insulation foam
- Makrolon<sup>®</sup>, e.g. LED lighting



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Notes:

(a) BDO refers to 1.4-butanediol

## Right answers for big challenges

Global trends

R&D

kaw naterials

**Production** 

Products to markets





## Focused R&D to build and protect profitable competitive positions



Global

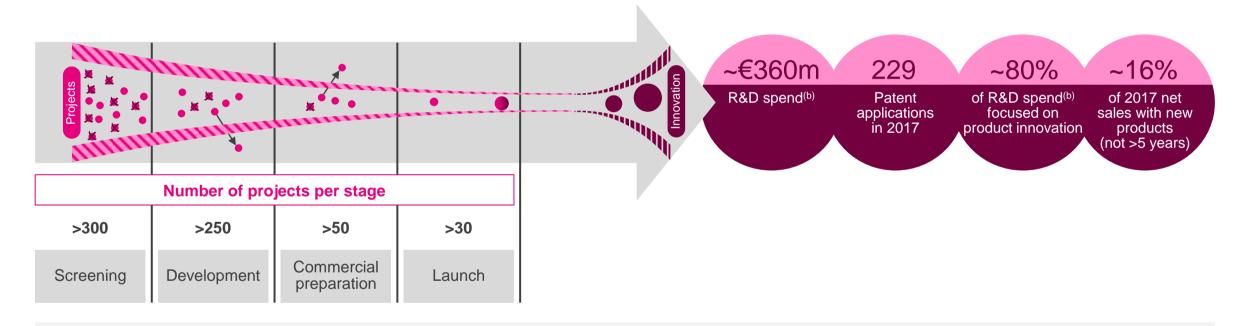
R&D

raw naterials

**Production** 

Products to markets

#### Progress of product and process innovation projects(a)



- PPP rule: each project has to contribute positively to at least two of the Ps, no P negative
- Early check of ecological parameters in the process
- R&D project portfolio aligned with UN Sustainable Development Goals

## Innovation inspired by sustainability



R&D



#### Key industries rely on sustainable solutions



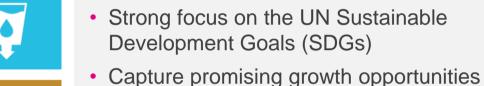










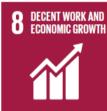


Aligned with the PPP principle

with innovative sustainable solutions



13 CLIMATE ACTION



14 LIFE BELOW WATER





















**Target N°1** 

Increase share of sustainability-related R&D projects to 80% by 2025

## Internal sourcing: Pushing boundaries in use of alternative raw materials



Globa

R&D

materials

**Productior** 

Products to markets

#### Highlights

First bio-based coating hardener





Revolution in aniline production







#### **Benefits**

- Coating hardener developed with ~70% bio-based content and ~30% reduction in carbon footprint
- Collaboration with Audi and BASF clear coat applied to Audi Q2 test bodies
- Improved eco-balance goes hand in hand with full performance
- New technology permits to use CO<sub>2</sub> in the production of polymers, saving crude oil
- Recticel manufactures KAPUA® foam mattresses with more than one-seventh of oil content replaced by CO<sub>2</sub>-based chemicals (e.g. cardyon®)
- More CO<sub>2</sub>-based products in development for applications in sport, appliances, etc.
- For the first time, aniline has been derived from renewable raw materials instead of petrochemicals
- Aniline is widely used in the chemical industry, a key component of insulation foam
- Plans to produce bio-based aniline on a large industrial scale, as of mid-2020s

## External sourcing: Supplier compliance with Together for Sustainability



materials



















































Externally

audited by

- Dynamic and collaborative initiative founded in 2011, currently 21 members
- Offers the infrastructure to support high-quality, third-party sustainability assessments and audits by EcoVadis

Target N°2

100% of suppliers compliant with our sustainability requirements by 2025

## Leading process technologies based on world-class chemical engineering



Globa trends

R&D

materials

**Production** 

Products to markets

#### Highlights

#### Melt process in world-scale PC production



#### **Benefits**

- Conversion cost advantage of around 20% vs. competitor technologies
- Raw material cost on par or better than competitive technologies
- Pushing economies of scale to new standard of 150kt/a per line in Caojing, China

TDI / HDI gas-phase phosgenation



- Capex reduced by 20%(a)
- Reduced conversion cost due to lower energy demand and reduced solvent usage
- Reduced phosgene hold-up by 40% and energy consumption by 60% vs. liquid phase

NaCl electrolysis with ODC<sup>(b)</sup>



- Consumes 30% less electricity vs. conventional processes
- Significant economic and ecological benefits vs conventional processes
- World-scale ODC plant planned in Tarragona, Spain

**Target N°3** 

Reduce specific greenhouse gas emissions by 50% until 2025

## Adressing ever-changing customer needs for new material solutions



Globa trends

R&D

materials

Production

Products to markets

Need	Overall market	Relevant market	2015-2017	Covestro solutions
More durable and eco- nomical wind power plants	Energy consumption CAGR: ~3%	Offshore wind energy CAGR: ~19%	Covestro CAGR: 29%	Novel materials for wind power plants: PU resins for rotor blades, PU-based coatings, Elastomers for sea cables
Energy- and cost-efficient buildings	Construction CAGR: ~2%	Polyurethane insulation CAGR: ~5%	Covestro CAGR: 3%	Raw materials for PU foam (rigid and in spray form) enabling highly efficient insulation
Reduction of high energy consumption of lighting	Luminaire CAGR: ~3%	Luminaire LED CAGR: ~12%	Covestro CAGR: 122%	Polycarbonates in LED lenses, light guides, heat sinks
Eco-friendly produced furniture	Coating ind. furniture CAGR: ~3%	Water-based ind. furniture CAGR: ~5%	Covestro CAGR: 10%	New bio-based hardener for water-based wood coatings
Sustainable and functional fashion	Textile coating CAGR: ~6%	Relevant textile coating CAGR: ~11%	Covestro CAGR: 7%	Waterborne, solvent-free materials for functionalized textiles in diverse applications
More and better cooling devices	Refrigerators CAGR: ~3%	Refrigeration insulation foam CAGR: ~8%	Covestro CAGR: 12%	Raw materials for particularly effective insulating foams: 40% smaller pores allow up to 10% better insulation
Reduced weight and increased comfort	Global car production CAGR: ~3%	Relevant car applications CAGR: ~5%	Covestro CAGR: 7%	Attractive alternatives to conventional materials: polymers to replace glass and metal

### Increase the return on carbon employed

#### Measuring sustainability along the value chain



#### Highlights

#### Our vision is to drive a new perspective on value creation through carbon

- Improving carbon productivity along the value chain means generating more value from less fossil fuel carbon
- The alternative ROCE measures the return on carbon employed in making materials and products

#### Our role as initiator of the Carbon Productivity Consortium:

- Promote a group of like-minded organizations who want to seed the breakthrough idea of carbon productivity across industry and beyond
- Catalyse new insights about carbon at various stakeholder levels
- Support the collaborative creation of a tool, soon available as open source



**Target N°5** 

Develop a significant and universally accepted metric to set a quantitative target for 2025

## Using waste gas from steel factories to make plastics

#### Consortium joins forces on CO<sub>2</sub>



#### Highlights

- A new consortium of 14 partners from seven countries, led by Covestro
- Plan to investigate how flue gas from the steel industry can be used to produce plastics in a particularly efficient and sustainable way
- This will save crude oil, the raw material used in conventional methods
- The cross-sector project called **Carbon4PUR** receives funding from the European Union



Together, we are on the path to a crucial innovation: waste gas mixtures from the steel industry can provide carbon for chemical processes and ultimately be used to produce insulation materials and coatings. This helps us to broaden our resource base and to reduce the climate footprint for the entire value chain. At the same time, we are joining our forces by partnering with industrial and academic partners throughout Europe.

"

Dr. Markus Steilemann, Covestro Chief Executive Officer



# Social @ Covestro

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## Our success is the result of the strong engagement of our employees People at Covestro



- We have a unique set of values: curious, courageous, colorful our C<sup>3</sup> values They shape our company culture and allow every person to contribute in a successful way beyond job responsibilities.
- We aim to attract and retain the best talent available We follow the principles and rights set out in the ILO Declaration on Fundamental Principles and Rights at Work<sup>(a)</sup>
- We foster a high-performance culture To achieve this, continuous performance dialogues and candid feedback in both directions are essential
- We value diversity and promote an inclusive work environment We promote an inclusive environment that welcomes diverse characteristics and where all employees are treated with respect
- We seek to operate with flat and flexible structures 5 With minimal levels of management and a broad span of supervision to speed our decision making
- We support our employees in their professional development and personal growth 6 We support clear career progression to ensure that we have the right people in the right positions at the right time
- We recognize and compensate our employees in a transparent and competitive way We combine a competitive base salary that reflects the duties of a position with performance-related additional benefits

## Our priority: Nothing we do is worth getting hurt for

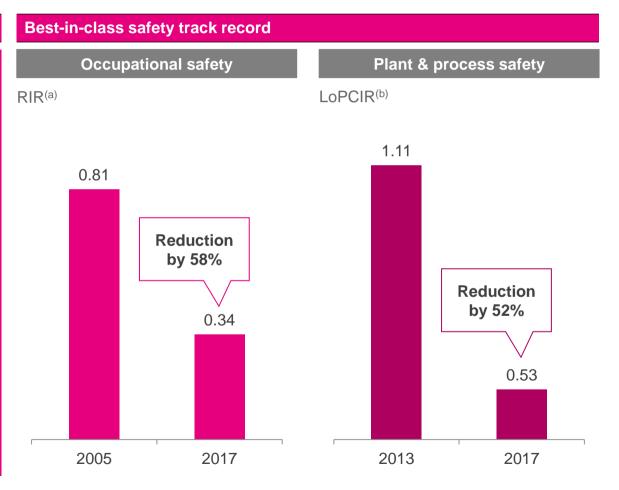
#### **HSEQ** at Covestro



#### Signatory to the Global Charter of Responsible Care®

A commitment by management and all employees to drive continuous improvement and achieving excellence in the HSEQ areas





## Social engagement as a matter of course

#### Corporate citizenship



#### Highlights

#### UN's Young Champions of the Earth



#### Covestro involvement

- Supporting the United Nations' Young Champions of the Earth prize and its environmental protection ideas
- In 2018, the winners will attend a one-week entrepreneurship course in Europe designed to improve their entrepreneurial skills
- Ongoing mentoring of Young Champions by more than one hundred volunteering Covestro employees

## World Solar Challenge



- Supporting future mobility concepts with high-tech materials
- A team from Aachen University participated in the world's most difficult solar-powered car race in Australia
- Use of a new vehicle repair coating made predominantly from plant-based raw materials

#### Solar Impulse



- Supporting world's first flight around the globe without fuel
- Under the name "World Alliance for Efficient Solutions," a new initiative plans to present 1,000 ideas for a more sustainable future at the UN climate conference in December 2018

### Bring product innovations to people in underserved markets

## covestro

#### Inclusive business as business model innovation

#### Highlights

## Solar dryer domes



#### **Benefits**

- Food security: PCS solutions for smallholder farmers
- Avoid food wastage after harvest, benefitting farmers economically
- · Locations: Thailand, Vietnam, Myanmar, India

## Affordable houses



- Based on polyurethane rigid foam (PIR)
- With outstanding insulation and mechanical properties
- · Locations: Iraq, Malaysia, Philippines, India

## Hygienic sanitation



- PIR technology based toilets
- Community and school toilets as the next step
- · Locations: India, Malaysia

#### **Target N°4**

Help ten million people in underserved markets with sustainable solutions by 2025



# Corporate Governance @ Covestro

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## Our culture of responsibility

#### Corporate Governance at Covestro





Declaration by the Board of Management and Supervisory Board concerning the German Corporate Governance Code (February 7, 2017 version) pursuant to Section 161 of the German Stock Corporation Act

Convenience Translation

Since the last Declaration of Conformity as of December 2016, Covestro AG has complied with all recommendations of the German Corporate Governance Code in the version of February 7, 2017 and will comply with them in the future.

Leverkusen, December 2017

For the Board of Management:

For the Supervisory Board:

Thomas

Pott

- Commitment to the German Corporate Governance Code
- Since October 2015, Covestro is in compliance with all of the recommendations of the German Corporate Governance Code
- Formal documentation with annual declarations of conformity
- Detailed corporate governance report as an integral part of the annual report

## Transparent leadership

#### Covestro's management structure



**Board of Management** 



Dr. Thomas Toepfer CFO<sup>(a)</sup>

Dr. Klaus Schäfer CTO

**Supervisory Board** 





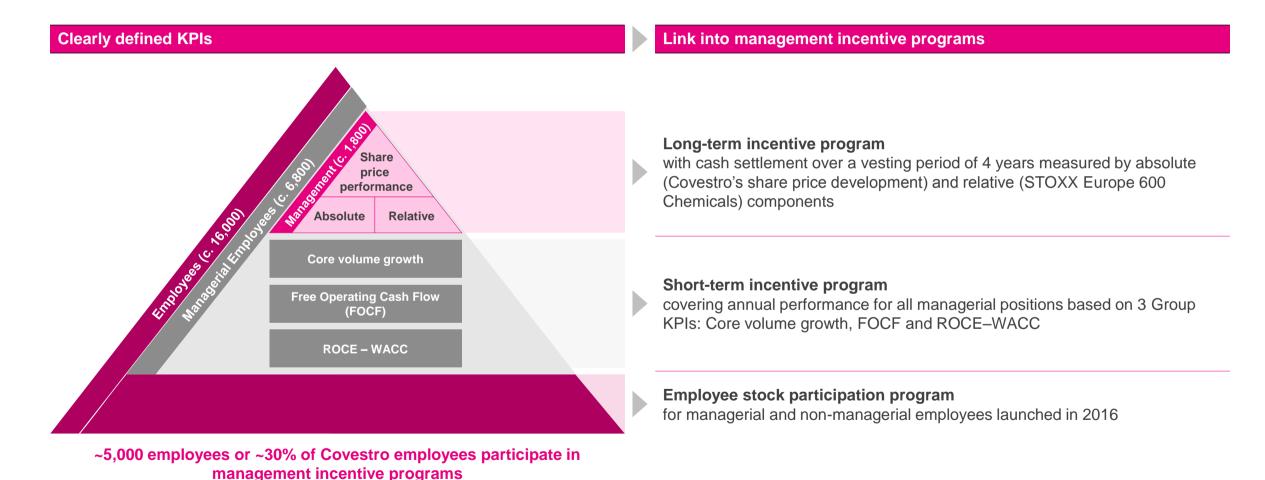
- Ferdinando Falco Beccalli
- Dr. Christine Bortenlänger
- Johannes Dietsch
- Dr. Ulrich Liman<sup>(b)</sup>
- Peter Hausmann

- Irena Küstner
- Prof. Dr. Rolf Nonnenmacher
- Regine Stachelhaus
- Marc Stothfang
- Frank Werth

## ~30% of employees participate in global management incentive programs



#### Executive pay: Focus on performance



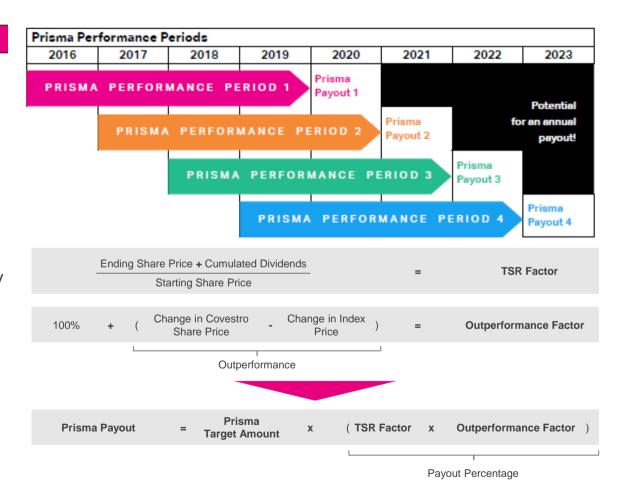
#### LTI component based on total shareholder return

#### Executive pay: Long-term incentive program Prisma



#### **Program details**

- Cash settled plan with four-year performance periods (Jan. to Dec.)
- Globally consistent program for all eligible employees
- Target amount based on fixed percentage of annual base salary
- Payout criteria based on:
  - 1. TSR (Total Shareholder Return) as absolute performance criterion
  - Outperformance factor as relative payout criterion based on STOXX Europe 600 Chemicals index
- Start and end prices for Covestro share and index are determined by the average closing prices during November and December before the start and at the end of the performance period



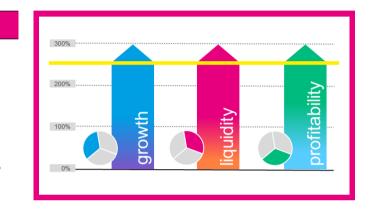
## STI solely based on three financial Group KPIs

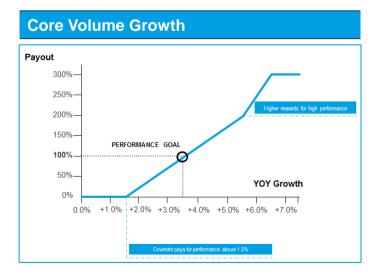
#### Executive pay: Short-term incentive program Profit Sharing Plan (PSP)

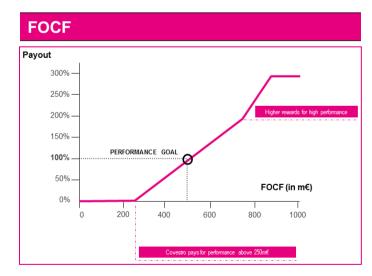


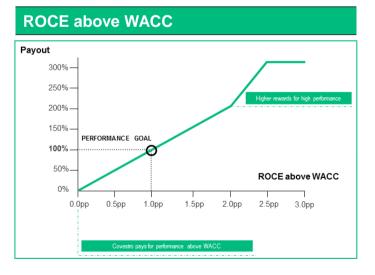
#### **Program details**

- Based on three equally weighted Group performance metrics: Core volume growth, FOCF and ROCE above WACC
- Decided by supervisory board in 2015, approved by Annual General Meeting in 2016
- PSP target amounts (equal 100% payout) are a percentage of annual base salary, linked to individual position grade, ranging from 18% for entry managerial level to 100% for board members
- For each metric, payout can range from zero to 300%, depending on Group achievement levels; total payout capped at 250%









### Code of conduct and principles for taxes

# covestro

#### Tax strategy

- Covestro and its affiliated companies believe that it is their obligation to pay the amount of tax legally due in any country and/or territory, in accordance with the rules set by the respective governments
- Appropriate tax payments is one core element of Covestro's corporate social responsibility; Covestro's total tax payments
  provide essential revenues for governments needed to fulfill their social, economic and societal tasks
- Covestro complies with all relevant tax regulations as well as filing, documentation, disclosure and approval requirements in all countries and territories it operates

#### **Covestro's tax principles:**

- · Zero tolerance regarding any non-compliance, foremost tax fraud
- Tax payments in line with respective value creation in each country and territory
- Tax optimization in line with business reasons and needs
- Cooperative approach with tax authorities



Above principles are part of the internal tax directive and tax strategy, aligned with the corporate and business strategy

## Our priority: Nothing we do is worth going to jail for

#### Compliance at Covestro



We are committed to fair competition
No antitrust violations

We are committed to integrity in business dealings
No corruption

We are committed to the principle of sustainability

No inappropriate risks for human health and the environment

We are committed to upholding foreign trade laws
Not export infractions

- We are committed to safeguarding equal opportunity in securities trading

  No illegal insider trading
- We are committed to proper record-keeping and transparent financial reporting

  No deception
- We are committed to fair and respectful working conditions

  No discrimination
- We are committed to protecting the fruits of our own endeavors and respecting the legally recognized rights of others

  No infringement of our own or other's property rights

We are committed to keeping corporate and personal interests separate

No conflict of interest

We are committed to cooperating with the authorities

No misinformation



## ESG @ Covestro

Summary

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## Non-financial ambition supports growth strategy



Covestro non-financial targets 2025



Our R&D project portfolio is aligned with UN Sustainable Development Goals



100% of suppliers compliant with our sustainability requirements



Reduce specific greenhouse gas emissions by 50% by 2025



Ten million people in underserved markets benefit from our business solutions



Getting the most out of carbon

## Scores reflect Covestro's broad engagement in ESG matters

#### Rating results as of July 2018

Rating / Index	Total score	Detail	
MSCI 🕀	A (Scoring A-D)	in Specialty Chemicals	10% 18% 18% 14% CCC B BB BBB A AA AAA
Corporate Responsibility Prime rated by oekom research	B- (Scoring A-D)	Status: Prime	Not Prime Prime  118 companies in the industry
SUSTAINALYTICS	75 (out of 100 Points)	Status: Outperformer	10 out of 133 Relative Position Outperformer
ecovadis Supplier Sustainability ratings	73 (out of 100 Points)	Status: Gold	CSR Rating  COO Godis
FTSE Russell	Inclusion in FTSE4Good Index <sup>(a)</sup>	FTSE4Good	
vigeeiris	Inclusion in Vigeo Eiris Index: - Eurozone 120 Index <sup>(b)</sup>	EURONEXT VIGEQUITIS INDICES EUROZONE 120	

### Discover more on the net



#### Useful links and sources

General	Non-financial targets	Ratings & Indices			
Environment	Products  • Polycarbonates  • PUR  • Coatings	Carbon initiative	CO <sub>2</sub> technology	Energy productivity	
Social	People	Product safety	Inclusive business		
Governance	Corporate governance	Compliance-Hotline	Covestro Policies	Covestro Certificates	

## Forward-looking statements



This presentation may contain forward-looking statements based on current assumptions and forecasts made by Covestro AG.

Various known and unknown risks, uncertainties and other factors could lead to material differences between the actual future results, financial situation, development or performance of the company and the estimates given here. These factors include those discussed in Covestro's public reports which are available on the Covestro website at <a href="https://www.covestro.com">www.covestro.com</a>.

Covestro assumes no liability whatsoever to update these forward-looking statements or to conform them to future events or developments.