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BASF Capital Market Story

August 2019

Cautionary note regarding forward-looking statements

This presentation contains forward-looking statements. These statements are based on current estimates and projections of the Board of Executive Directors and currently available information. Forward-looking statements are not guarantees of the future developments and results outlined therein. These are dependent on a number of factors; they involve various risks and uncertainties; and they are based on assumptions that may not prove to be accurate. Such risk factors include those discussed in Opportunities and Risks on pages 123 to 130 of the BASF Report 2018. BASF does not assume any obligation to update the forward-looking statements contained in this presentation above and beyond the legal requirements.

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BASF shares – an attractive investment

- **Strategy focused on participating in fast growing Asian markets**
  - driven by strong and expanding local presence
- **Industry-leading innovation platform**
  - covering a broad range of technologies and providing solutions for a multitude of customers
- **Unique Verbund concept**
  - competitive advantage based on integrated sites, operational excellence and best-in-class technologies
- **CO_2-neutral growth until 2030 targeted**
  - creating value to society and contributing to a sustainable development
- **Earnings growth, strong cash flow generation and clear return criteria**
  - based on operational excellence and financial strength
- **Long-term value creation with progressive dividend policy**
  - increase the dividend per share every year

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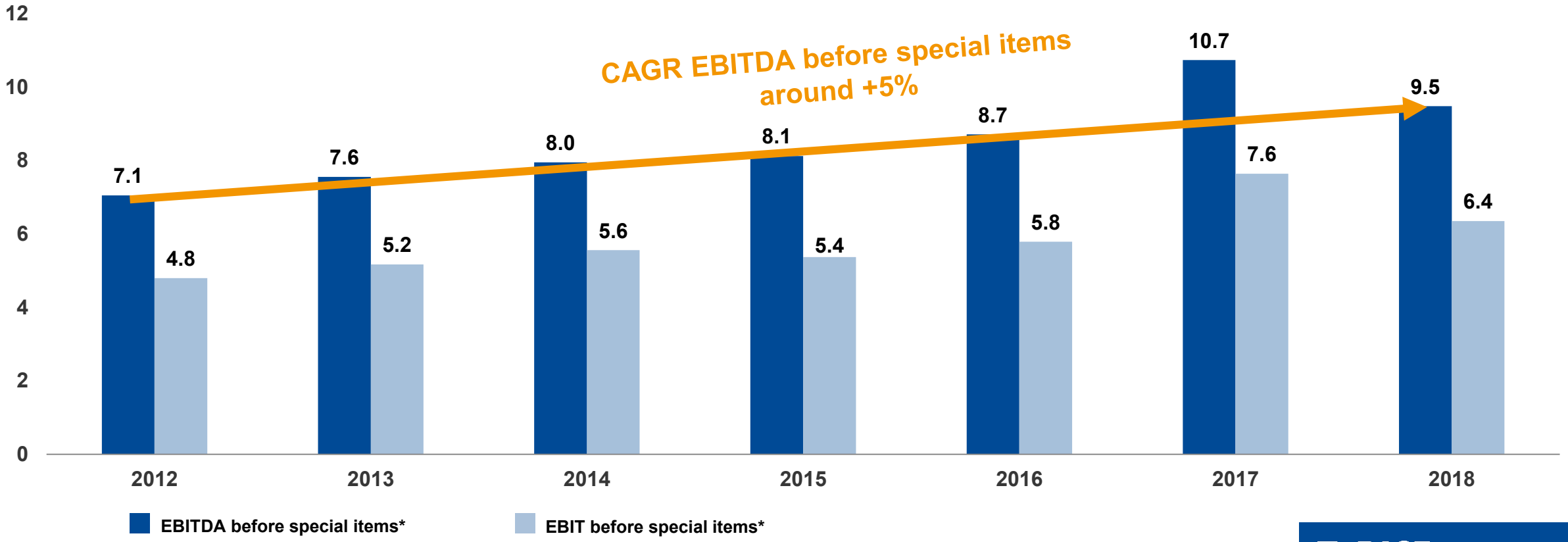
Proven ability to achieve earnings growth above global chemical production of 3.7% per year

EBIT before special items* and EBITDA before special items*

billion €, 2012–2018



* Excluding Oil & Gas

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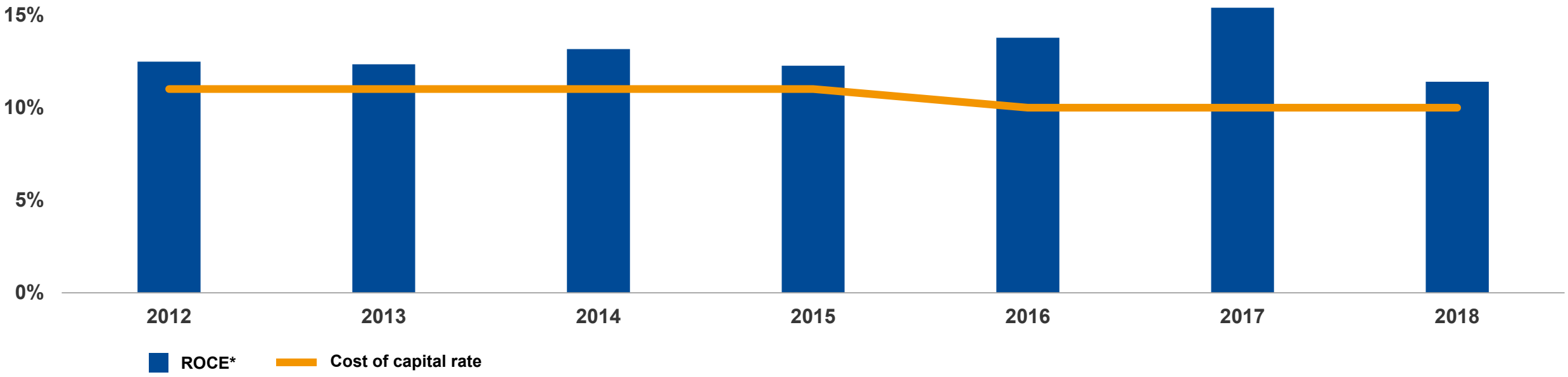
Return on capital employed well above cost of capital

Return on capital employed
%, 2012–2018



	2012	2013	2014	2015	2016	2017	2018
ROCE*	12.5%	12.3%	13.2%	12.3%	13.8%	15.4%	11.4%

* ROCE: EBIT generated by the operating divisions as a percentage of the average cost of capital basis, excluding Oil & Gas

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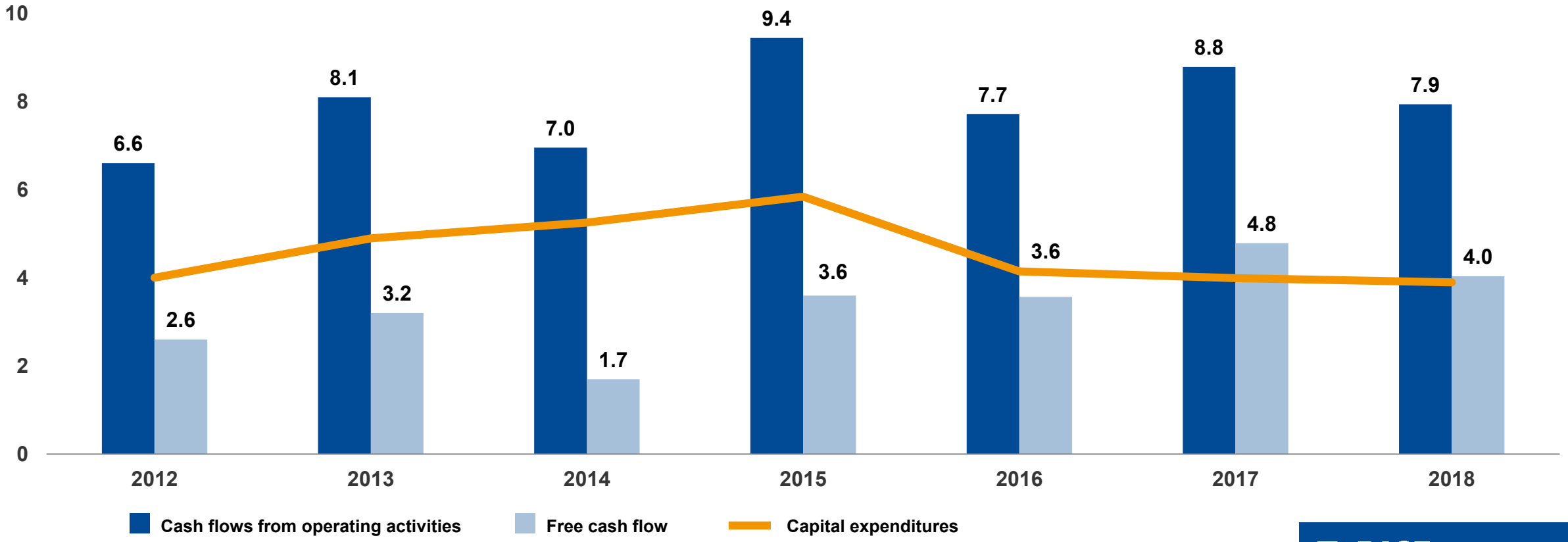
Strong free cash flow development

Cash flows from operating activities and free cash flow*

billion €, 2012–2018



* Including Oil & Gas, as reported

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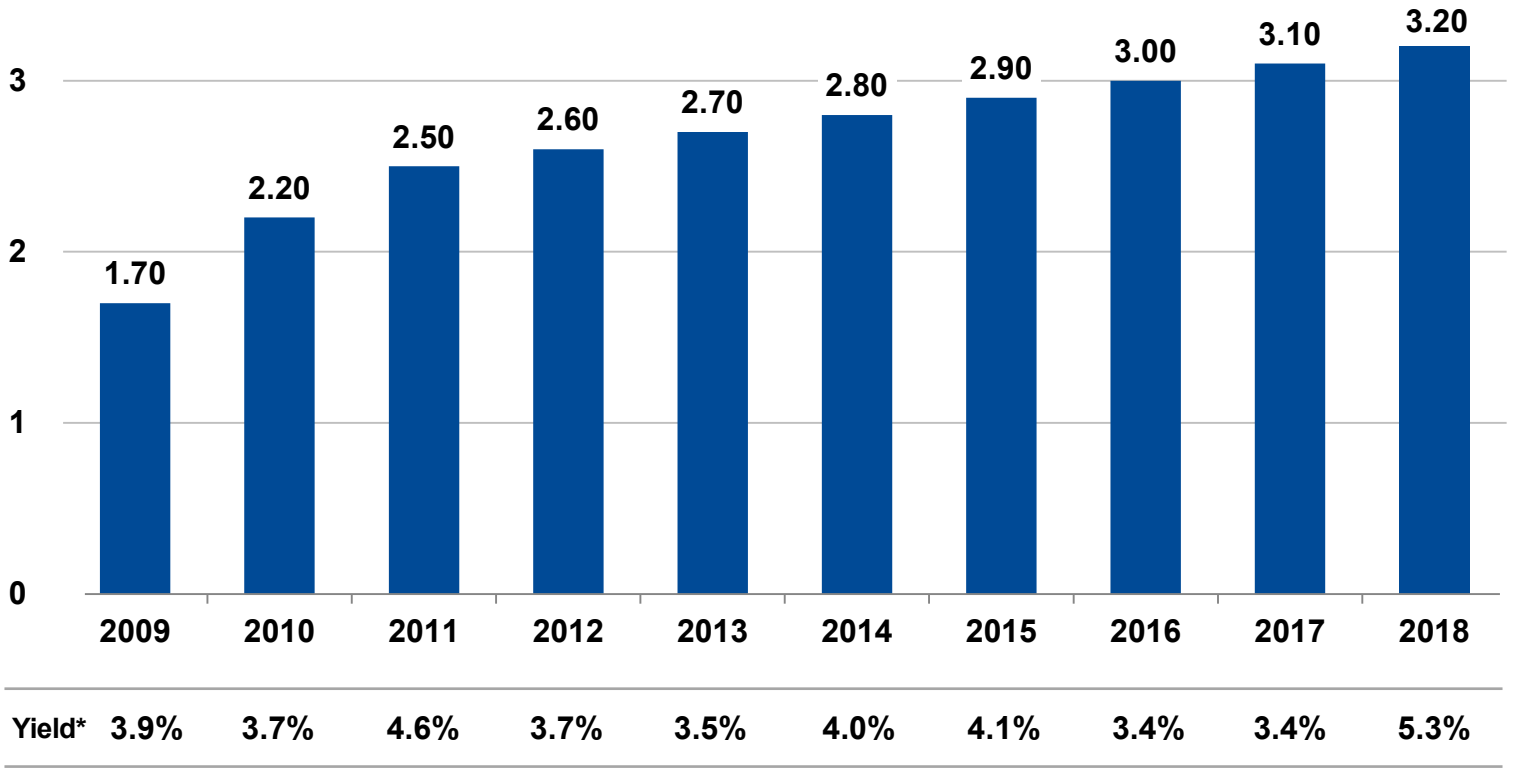
Attractive shareholder return

Dividend per share

€



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Yield*	3.9%	3.7%	4.6%	3.7%	3.5%	4.0%	4.1%	3.4%	3.4%	5.3%

Dividend policy

- Increase the dividend per share every year

Key facts

- Dividend of €3.20 per share, an increase of €0.10
- Dividend yield of 5.3% based on the share price at year end 2018

* Dividend yield based on share price at year end

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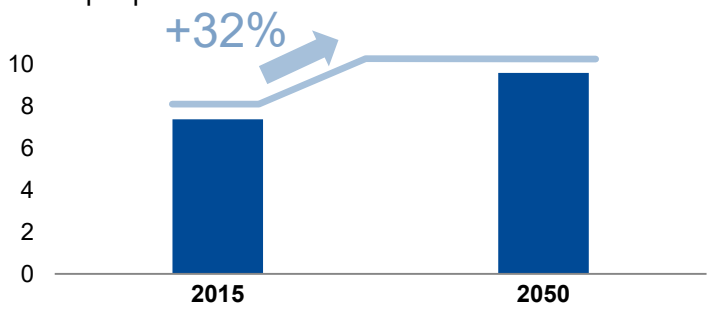
Global trends provide opportunities for growth in the chemical industry

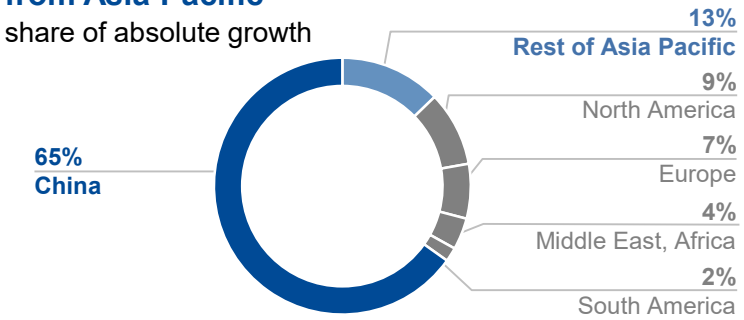
Population growth

billion people



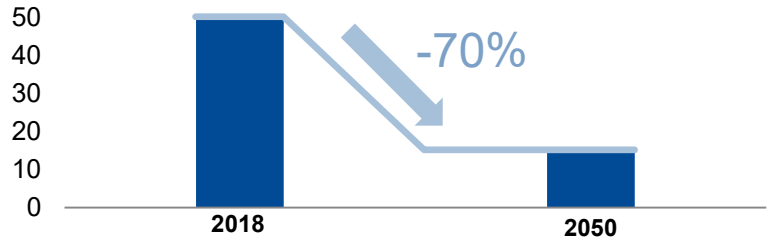
Chemical growth 2018–2030 coming mainly from Asia Pacific

share of absolute growth



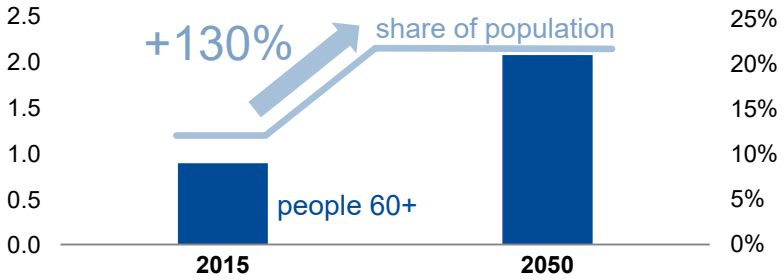
Climate change: Strong reduction of GHG emissions necessary to achieve 2°C global warming target

gigatons CO_2



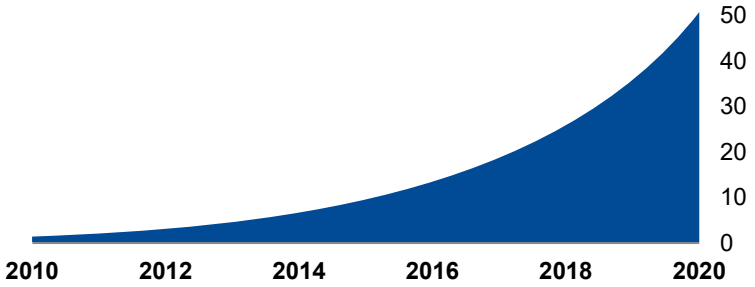
Demographic change: Rising number of seniors

billion people 60+ | share of population



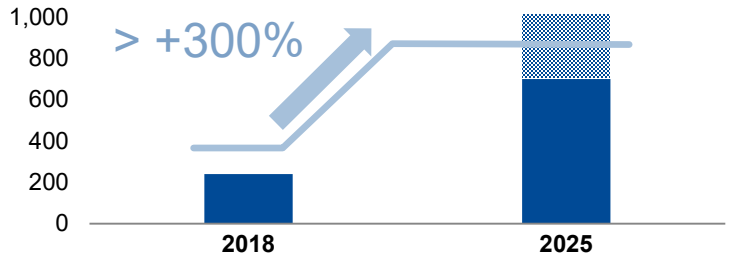
Digitalization is surging

digital universe, zettabytes



Electromobility drives demand for battery materials

cathode active materials demand, kilotons



Sources: UN, IEA, UBS foresight, BASF

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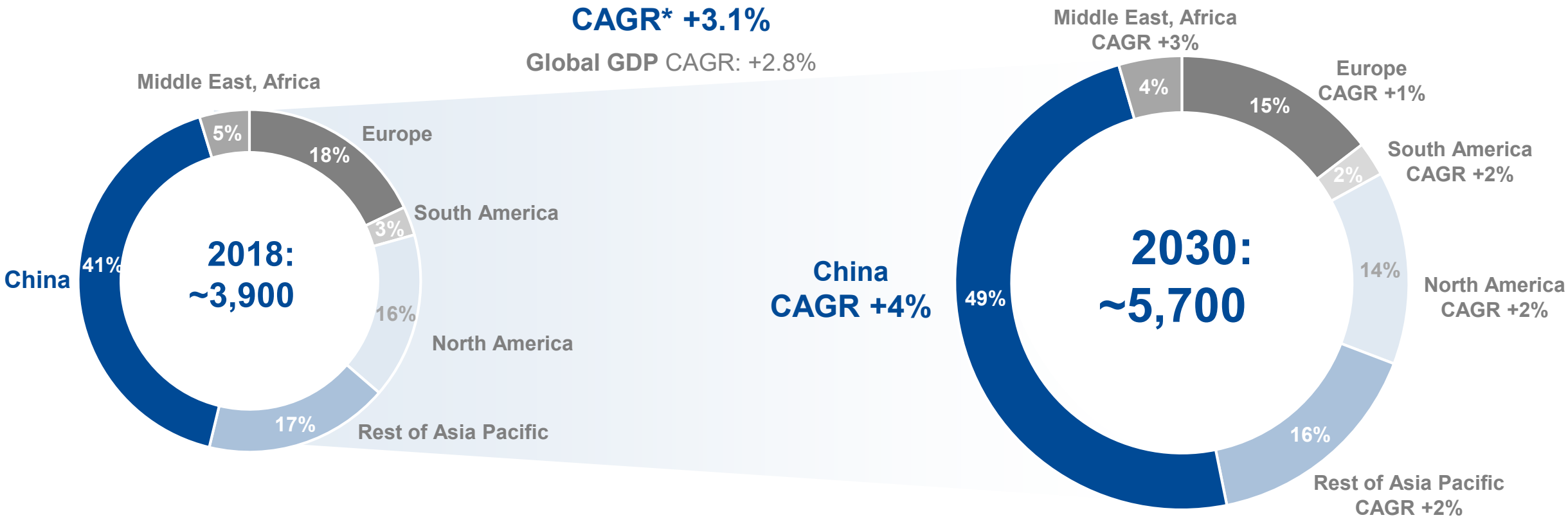
China is the major growth driver for global chemical production

Real chemical production excluding pharmaceuticals
billion US$



Source: BASF * Real chemical production excluding pharmaceuticals

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Global market access through regional presence

Europe

Sales	€26,546 million
EBIT	€3,210 million
Employees	75,188

North America

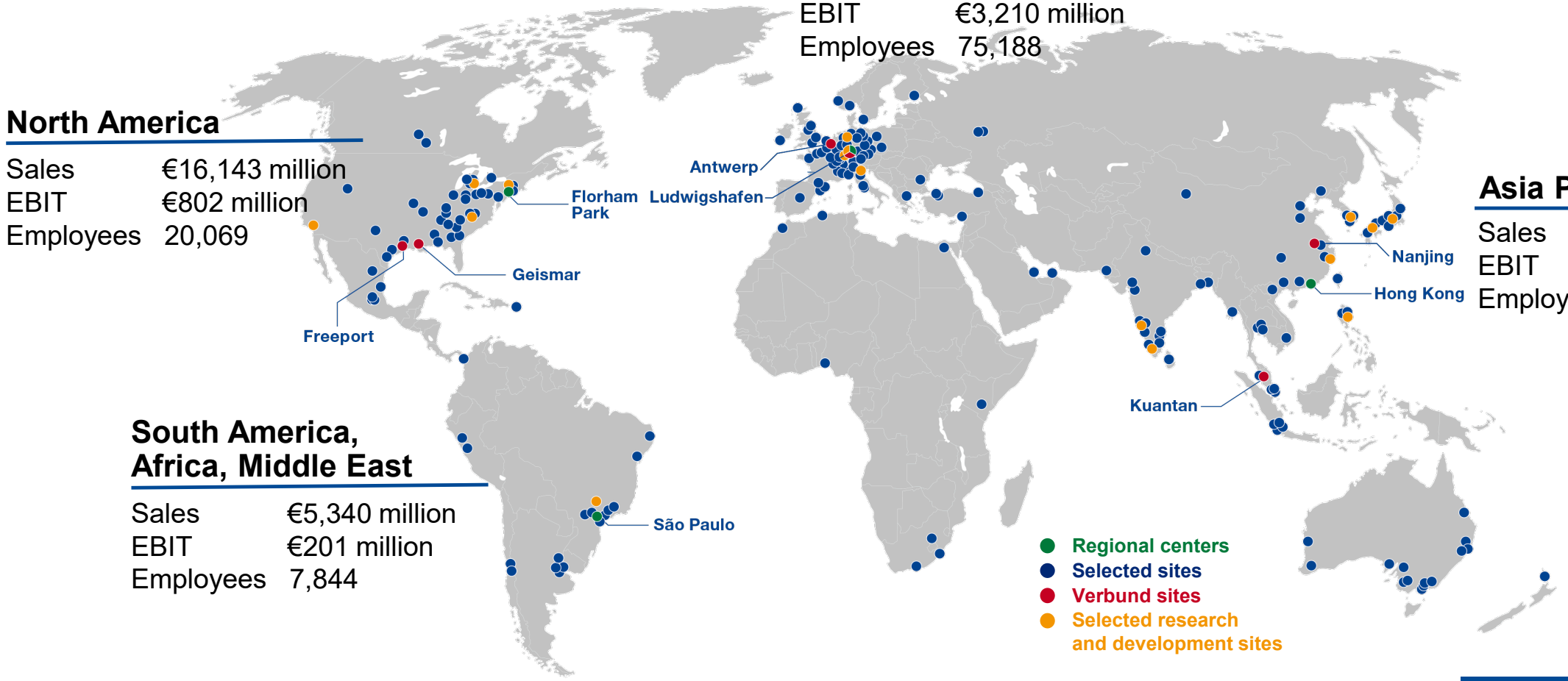
Sales	€16,143 million
EBIT	€802 million
Employees	20,069

Asia Pacific

Sales	€14,646 million
EBIT	€1,820 million
Employees	19,303

South America, Africa, Middle East

Sales	€5,340 million
EBIT	€201 million
Employees	7,844



Sales 2018 by location of customer; EBIT 2018 by location of company

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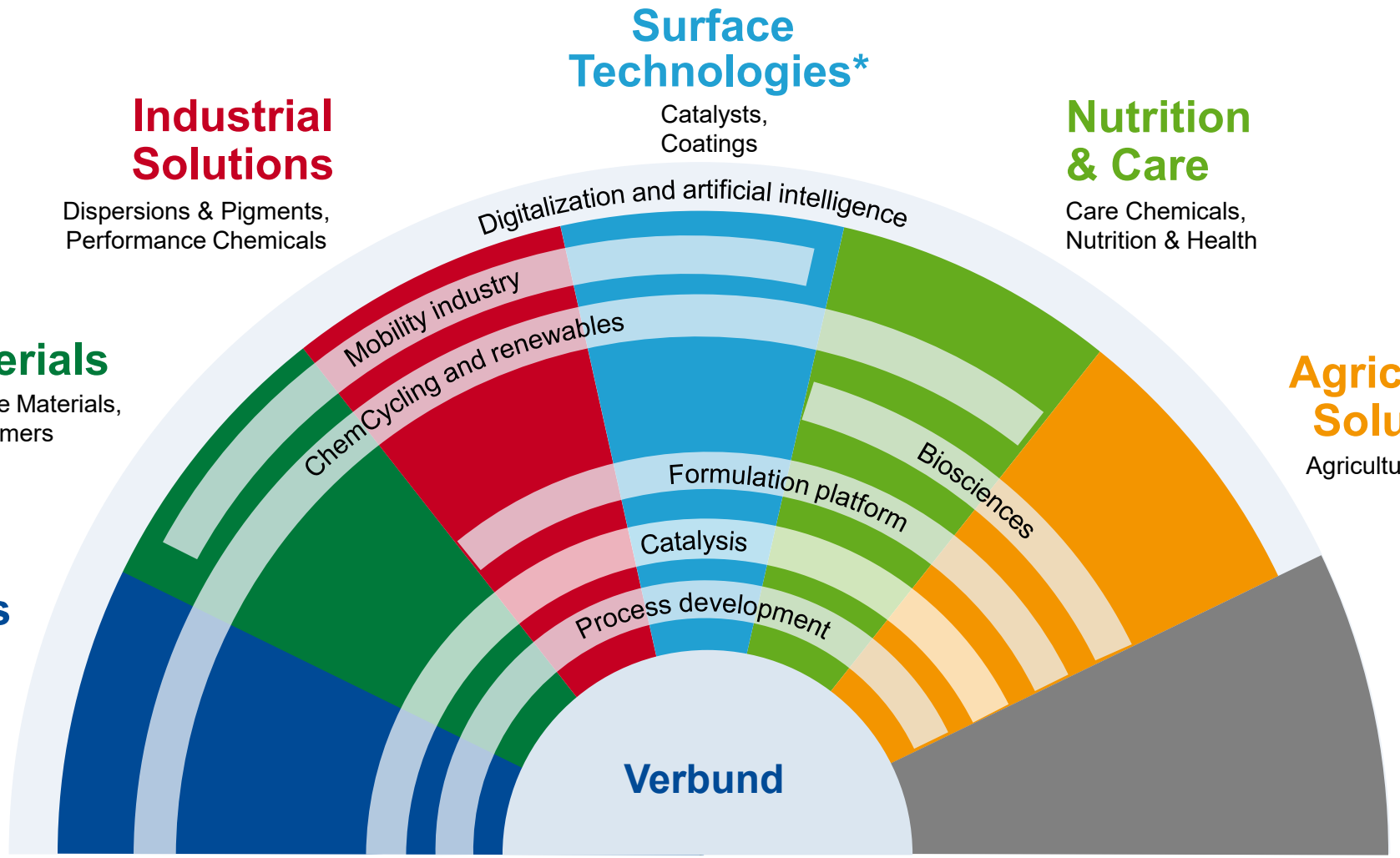
New segment structure strengthens performance- and market-orientation and provides more transparency



* Target picture, until signing of a transaction agreement, Construction Chemicals will be reported under Surface Technologies

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Each new segment has a clear and compelling path forward

	Chemicals	Materials	Industrial Solutions	Surface Technologies*	Nutrition & Care	Agricultural Solutions
% of sales 2018*	19%	21%	15%	22%	9%	10%
EBIT bsi 2018*	€1.6 billion	€2.4 billion	€0.7 billion	€0.7 billion	€0.7 billion	€0.7 billion
Core theme	Verbund	Advanced materials	Additives platform	Surface modification platform	Consumer ingredients	Integrated offering of crop protection, seeds & traits, digital
Innovation focus	Improved or new processes	Applications, biomaterials	Formulations	Battery materials, surface effects	Biotechnology, formulations	Crop protection, seeds & traits, digital farming
Capex relevance						
M&A relevance						
Sustainability	ChemCycling	Bio-based materials	More from less	Low-emission mobility	Bio-based and natural, traceability	Better with less

* Until signing of a transaction agreement, Construction Chemicals will be reported under Surface Technologies; Other (sales 2018: €2.8 billion, EBIT bsi 2018: €(462) million) not depicted on this slide

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Our ambitious financial and non-financial targets

Financial targets

Grow **sales volumes faster** than **global chemical production** every year

Increase **EBITDA before special items** by **3% to 5%** per year

Achieve a **return on capital employed (ROCE)*** considerably **above the cost of capital percentage** every year

Increase the **dividend per share** every year based on a **strong free cash flow**

Nonfinancial targets

Grow **CO_2-neutrally** until 2030

Achieve **€22 billion** in **Accelerator sales**** by 2025

Cover **90%** of our relevant spend*** with **sustainability evaluations** by 2025, and have **80%** of our suppliers **improve** their sustainability performance upon re-evaluation

More than **80%** of our **employees** feel that at BASF, they can **thrive** and **perform at their best**

Existing nonfinancial targets

Reduce the worldwide **lost-time injury rate** per 200,000 working hours to **≤0.1** by 2025

Reduce worldwide **process safety incidents** per 200,000 working hours to **≤0.1** by 2025

Introduce sustainable **water management** at all production sites **in water stress areas** and at all **Verbund sites** by 2030

Increase the proportion of **women in leadership positions** with disciplinary responsibility to **22–24%** by 2021

* Return on capital employed (ROCE) is a measure of the profitability of our operations. We calculate this indicator as the EBIT generated by the operating divisions as a percentage of the average cost of capital basis.
** Accelerator products are products that make a substantial sustainability contribution in the value chain.
*** We understand relevant spend as procurement volumes with relevant suppliers.

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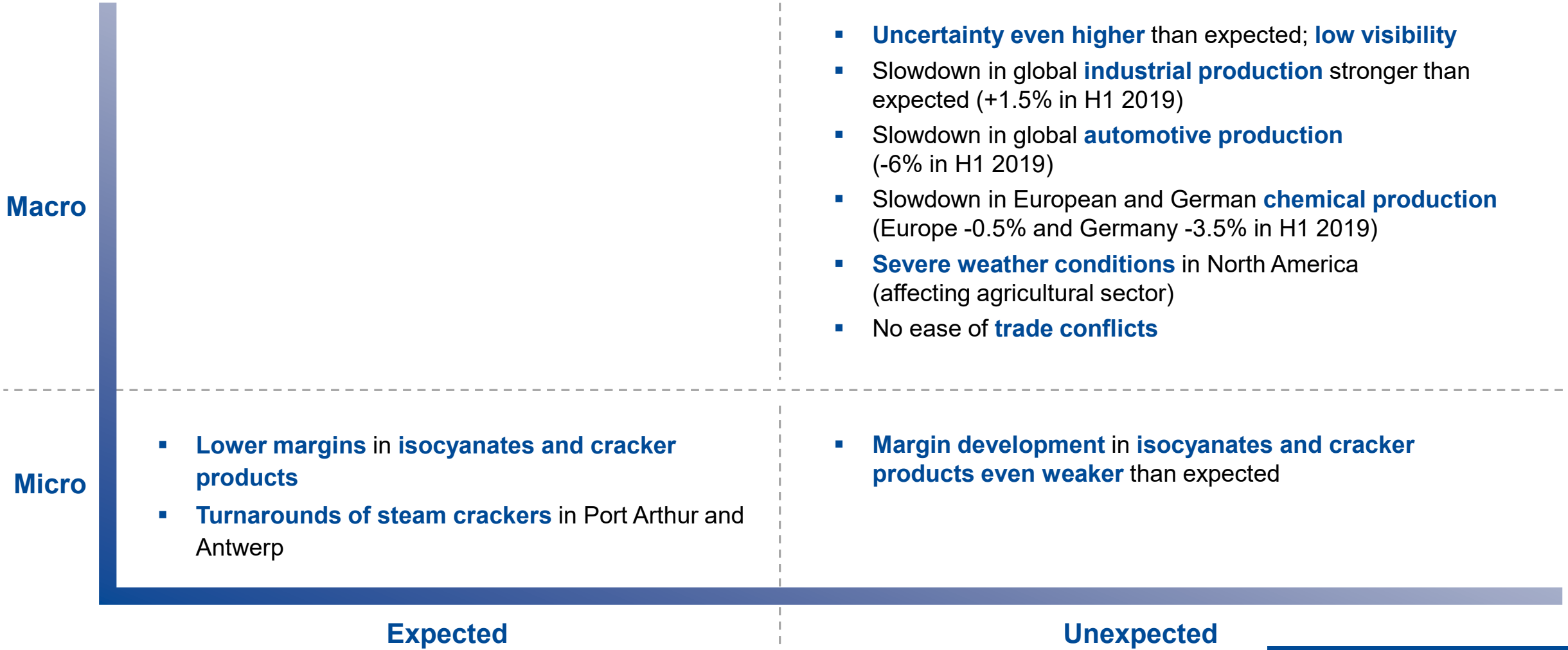
Key drivers for the earnings decline in H1 2019



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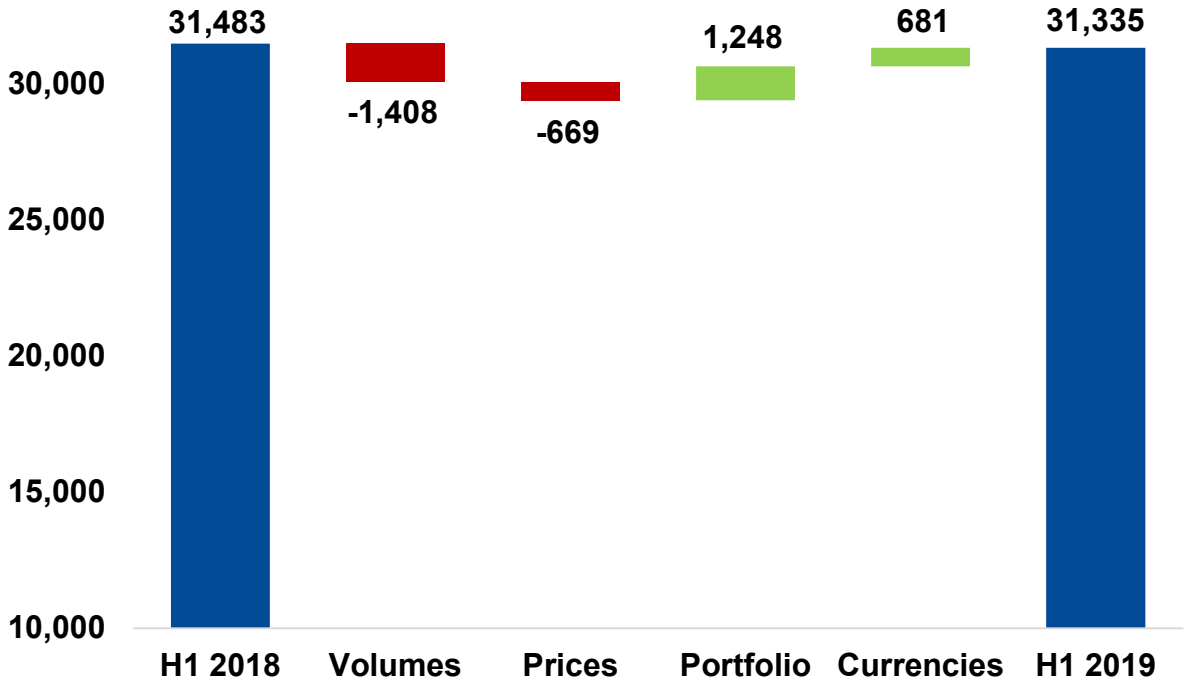
BASF Group H1 2019 – Sales and EBIT before special items

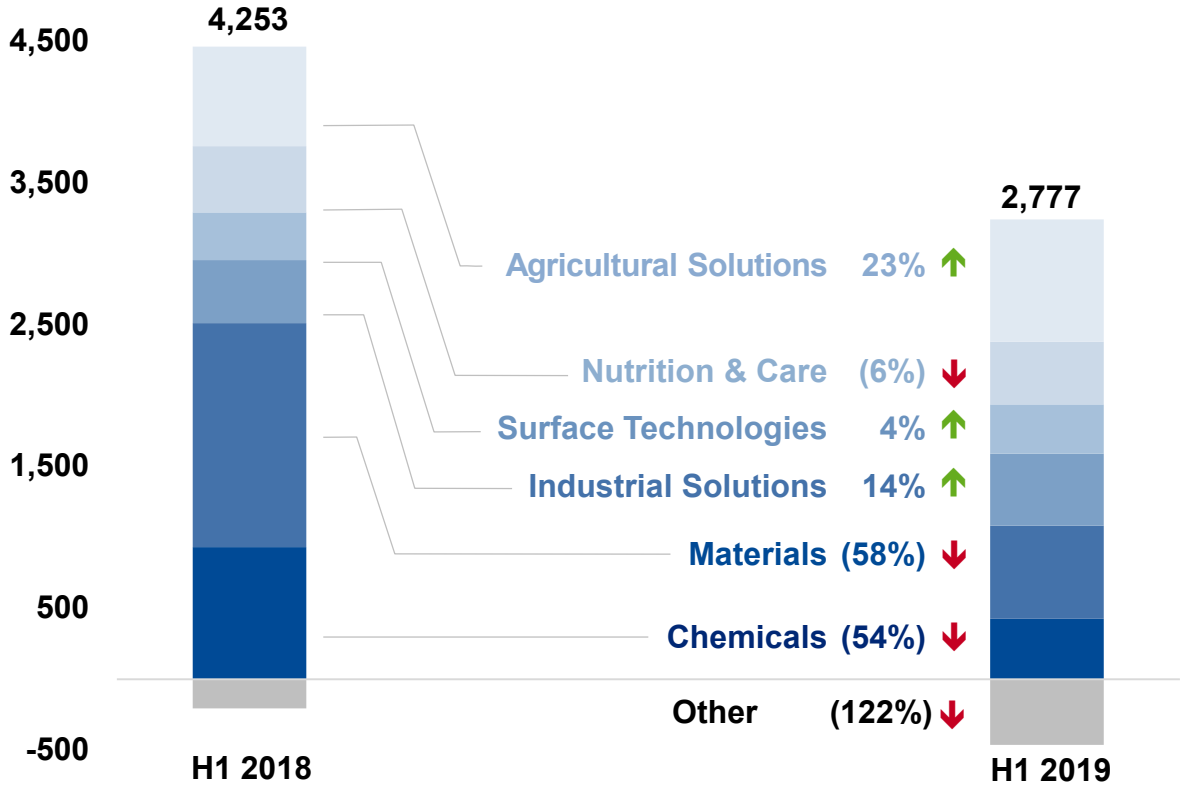
Sales bridge H1 2019 vs. H1 2018
million €



Sales development

H1 2019 vs. H1 2018	↓ (4%)	↓ (2%)	↑ 4%	↑ 2%

EBIT before special items by segment H1 2019 vs. H1 2018
million €



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Outlook 2019 for BASF Group

Outlook 2019*	Since July 8, 2019	Previous
Sales	Slight decline	Slight increase
EBIT before special items	Considerable decline of up to 30%	Slight increase
ROCE	Considerable decline	Slight decline

Underlying economic assumptions for 2019

(previous assumption in parentheses)

- GDP growth: around +2.5% (+2.8%)
- Growth in global industrial production: around +1.5% (+2.7%)
- Growth in global chemical production: around +1.5% (+2.7%)
- Exchange rate: US$1.15 per euro (unchanged)
- Oil price (Brent): US$70 per barrel (unchanged)

* For sales, “slight” represents a change of 1–5%, while “considerable” applies to changes of 6% and higher. For earnings, “slight” means a change of 1–10%, while “considerable” is used for changes of 11% and higher. At a cost of capital percentage of 10% for 2018 and 2019, we define a change in ROCE of 0.1 to 1.0 percentage points as “slight,” a change of more than 1.0 percentage points as “considerable.”

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BASF Group Q2 2019 – Sales decreased slightly; EBIT before special items considerably below prior-year quarter

Financial figures	Q2 2019	Q2 2018	Change
	€	€	%
Sales	15,158 million	15,783 million	(4)
EBITDA before special items	1,975 million	2,709 million	(27)
EBITDA	1,626 million	2,645 million	(39)
EBIT before special items	1,045 million	1,972 million	(47)
EBIT	548 million	1,906 million	(71)
Net income	6,460 million	1,480 million	336
Reported EPS	7.03	1.61	337
Adjusted EPS	0.82	1.77	(54)
Cash flows from operating activities	1,946 million	2,224 million	(13)

Sales development	Volumes	Prices	Portfolio	Currencies
Q2 2019 vs. Q2 2018	↓ (6%)	↓ (2%)	↑ 2%	↑ 2%

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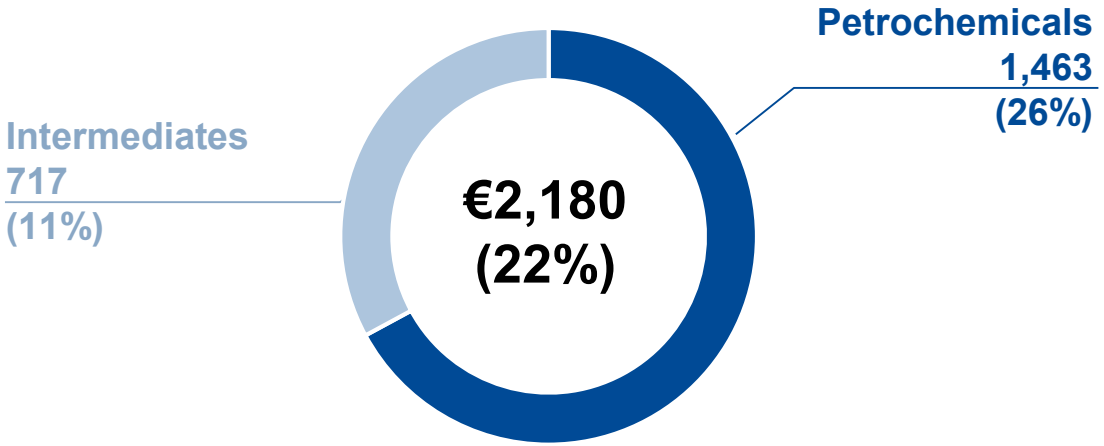
Chemicals

Sales declined on lower volumes and prices; earnings decreased due to lower volumes and margins

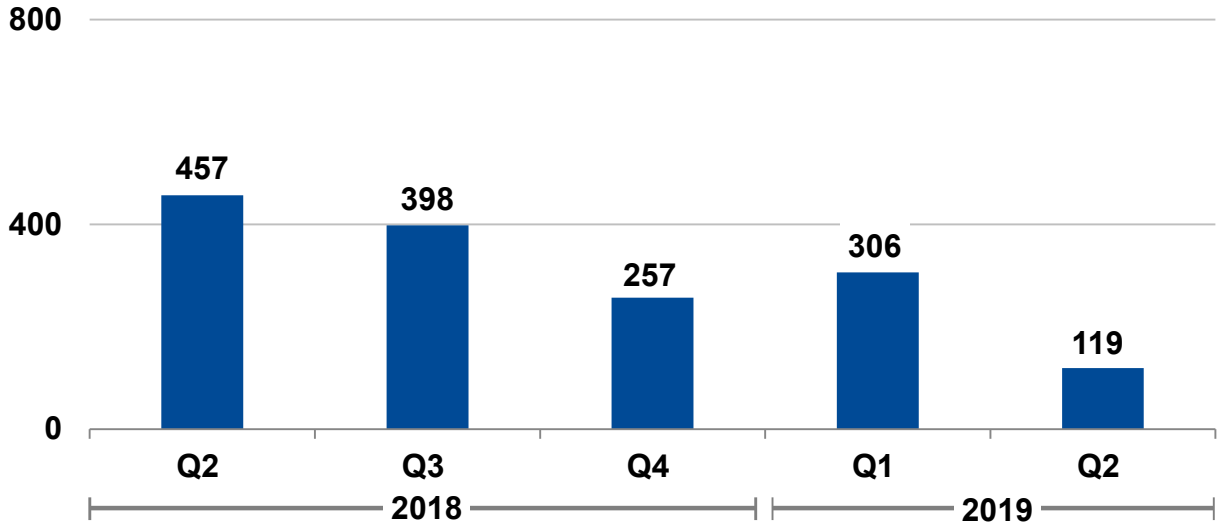
Sales Q2 2019 vs. Q2 2018

million €



EBIT before special items

million €



Sales development	Volumes	Prices	Portfolio	Currencies
Q2 2019 vs. Q2 2018	↓ (17%)	↓ (6%)	0%	↑ 1%

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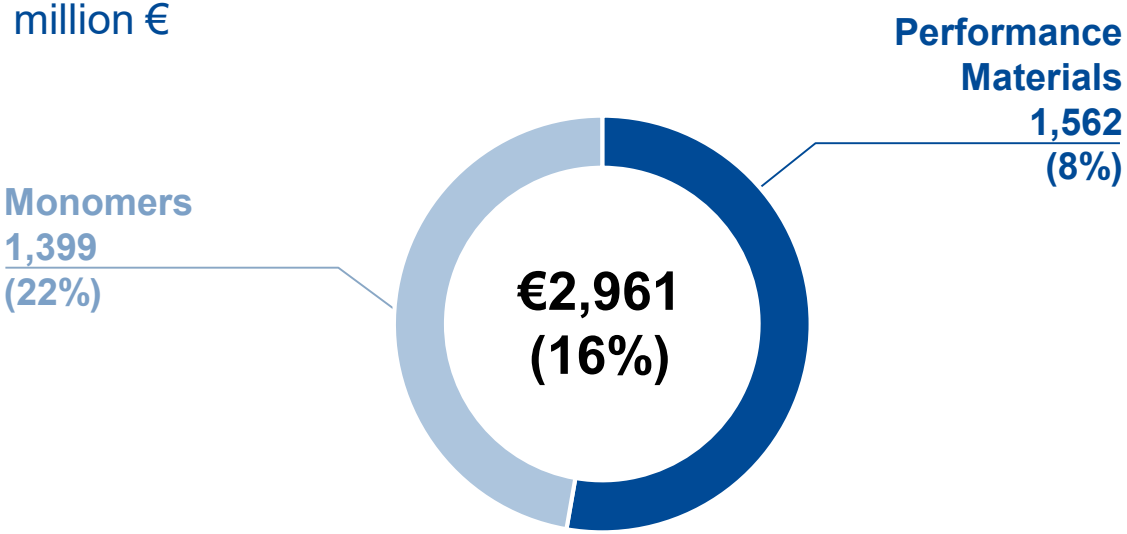
Materials

Sales down on lower prices and volumes; earnings decreased mainly due to lower isocyanate margins

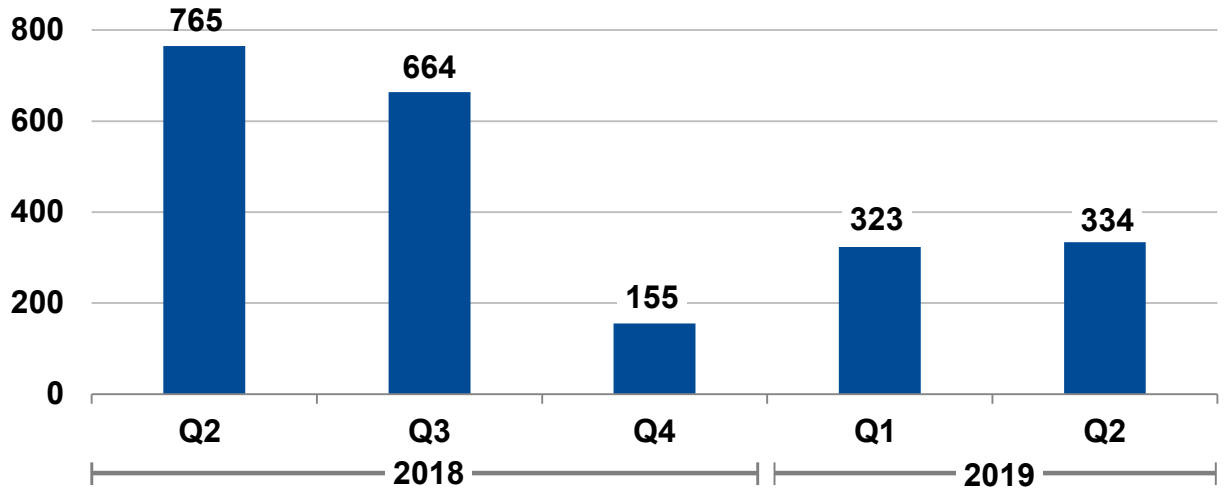
Sales Q2 2019 vs. Q2 2018

million €



EBIT before special items

million €



Sales development	Volumes	Prices	Portfolio	Currencies
Q2 2019 vs. Q2 2018	↓ (5%)	↓ (12%)	0%	↑ 1%

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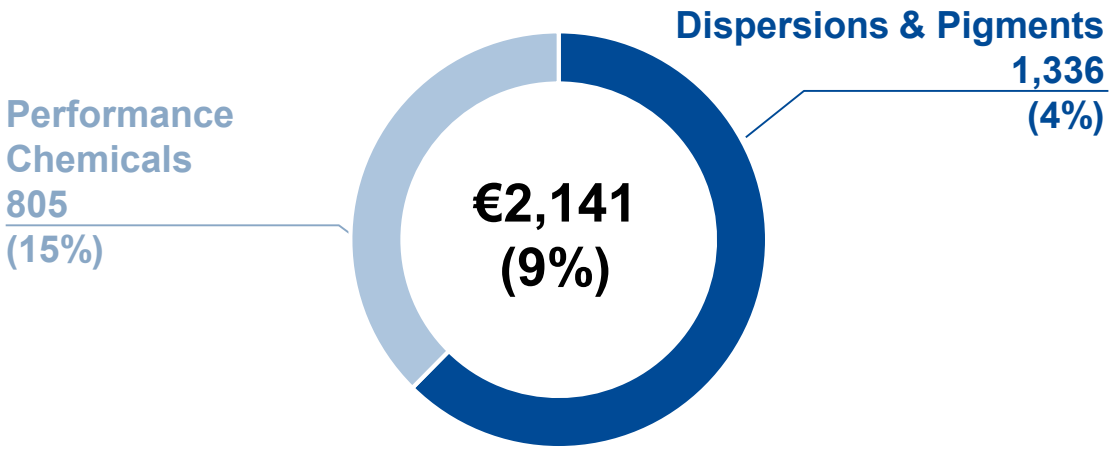
Industrial Solutions

Sales decreased primarily due to portfolio effects; earnings up on higher margins and lower fixed costs

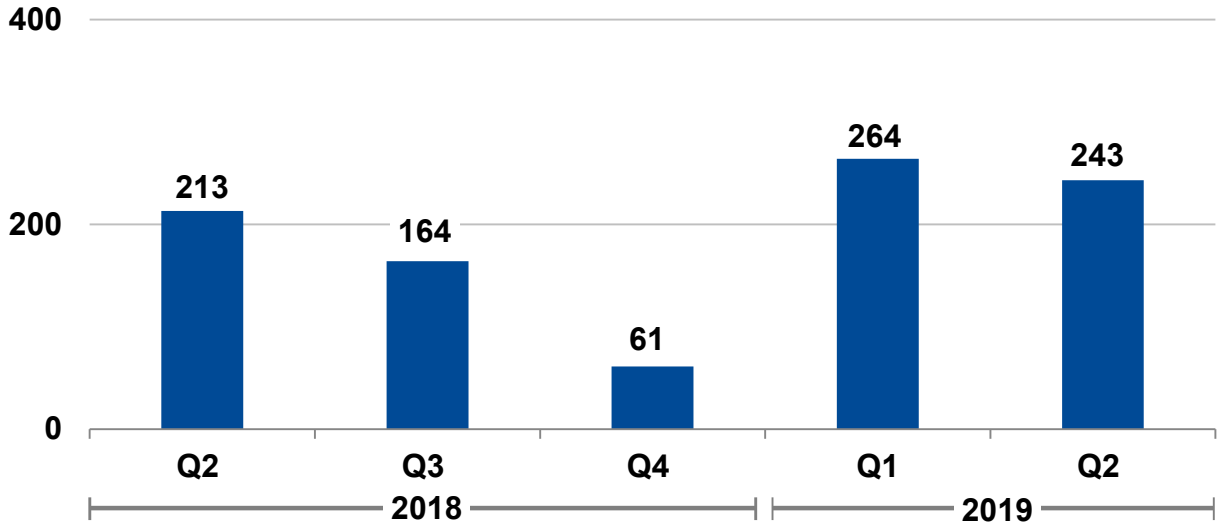
Sales Q2 2019 vs. Q2 2018

million €



EBIT before special items

million €



Sales development	Volumes	Prices	Portfolio	Currencies
Q2 2019 vs. Q2 2018	↓ (2%)	0%	↓ (8%)	↑ 1%

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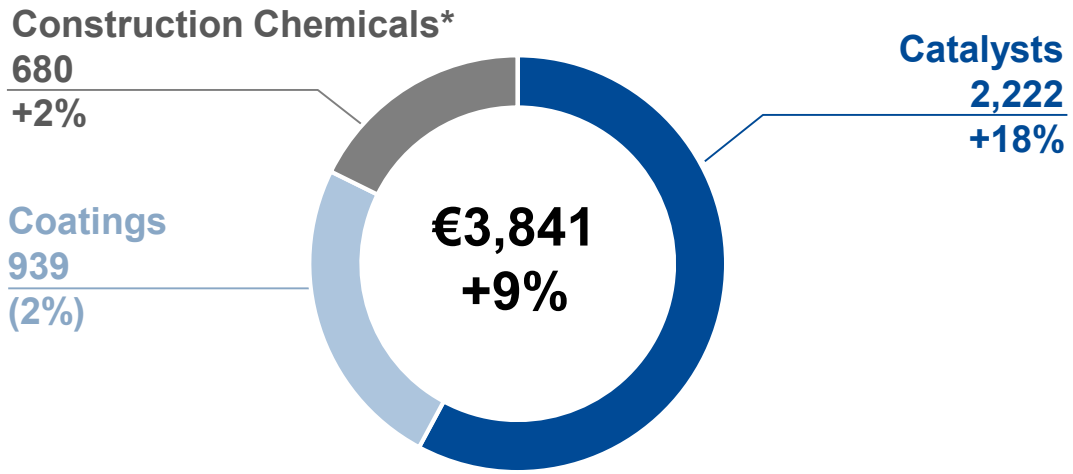
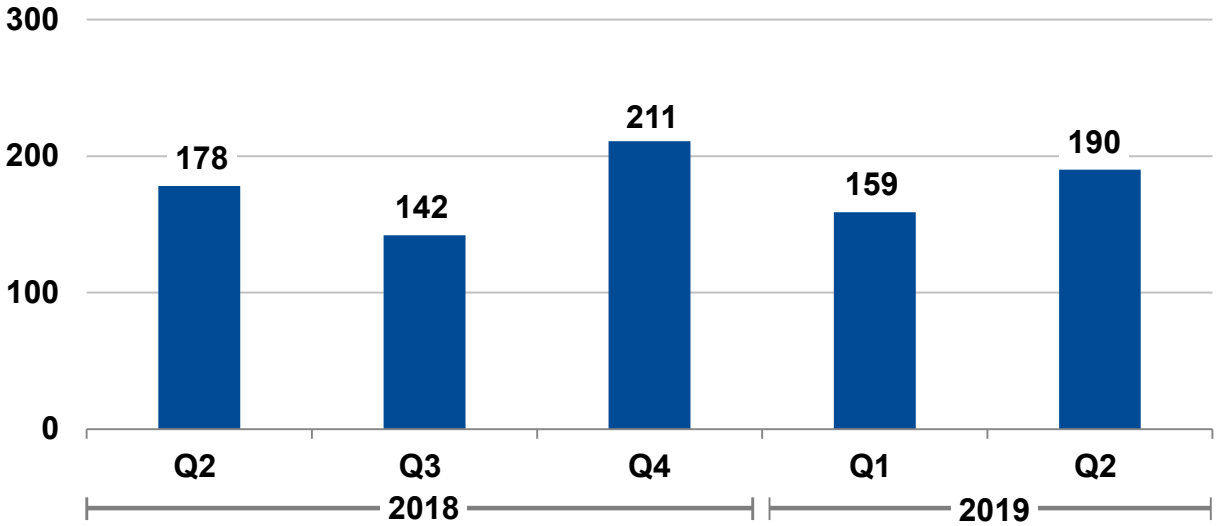
Surface Technologies

Sales increased mainly due to higher prices; earnings up on lower fixed costs and higher margins

Sales Q2 2019 vs. Q2 2018
million €



EBIT before special items
million €



* Until signing of a transaction agreement, Construction Chemicals will be reported under Surface Technologies

Sales development	Volumes	Prices	Portfolio	Currencies
Q2 2019 vs. Q2 2018	↓ (4%)	↑ 11%	0%	↑ 2%

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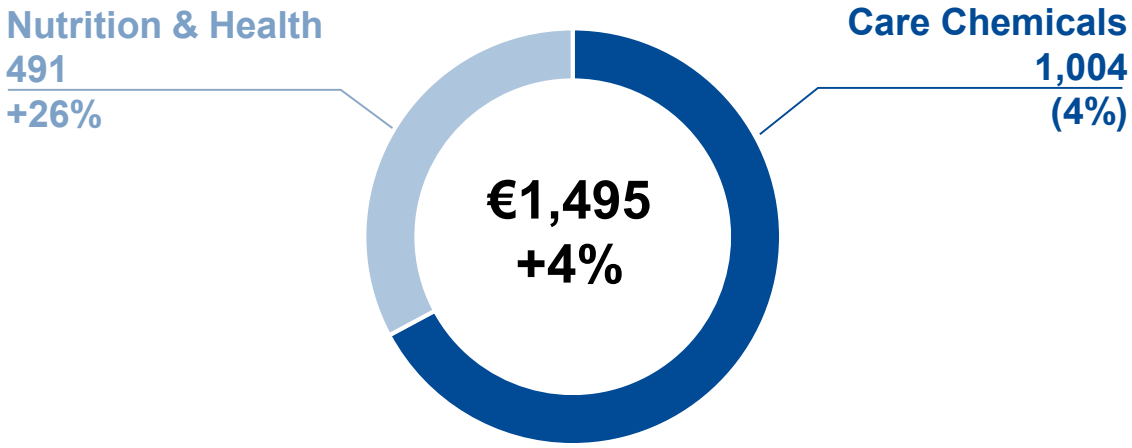
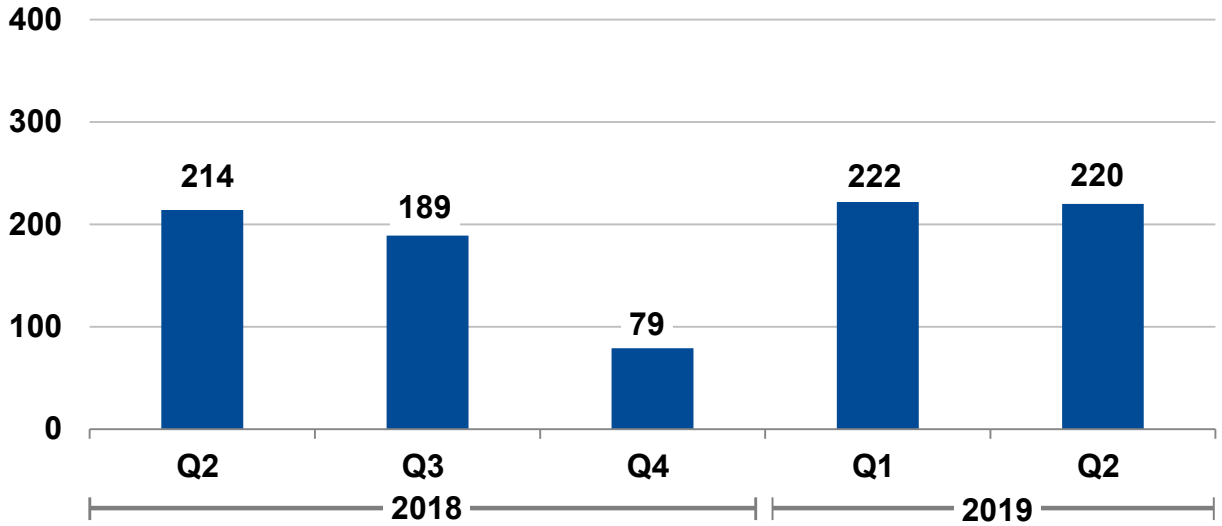
Nutrition & Care

Sales increased primarily due to higher product availability; earnings mainly up on lower fixed costs

Sales Q2 2019 vs. Q2 2018
million €



EBIT before special items
million €



Sales development	Volumes	Prices	Portfolio	Currencies
Q2 2019 vs. Q2 2018	↑ 5%	↓ (3%)	0%	↑ 2%

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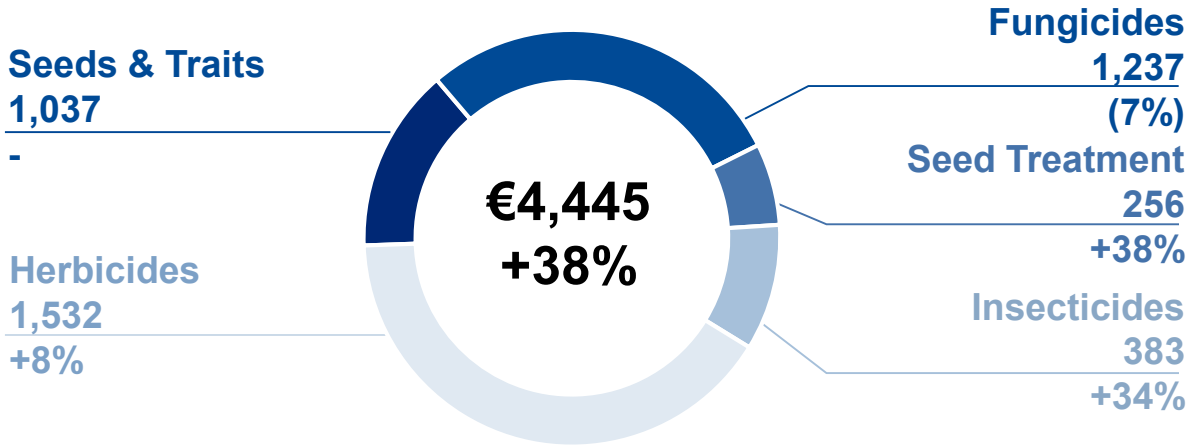
Agricultural Solutions

Earnings down due to seasonality of the acquired businesses and lower volumes in crop protection

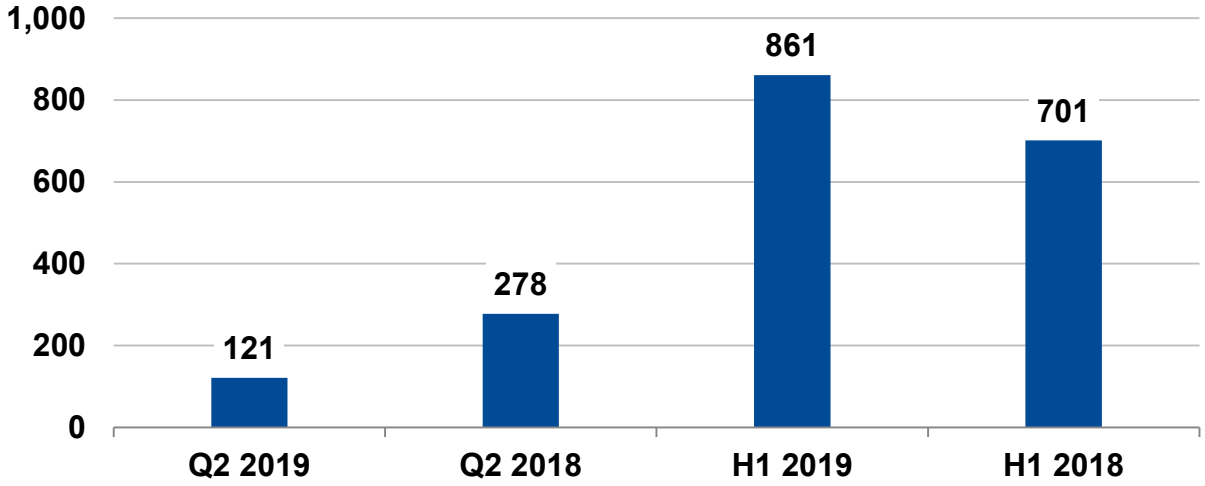
Sales H1 2019 vs. H1 2018

million €



EBIT before special items Q2 2019 vs. Q2 2018 and H1 2019 vs. H1 2018

million €



Sales development	Volumes	Prices	Portfolio	Currencies
Q2 2019 vs. Q2 2018	↓ (12%)	↑ 3%	↑ 28%	↑ 1%
H1 2019 vs. H1 2018	↓ (9%)	↑ 3%	↑ 43%	↑ 1%

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Review of “Other”

Financial figures		Q2 2019	Q2 2018
		million €	million €
Sales		**744**	**689**
EBIT before special items		**(182)**	**(133)**
Thereof	Costs of corporate research	(100)	(90)
	Costs of corporate headquarters	(66)	(66)
	Foreign currency results, hedging and other measurement effects	(13)	32
	Other businesses	39	17
Special items		(191)	(16)
EBIT		**(373)**	**(149)**

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Cash flow development H1 2019

		H1 2019	H1 2018
		million €	million €
Cash flows from operating activities		**2,319**	**3,455**
Thereof	Changes in net working capital	(904)	(1,221)
	Miscellaneous items	(6,752)	(351)
Cash flows from investing activities		**452**	**(1,735)**
Thereof	Payments made for tangible / intangible assets	(1,722)	(1,449)
	Acquisitions / divestitures	2,292	64
Cash flows from financing activities		**(3,227)**	**(518)**
Thereof	Changes in financial and similar liabilities	(215)	2,526
	Dividends	(3,013)	(3,044)
Free cash flow		**597**	**2,006**

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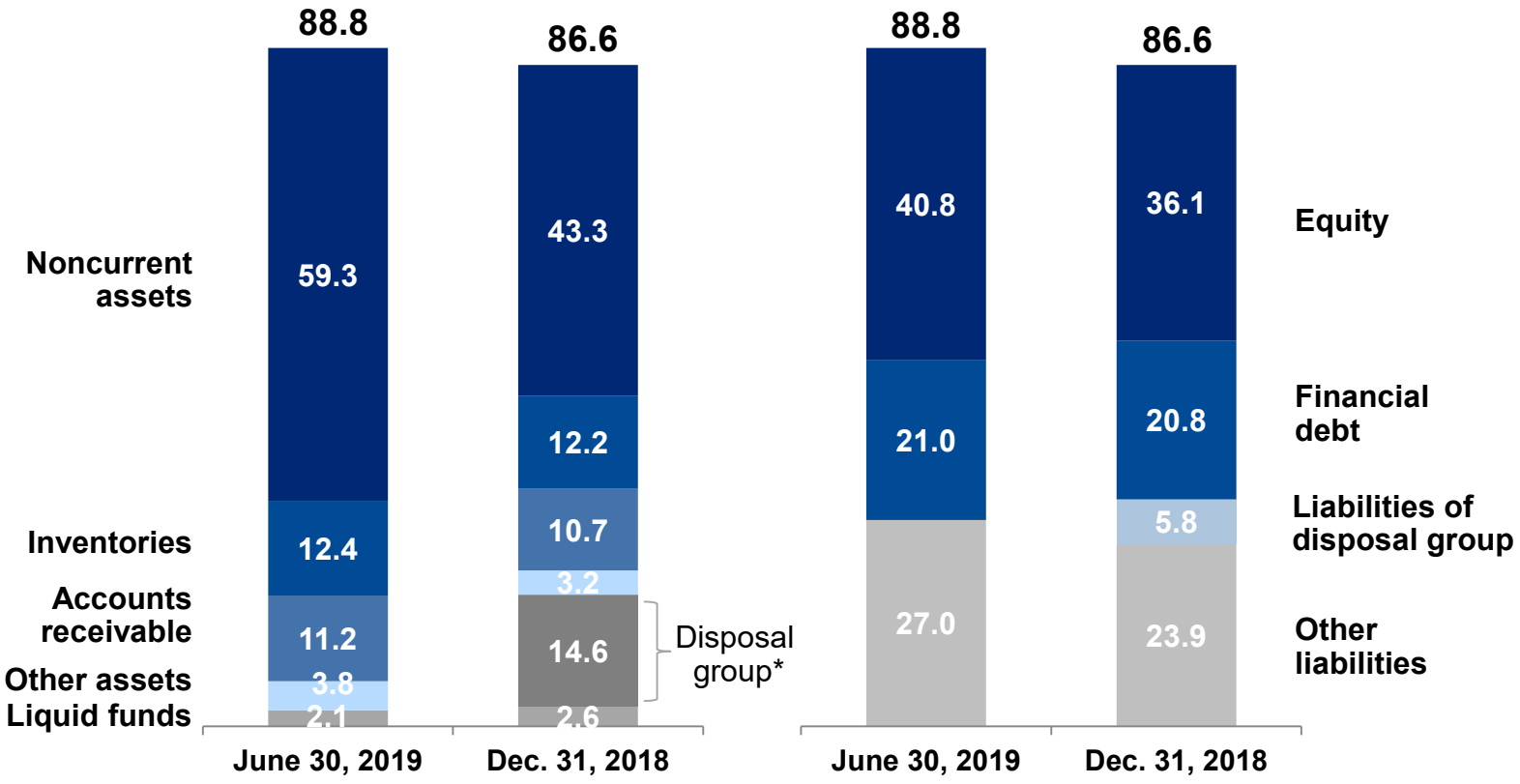
Balance sheet remains strong

Balance sheet June 30, 2019 vs. December 31, 2018

billion €



- Total assets increased by ~€2.2 billion, mainly due to the new IFRS 16 standard on leases and higher accounts receivables related to the acquired agricultural solutions businesses
- Noncurrent assets increased by €16.0 billion, mainly due to the recognition of our participating interests in Wintershall Dea and Solenis
- Net debt increased by €675 million to €18.9 billion
- Equity ratio: 46% (June 30, 2019)

* For the oil & gas business and the paper and water chemicals business

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Strategy announced in November 2018 is being implemented with speed and determination

- **People:** Transform organization to be more agile and customer focused
- **Portfolio:** Sharpen portfolio and strengthen the Verbund
- **Digitalization:** Leverage automation/digitalization across the company and develop new business models
- **Operations:** Improve competitiveness through technological leadership and operational excellence
- **Sustainability:** Drive long-term competitiveness via carbon management and circular economy approaches
- **Innovation:** Innovate with impact for our customers by closely connecting research and development

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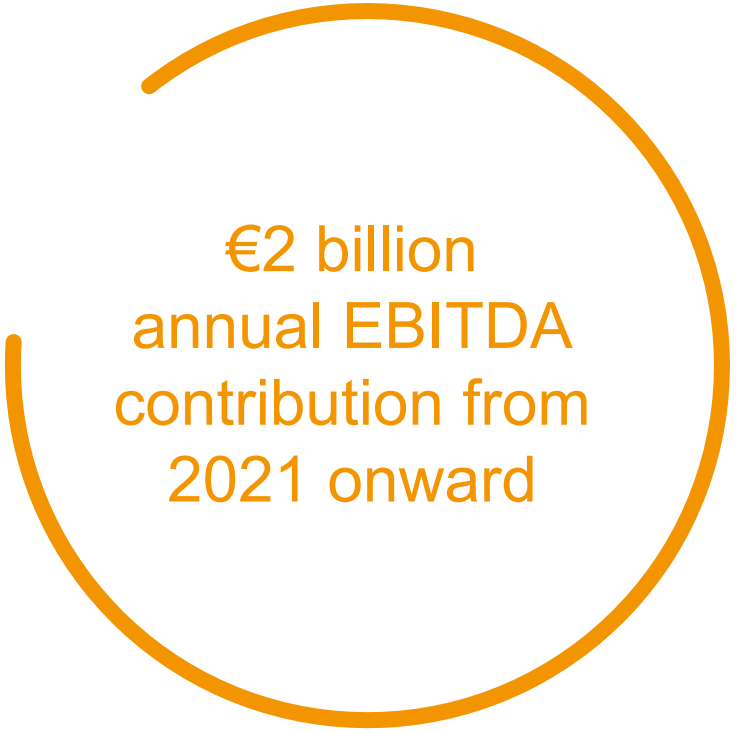
Excellence program 2019-2021

Key facts

- **Operational excellence** with focus on production, logistics and planning
- In **digitalization and automation,** smart supply chains and smart manufacturing are major contributors
- **Organizational development** targets leaner structures in the areas of services, R&D and headquarters (~€300 million)
  - Significant parts of **functional services** embedded in businesses, closer to our customers
  - **Leaner structures** and **simplification** of process landscape
- Estimated **one-time costs of €0.8 billion** over the 3-year period. This includes **special charges in a mid-triple-digit million-euro-range**



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BASF to reshape organization – Leaner structures and simplified processes

A lean **Corporate Center** with <1,000 FTE supports the Board of Executive Directors in steering BASF Group (Corporate Development; Finance; Legal, Compliance, Tax & Insurance; EHS; HR; Communications; Investor Relations; Corporate Audit)

Service Units ensure a competitive, demand-driven and effective service delivery (Global Engineering Services, Global Digital Services, Global Business Services, Global Procurement)

Our **Operating Divisions & Technology Platforms** are empowered to drive growth and profitability

The **Regions & Countries** focus on supporting and enabling the businesses locally

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We have refocused our portfolio towards innovative growth businesses*

Acquisitions

- Functional crop care
- Personal care and food ingredients
- Omega-3 fatty acids
- Enzymes
- Battery materials
- Specialty plastics
- Refinish coatings
- Surface treatment
- Seeds and crop protection

~€7.8 billion sales in emerging and innovation-driven businesses

BASF core business

Selected transactions 2010−today

Divestitures

- Styrenics
- Fertilizers
- Natural gas trading and storage
- Custom synthesis business
- Textile chemicals
- Polyolefin catalysts
- Industrial coatings
- Leather chemicals
- Water and paper chemicals
- Oil & Gas

~€26.0 billion sales in businesses with decreased differentiation potential

* Selected, closed transactions 2010–today

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Active portfolio management is ongoing

Divestitures and other strategic options

Water and paper chemicals

- Sales 2018: ~€0.8 billion
- Closing took place on January 31, 2019

Oil & Gas

- Sales 2018: ~€4.1 billion
- Merger took place on May 1, 2019
- IPO planned for H2 2020, subject to market conditions

Construction Chemicals

- Sales 2018: ~€2.5 billion
- High interest from various parties; indicative bids received
- Signing expected by the end of 2019

Pigments

- Sales 2018: ~€1 billion
- Divestment process started
- Closing expected by the end of 2020 at the latest

Acquisitions

BASF to acquire Solvay's integrated polyamide business

- On January 18, 2019, the EU Commission approved the acquisition subject to certain conditions
- On August 14, 2019, BASF, Solvay and Domo Chemicals agreed that Domo will acquire the European PA6.6 business from Solvay. BASF will acquire the global, non-European PA6.6 business from Solvay (sales 2018: ~€1 billion), including its 50% share in Butachimie's adipodinitrile (ADN) production, for a purchase price of €1.3 billion
- Closing is targeted by the end of 2019, subject to the approval of the relevant competition authorities

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Clear acquisition criteria

Strategic acquisition criteria

We want to acquire businesses which …

- create more value as part of BASF's Verbund
- help achieve relevant market positions
- drive innovation or technological differentiation
- enable new and sustainable business models

Financial acquisition criteria

We want to acquire businesses which …

- provide a return on capital employed above the WACC after full integration into BASF Group
- are EPS accretive by year three at the latest
- contribute to growth of EBITDA before special items

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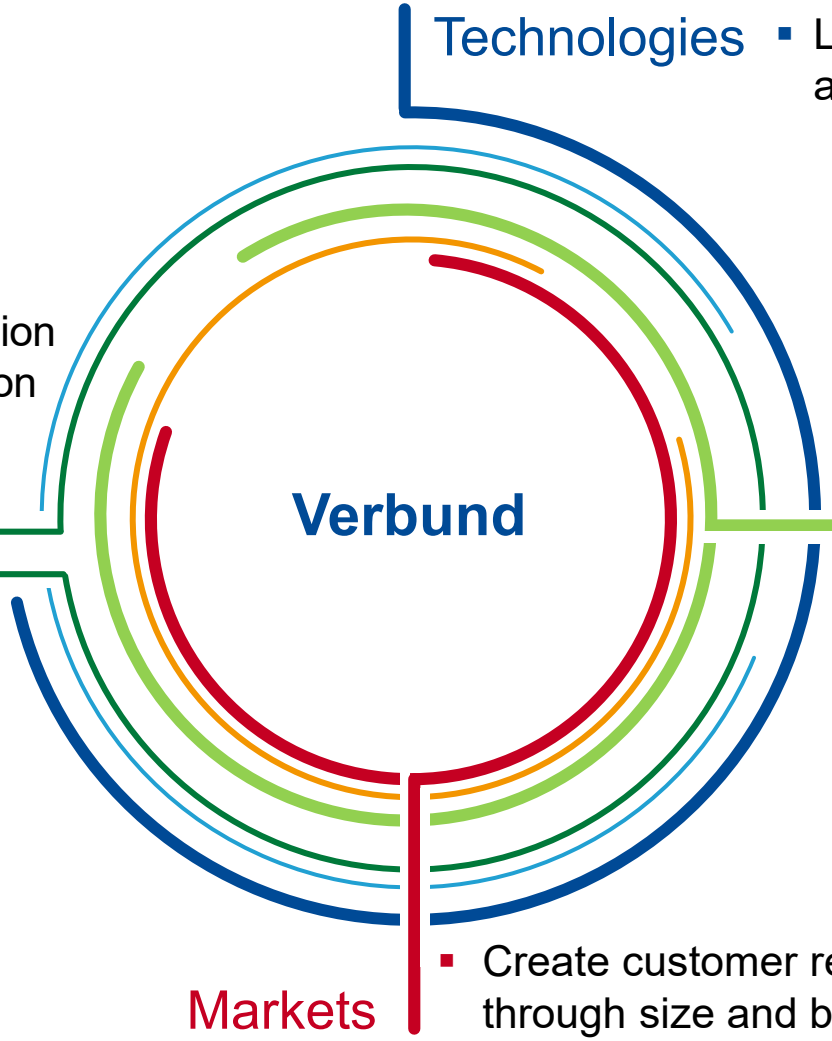
Our portfolio is strengthened by multiple Verbund effects



Technologies

- Leverage technological advantages and innovation across all segments

Production

- Confirmed annual cost savings of more than €1 billion through integrated production

Value Chains

- Ensure competitive supply of key products to all segments

Digitalization

- Harvest the advantages offered by digitalization across BASF

Markets

- Create customer relevance through size and broad portfolio

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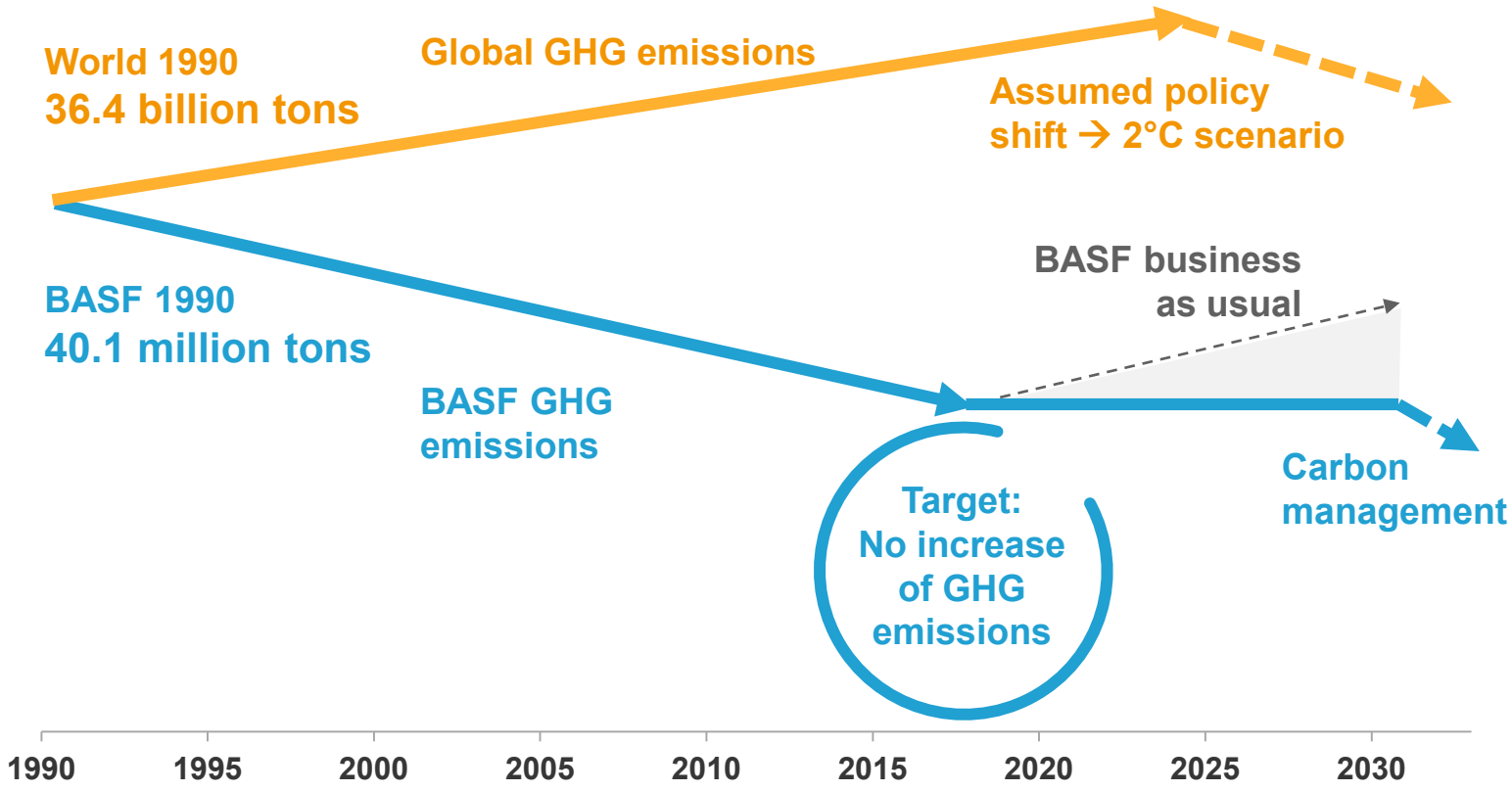
CO_2-neutral growth until 2030: Creating value to society and contributing to a sustainable development

Absolute greenhouse gas (GHG) emissions
indexed (1990 = 100)



- Since 1990, we have doubled our production volumes and nevertheless cut our greenhouse gas emissions in half
- BASF uses carbon raw materials responsibly: 75% of carbon converted to products, 25% consumed for process energy and converted to CO_2
- 22 million tons of CO_2 emissions by BASF worldwide in 2018 compared to 10–30 million tons per year for one coal-fired power plant
- Carbon intensity to be reduced by 30%
- We support the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)

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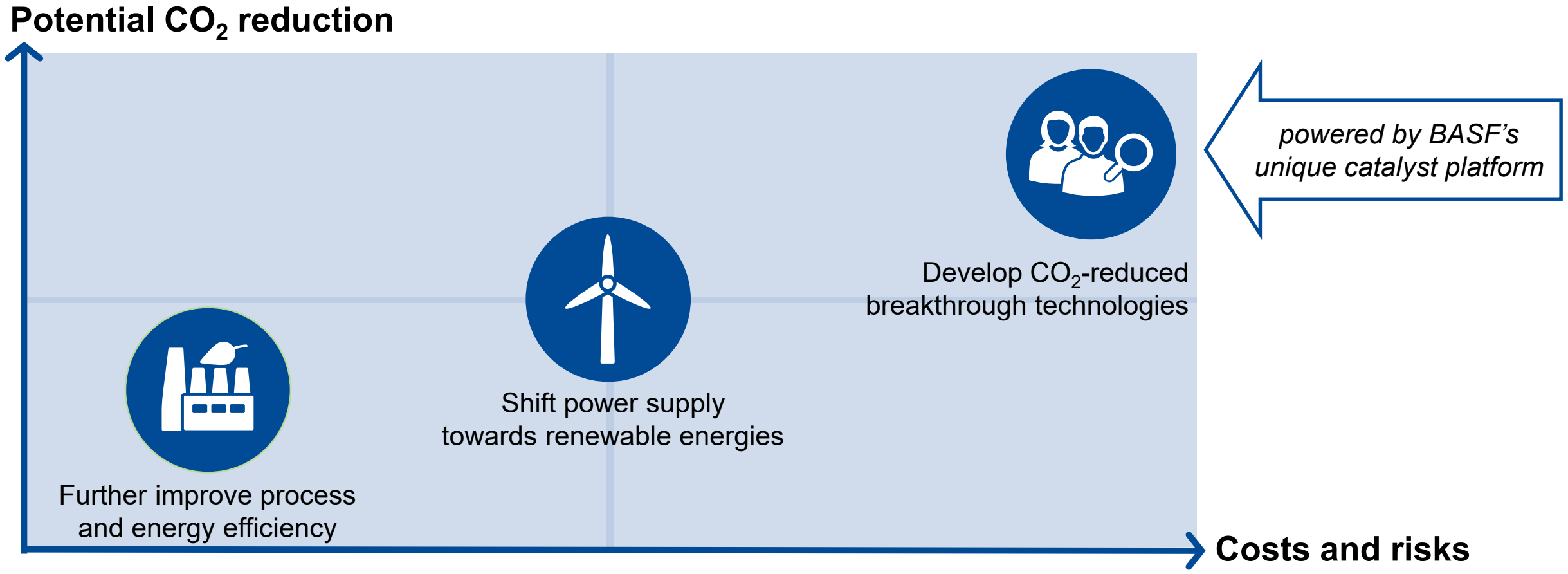
BASF's Carbon Management – our focus today



BASF is committed to contributing to the Paris Climate Agreement

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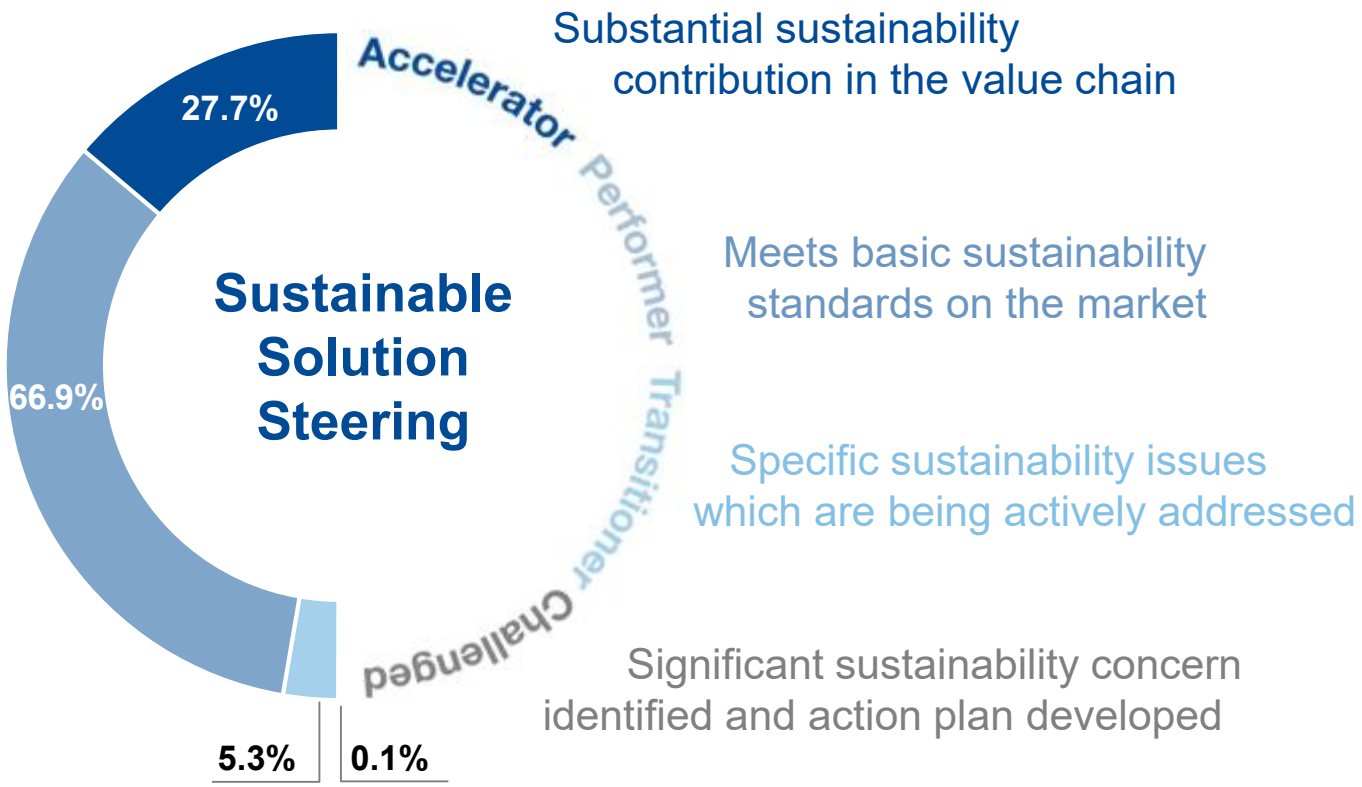
€22 billion sales with Accelerator products by 2025 through innovation

Percentage of sales 2018



- >60,000 product applications analyzed by 2018 (€56.2 billion in sales, 96.5% of relevant portfolio)
- 27.7% Accelerators
  - >12,000 solutions for enhanced quality of life
  - strong growth in their markets
  - on average margins ~6 percentage points above the rest of assessed portfolio
- Goal: €22 billion of sales with Accelerator products by 2025 (2018: €15 billion)
- Stronger integration in R&D pipeline, business strategies and M&A projects
- We will stop selling all Challenged products within maximum five years after classification

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Examples of BASF Accelerator products

Formic acid
Runway and road de-icing

- Better biodegradability than conventional products
- Less corrosive than conventional products, reduced impact on the surrounding flora, not hazardous to animals
- Reduced water treatment demand and costs
- In Europe, all big airports are now using salts of formic acid

Cetiol® Ultimate
Emollient for personal care

- 100% renewable-based, readily biodegradable
- Replacement of volatile silicones and substitution of cyclomethicone possible
- Gives more flexibility in the development of natural cosmetic concepts for improved skin feel

Synative® ES TMP
Marine lubricants

- Superior lubrication performance, excellent stability
- 80% renewable-based, readily biodegradable
- One of few product lines for environmentally acceptable marine lubricants (e.g., for EU Ecolabel listing)
- Significant growth potential, depending on future regulation

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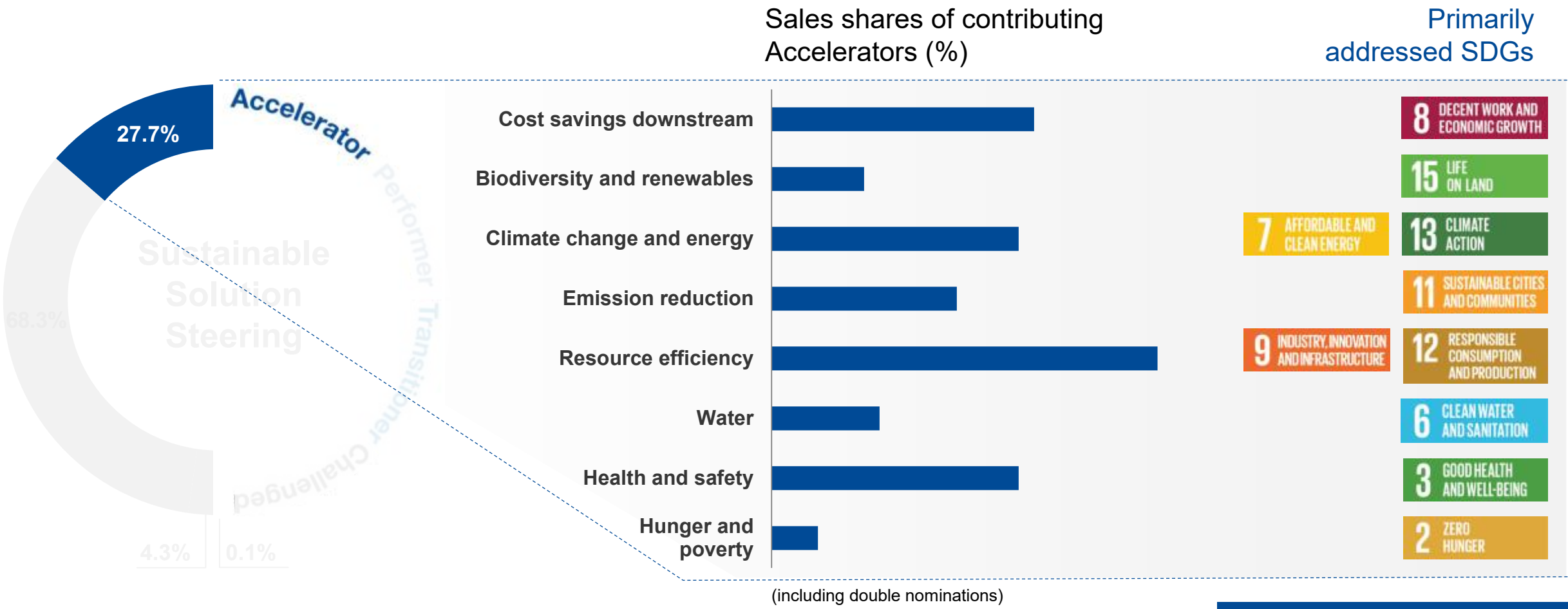
BASF's Accelerators contribute to a wide range of the UN Sustainable Development Goals



(including double nominations)

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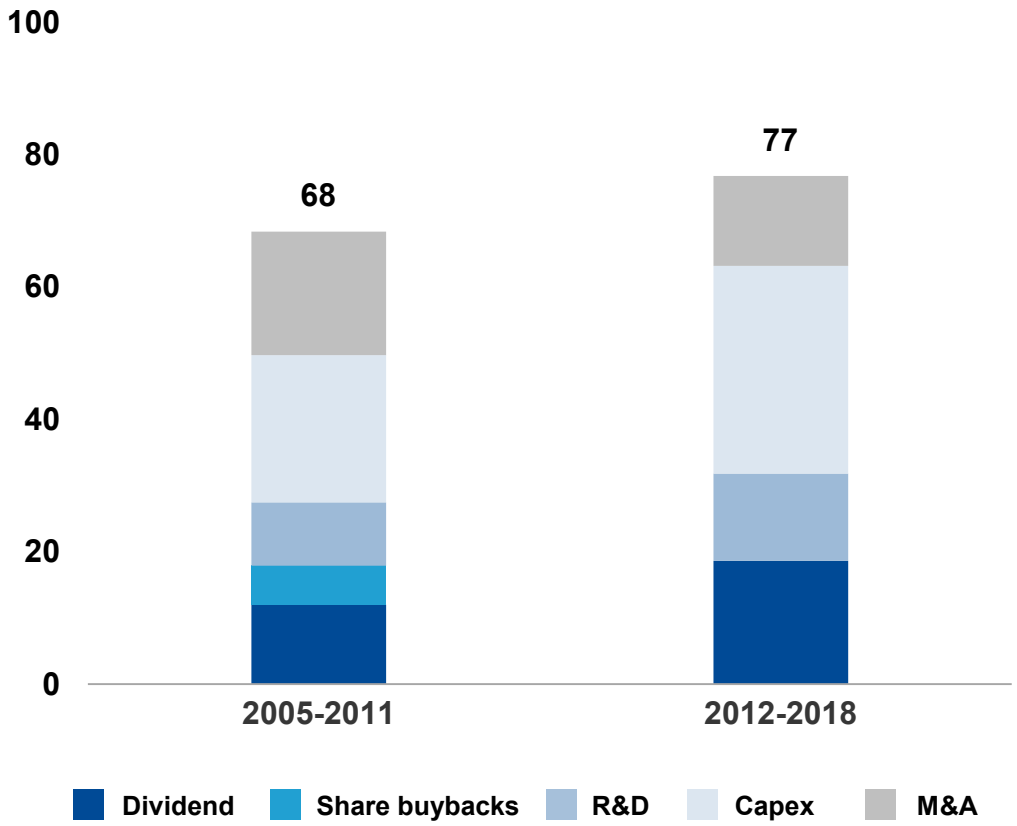
Guidance on the use of cash

Use of cash of BASF Group 2005-2018
billion €



1 Organic growth

We strive to organically grow above global chemical production via innovation and capital expenditures.

2 Progressive dividend policy

We aim to increase our dividend per share every year.

3 Portfolio upgrading

We strive to enhance BASF's portfolio through selective acquisitions with transformative character for distinct growth businesses or segments, and further focus the portfolio through continued pruning measures.

4 Share buybacks

We will also consider share buybacks to return cash to our shareholders, thus maintaining an efficient capital structure.

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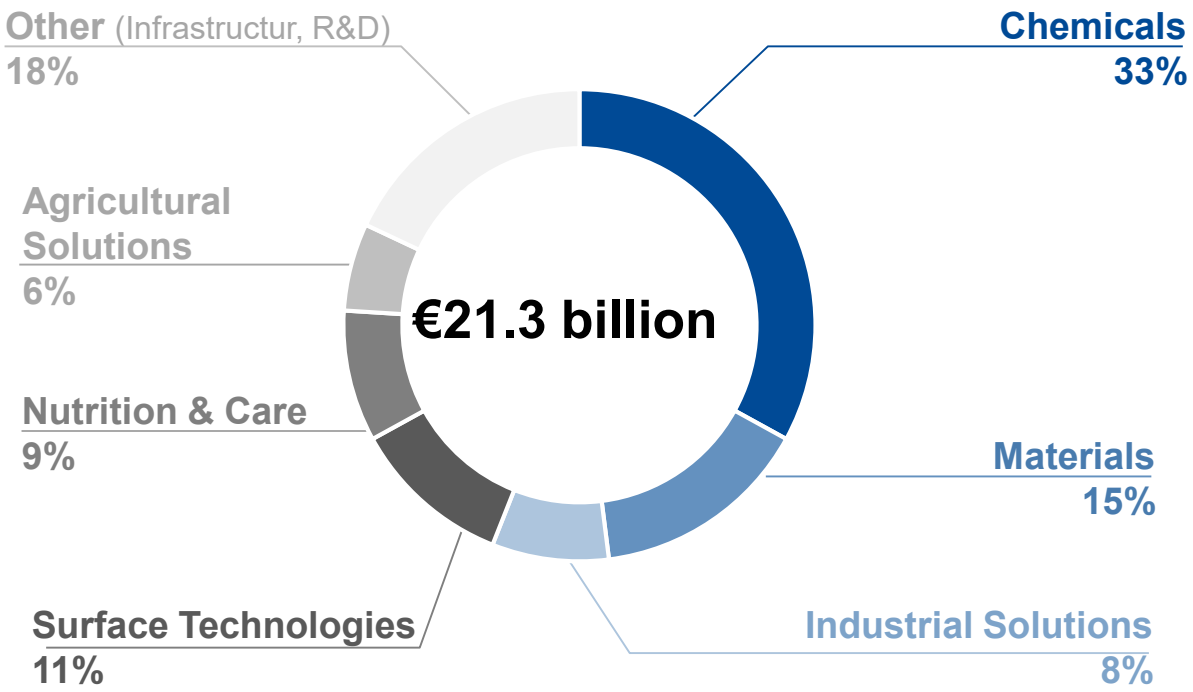
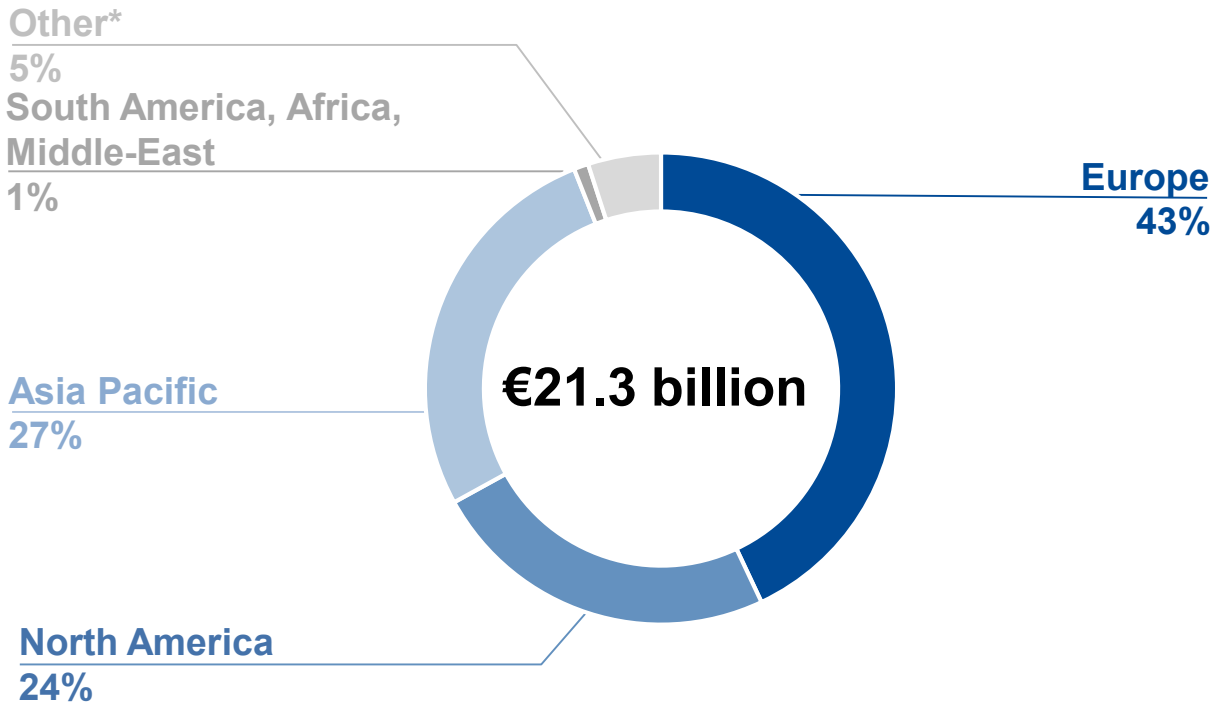
Investments in organic growth

Investments of ~€3.8 billion planned for 2019

Capex budget 2019–2023 by segment



Capex budget 2019–2023 by region



* Alternative sites currently being investigated

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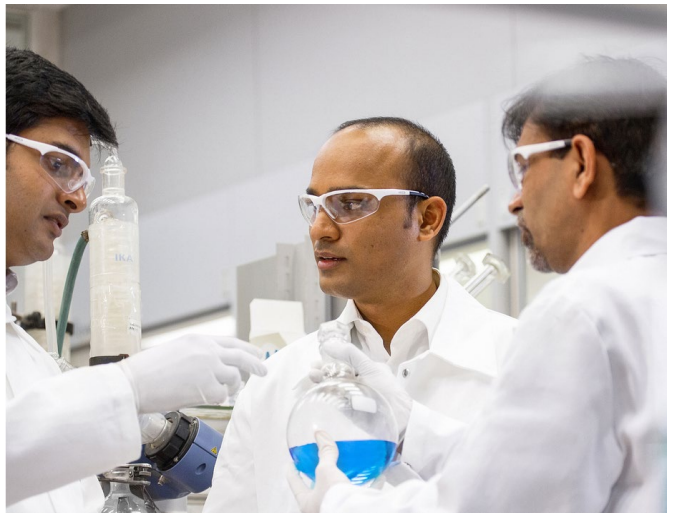
Announced investments in organic growth in Asia

BASF and SINOPEC signed MoU to expand Joint Venture in Nanjing, China

- JV BASF-YPC to have a 50% stake in an additional steam cracker; SINOPEC to invest the other 50%
- Steam cracker capacity of 1 million metric tons of ethylene p.a. to support further downstream portfolio development

BASF signed Framework Agreement to establish Verbund site in Zhanjiang, China

- Total investment of up to $10 billion, implementation in phases until 2030
- Wholly-owned steam cracker with a capacity of 1 million metric tons of ethylene p.a. and several plants for consumer-oriented products
- Circular economy concepts to be incorporated into the new Verbund site



BASF to partner with Adani to evaluate investments in acrylics value chain in Mundra, India

- With a joint investment totaling €2 billion, project would be BASF's largest investment in India
- First CO_2-neutral site to be 100% powered by renewable energy

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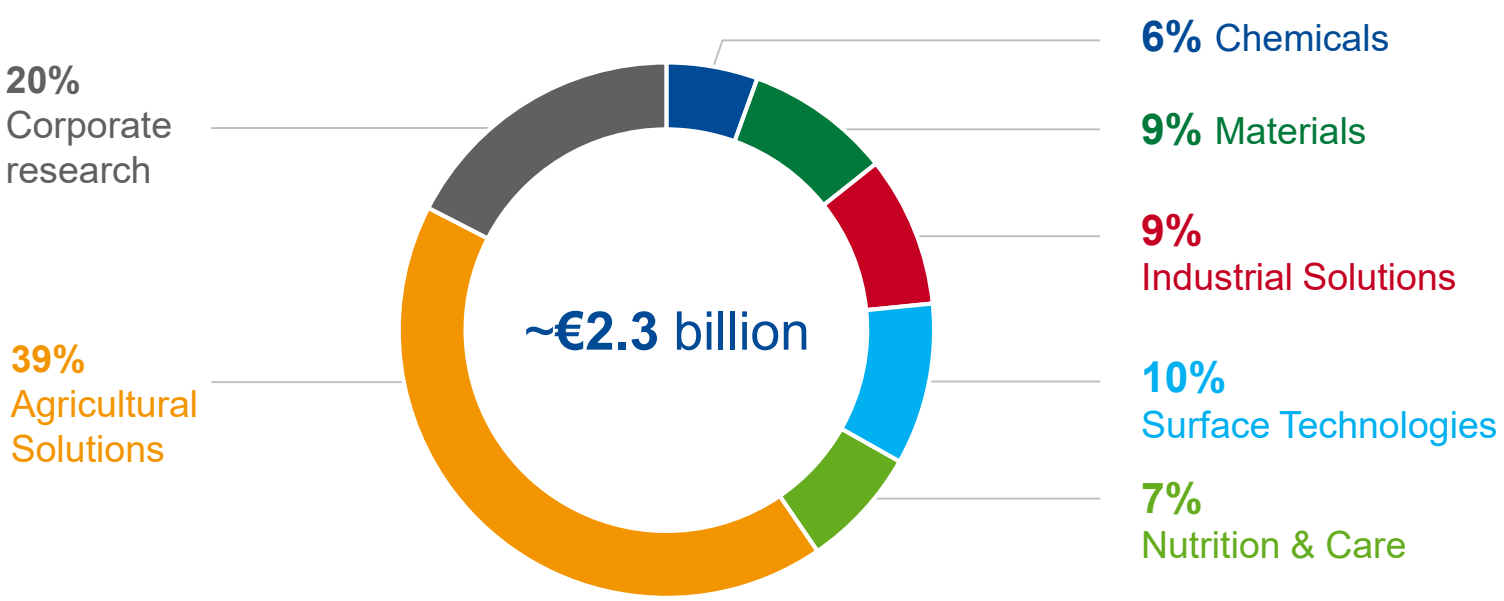
BASF's R&D is highly competitive, ensures long-term growth and generates a net benefit to earnings every year

Expected annual R&D expenditures



Measures to boost innovation power

- Capitalize on innovation mindset
- Focus R&D resources on growth businesses
- Increase customer centricity
  - Stronger alignment of customer needs and R&D projects
  - Establish rapid prototyping
  - Move R&D closer to businesses
- Fully leverage artificial intelligence
- Cross-divisional corporate research strengthens existing and develops new key technologies

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Fast-paced buildup of global cathode active materials footprint

2018

Second CAM production facility in Battle Creek, Michigan; merged with Elyria, Ohio into BASF TODA America (BTA)

2012

First CAM production facility in Elyria, Ohio

Europe planned greenfield production

2018

First production volumes at Harjavalta, Finland

China planned greenfield production

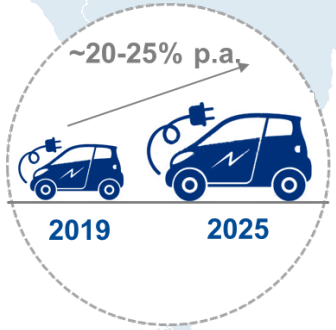
2015

Foundation of BASF TODA Battery Materials (BTBM), Japan

2017

Tripled capacity at BTBM in Onoda, Japan

Electromobility drives battery materials growth



Market projections for 2025:

10-15 million electric vehicles built per year

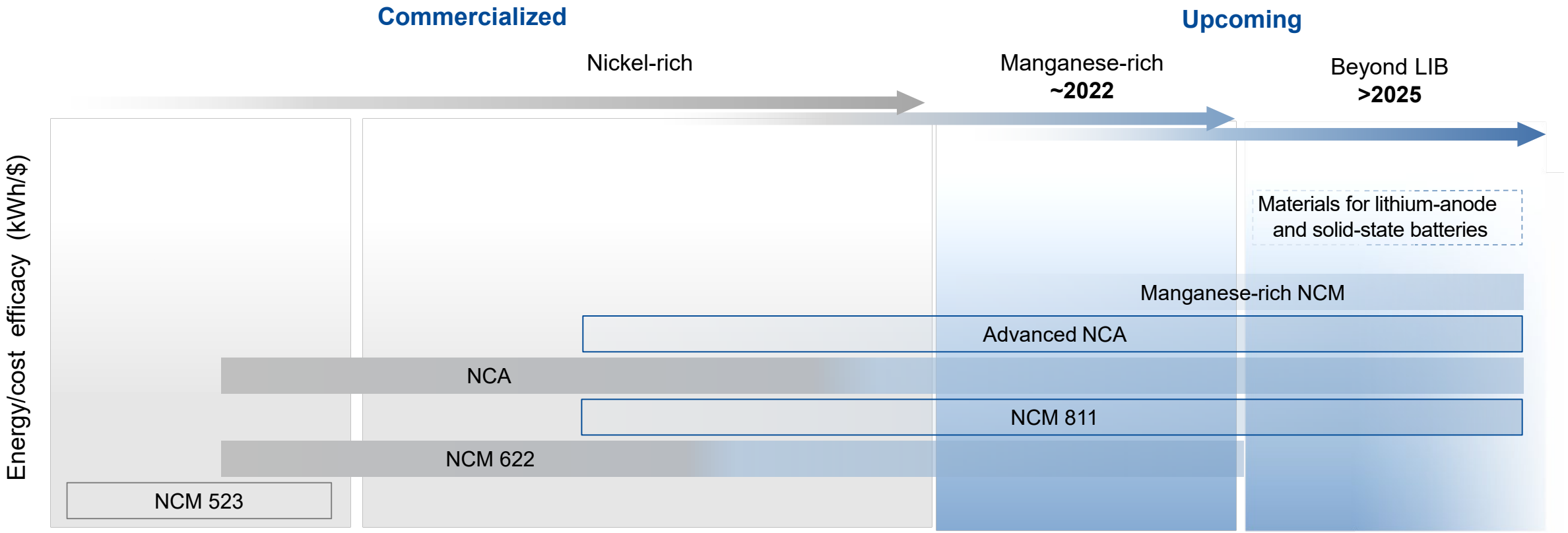
700-1,000 kt of CAM in electromobility

€25-30 billion CAM market size

Chemistry of cathode active materials is key to address electromobility challenges

BASF We create chemistry

BASF drives key cathode chemistries to improve energy density, lifetime and cost



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1 At a glance

2 Q2 2019 Reporting

3 Corporate Strategy

4 Segments Overview

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Chemicals – We are the heart of the BASF Verbund

Global chemical production growth

+3.1%

CAGR 2018-2030

Asia Pacific

~65%

of global chemical production will be in Asia Pacific by 2030

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Chemicals – Comprehensive portfolio of petrochemical products and intermediates

Divisions	BASF's offering for our customers
Petrochemicals	▪ Cracker products ▪ Ethylene oxide and glycols ▪ Industrial gases ▪ Alcohols and solvents ▪ Plasticizers ▪ Acrylics ▪ Superabsorbent polymers ▪ Styrenic foams
Intermediates	▪ Amines ▪ Butanediol and derivatives ▪ Acids and polyalcohols ▪ Acetylenics and carbonyl derivatives

Financial figures billion €		2017	2018	H1 2019
Sales		11.2	11.7	4.7
Thereof	Petrochemicals	8.2	8.6	3.3
	Intermediates	3.0	3.1	1.4
EBITDA bsi		2.6	2.2	0.8
EBITDA bsi margin (%)		23.7	19.2	16.7
EBIT bsi		2.0	1.6	0.4
ROCE (%)		23.1	17.7	-
Investments (incl. M&A)		0.8	1.0	0.6
R&D		0.1	0.1	0.1

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Chemicals – Expanding asset base in growing Asian markets

Market trend/growth driver

Strong growth in Asia

- Strong asset base in key Asian markets
- Dedicated investment projects in China and India

Value chain integration

- Integrated production and Verbund sites provide starting point of many value chains

Geographical reach/assets in relevant markets

- Global network of six Verbund sites and several large production sites

Best-in-class process technologies

- Technology leader in several value chains such as acrylic acid, butanediol and derivatives, amines

Sustainable and resource-efficient production

- Drive ChemCycling
- R&D projects with special focus on CO_2-neutral technologies (Carbon Management Program)

BASF offering/solution

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Chemicals – Enable growth of key value chains in the BASF Verbund

Divisions	▪ Petrochemicals ▪ Intermediates
Strategy	▪ Enable organic growth of key value chains by providing flexible supply of raw materials ▪ Maintain high competitiveness through technological leadership, operational excellence and Verbund advantages
Verbund integration	▪ Starting point of many value chains
Innovation	▪ Focus R&D on optimization of production processes and development of technologies to reduce or avoid CO_2
Capex	▪ Framework agreement to establish Verbund site in Zhanjiang, China ▪ MoU with Sinopec to expand Joint Venture in Nanjing, China ▪ Partnering to evaluate investments in acrylics value chain in Mundra, India ▪ Strengthen and upgrade existing value chains in advanced markets
Sustainability	▪ Develop low CO_2 technologies in Carbon Management Program ▪ Develop technologies to use plastic waste as raw material (ChemCycling) ▪ Foster Verbund value chain steering to minimize transportation risk and optimize asset utilization
Peers	▪ Arkema, Dow, Eastman, LyondellBasell, Nippon Shokubai

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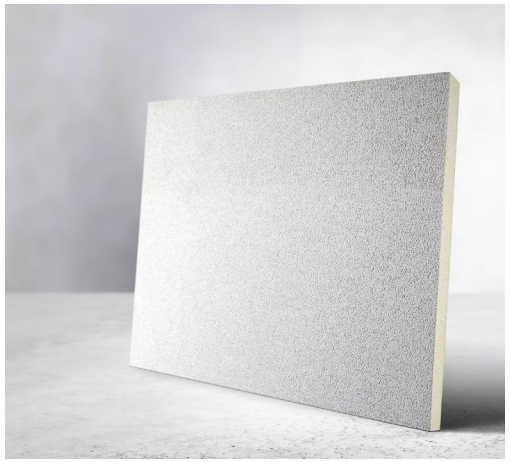
Materials – We support our customers with advanced materials in various consumer-facing industries

Automotive production

110 million

cars p.a. by 2025



Growing middle class

+3%

annual growth of consumer goods by 2025

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Materials – Industry-leading portfolio of advanced materials and their precursors leveraging two major integrated value chains

Divisions	BASF's offering for our customers
Performance Materials	▪ Polyurethanes ▪ Engineering plastics ▪ Specialty plastics ▪ Functional foams ▪ Bio-degradable materials
Monomers	▪ Isocyanates ▪ Polyamides and precursors ▪ Inorganic chemicals ▪ Glues and impregnating resins

Financial figures billion €		2017	2018	H1 2019
Sales		13.7	13.3	5.9
Thereof	Performance Materials	6.5	6.5	3.1
	Monomers	7.2	6.8	2.8
EBITDA bsi		3.7	3.0	1.0
EBITDA bsi margin (%)		27.1	22.8	16.9
EBIT bsi		3.0	2.4	0.7
ROCE (%)		33.4	26.1	-
Investments (incl. M&A)		0.6	0.6	0.3
R&D		0.2	0.2	0.1

BASF
We create chemistry

Materials – Advanced materials and solutions to shape future trends in transportation, construction and consumer goods industries

Market trend/growth driver

Growth in emerging markets

- Global production and R&D network
- Expansion projects especially in Asia, e.g., specialty plastics

Rising demand for consumer comfort

- Broad portfolio of different materials (polyurethanes, engineering plastics, specialty plastics)

Material substitution

- Deep industry knowledge and technical know-how
- Unmatched material simulation capabilities
- Substitution of metal by lightweight plastics

Transformation of mobility

- Innovative solutions for automotive trends such as electromobility, lightweight, interior, NVH*, autonomous driving, connectivity and car sharing

Sustainability

- Innovative applications drive energy efficiency
- Industry-leading in biodegradable and bio-based materials
- Solutions for plastic waste and recycling

BASF offering/solution

* Noise, vibration, harshness

BASF
We create chemistry

Materials – Drive growth by offering advanced materials for new applications and systems

Divisions	▪ Performance Materials ▪ Monomers
Strategy	▪ Drive above-market organic growth by offering advanced materials for new applications and systems ▪ Differentiate through application know-how, industry knowledge and customer proximity ▪ Fully leverage integrated structure to maximize value in isocyanate and polyamide value chains
Verbund integration	▪ Integration into inorganics and aromatics ▪ Customer Verbund with transportation industry
Innovation	▪ Focus on new materials formulation and compounding know-how, application knowledge, digital simulation and modeling tools ▪ Process innovation and digitalization in precursor assets to ensure competitiveness
Capex	▪ Continuously expand capacities in systems and specialty products ▪ Selectively expand isocyanate and polyol value chains ▪ Drive operational excellence and asset reliability
Sustainability	▪ Focus on innovative applications contributing to energy efficiency and climate protection ▪ Strengthen portfolio of biodegradable and bio-based materials ▪ Develop solutions for plastic waste and plastics recycling
Peers	▪ Covestro, Huntsman, Lanxess, Solvay, Wanhua

BASF
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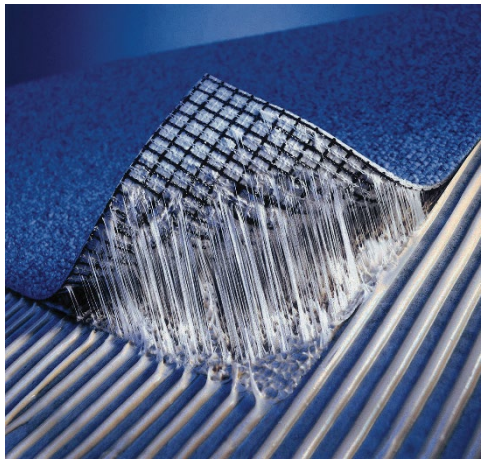
Industrial Solutions – We provide our customers with ingredients and solutions for resource-efficient industrial applications



Resource efficiency

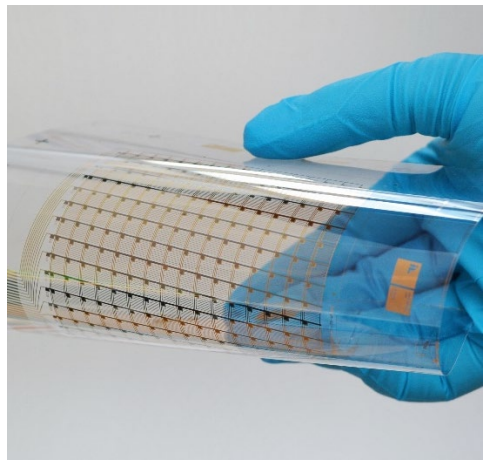
SDG 9 Industry, innovation, infrastructure

SDG 12 Responsible consumption and production

Industrial production

+3% p.a.

from 2018 until 2025



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SDG: United Nations Sustainable Development Goals

Industrial Solutions – Broad range of products for many different industrial applications

Divisions	BASF's offering for our customers
Dispersions & Pigments	▪ Dispersions ▪ Resins ▪ Additives ▪ Electronic materials ▪ Pigments*
Performance Chemicals	▪ Plastic additives ▪ Fuel and lubricant solutions ▪ Oilfield and mining solutions ▪ Kaolin

Financial figures billion €		2017	2018	H1 2019
Sales		9.3	9.1	4.3
Thereof	Dispersions & Pigments	5.4	5.3	2.6
	Performance Chemicals	3.9	3.8	1.7
EBITDA bsi		1.3	1.1	0.7
EBITDA bsi margin (%)		14.0	12.0	16.6
EBIT bsi		0.9	0.7	0.5
ROCE (%)		13.5	8.7	-
Investments (incl. M&A)		0.5	0.4	0.2
R&D		0.2	0.2	0.1

* In Q1 2019, BASF started the divestment process for its global pigments business.

BASF
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Industrial Solutions – Contributing to a more efficient use of resources in industrial processes

Market trend/growth driver

Growing demand for industrial products

- Plastic additives for packaging
- Low-VOC and low-odor dispersions and additives
- Water-based biodegradable adhesives
- Electronic chemicals to increase speed and processability of electronic logic devices

Efficient use of resources

- Fuel additives reduce fuel consumption
- Mining chemicals improve yields
- Additives (light stabilizers, antioxidants, cross-linkable resins) help to improve durability and service life of surfaces

Data-analytics to accelerate developments

- Using technologies to interact with customers to exchange, e.g., product information or formulation concepts
- Example FuelScout: A mobile analytics tool to find the right refinery additives solutions

Reduction of plastic waste

- Antioxidants and light stabilizers increase the useful life of plastics and reduce plastic waste
- Dispersions and resins for flexible packaging allowing reduced packaging weight
- Water-based polymers for paper cups as alternatives to PE

BASF offering/solution

BASF
We create chemistry

Industrial Solutions – Increasingly utilize BASF's additives platform to improve resource efficiency

Divisions	▪ Dispersions & Pigments ▪ Performance Chemicals
Strategy	▪ Drive organic growth in key industrial markets with low cyclicality ▪ Grow value-enhancing ingredients and solutions by building on industry and application know-how
Verbund integration	▪ Deep embedment into the C1, C3 and C4 value chains ▪ Tapping into BASF's strong expertise in catalysis, process development, formulation technologies and sustainable technologies
Innovation	▪ Increased focus on formulation development ▪ Enhanced process innovation focus to maintain cost competitiveness
Capex	▪ Selectively expand into high-growth regions by leveraging the integration into BASF value chains
Sustainability	▪ Address resource efficiency as key market driver ("more from less") ▪ Capture opportunities from societal and regulatory trends
Peers	▪ Arkema, Clariant, Dow, Lanxess

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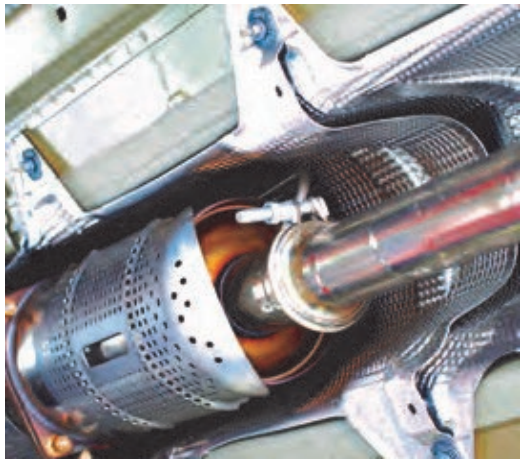
Surface Technologies – We offer a broad portfolio of solutions to create, modify and protect surfaces on various substrates



Increasing mobility

~10 million

more cars produced per year by 2022 (compared to 2018)

Growth in electromobility

20-25%

per year in battery demand for electric vehicles until 2025

BASF
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Surface Technologies – Innovative solutions for surfaces in the transportation and chemical industries

Divisions	BASF's offering for our customers
Catalysts	▪ Mobile emissions catalysts ▪ Process catalysts and technologies ▪ Battery materials ▪ Precious and base metal services
Coatings	▪ Automotive OEM coatings solutions ▪ Automotive refinish coatings solutions ▪ Surface treatment solutions ▪ Decorative paints (in Brazil)
Construction Chemicals*	▪ Admixture systems ▪ Construction systems

Financial figures billion €		2017	2018	H1 2019
Sales		12.9	13.7	7.4
Thereof	Catalysts	6.7	7.5	4.3
	Coatings	3.8	3.7	1.8
	Construction Chemicals*	2.4	2.5	1.3
EBITDA bsi		1.3	1.2	0.6
EBITDA bsi margin (%)		10.4	8.8	8.6
EBIT bsi		0.8	0.7	0.3
ROCE (%)		5.6	4.6	-
Investments (incl. M&A)		0.8	0.6	0.3
R&D		0.3	0.3	0.1

* In October 2018, BASF announced to evaluate strategic options for its Construction Chemicals business.

BASF
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Surface Technologies – Driving technologies to enable growth of low-emission mobility solutions

Market trend/growth driver

Low-emission mobility and processes

- Global leader in mobile emissions catalysts
- Functional coatings technology for passive temperature management
- Catalysts for resource and energy efficient processes

Growing automotive production in Asia

- Strong production, R&D, and applications development footprint across Asia, especially in China

Electromobility and battery materials

- Broad commercialized portfolio of nickel-rich CAMs*
- Strong product and process development pipeline with an extensive IP portfolio
- Global manufacturing base, regional development teams

Eco-efficient coatings

- Integrated processes in automotive OEM coatings
- Waterborne basecoats for automotive OEM and refinish coatings

BASF offering/solution

* Cathode Active Materials

BASF
We create chemistry

Surface Technologies – Participate in growth of the transportation industry with a focus on electromobility

Divisions	▪ Catalysts ▪ Coatings
Strategy	▪ Drive growth by leveraging portfolio of technologies and know-how regarding protection, modification and creation of surfaces on various substrates ▪ Strengthen position as a leading and innovative provider of battery materials
Verbund integration	▪ Catalysis is a core technology in the chemical industry that is fundamental to more than 90% of BASF production ▪ Back integration in superior process technology for C3 value chains via proprietary catalysts and processes ▪ Acrylate-based dispersions for coatings rely on the C3 value chain of the Verbund
Innovation	▪ Drive growth with new battery materials, advanced coatings, surface treatment, and innovative mobile and process catalyst technologies and services
Capex	▪ Build global asset footprint for battery materials ▪ Growth investments for catalyst offerings and surface treatment in Asia, especially in China
Sustainability	▪ Benefit from trend towards low emissions ▪ Resource-efficient circular economy established in platinum group metals ▪ Support OEMs with low VOC (volatile organic compounds) coatings solutions
Peers	▪ Axalta, Johnson Matthey, PPG, Umicore

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Nutrition & Care – We support our customers to participate in growing consumer markets

Market growth above GDP

+3.3% p.a.

growth in health and nutrition products until 2025

Demographic change

>21%

of the world's population will be 60+ by 2050

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Nutrition & Care – Attractive portfolio catering to various consumer needs

Divisions	BASF's offering for our customers
Care Chemicals	▪ Personal care specialties ▪ Home care and industrial cleaning solutions
Nutrition & Health	▪ Aroma ingredients ▪ Human nutrition products ▪ Animal nutrition products ▪ Pharma solutions ▪ Enzymes for feed, food, detergents and biofuels

Financial figures billion €		2017	2018	H1 2019
Sales		6.3	5.9	3.1
Thereof	Care Chemicals	4.4	4.2	2.1
	Nutrition & Health	1.8	1.7	1.0
EBITDA bsi		1.0	1.1	0.6
EBITDA bsi margin (%)		16.0	19.0	21.1
EBIT bsi		0.6	0.7	0.4
ROCE (%)		8.6	11.8	-
Investments (incl. M&A)		0.3	0.3	0.2
R&D		0.2	0.2	0.1

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Nutrition & Care – Benefitting from the trend towards natural ingredients, sustainability, wellbeing as well as convenience

Market trend/growth driver

Natural ingredients

- Plant sterols and natural beta-carotene for dietary supplements
- Products and formulations complying with naturality standard of cosmetics industry
- Green technologies to extract and concentrate phytochemicals

Eco-friendliness and sustainability

- Traceability with Rambutan, Argan and Galanga programs
- Low temperature washing with polymer and enzyme solution
- Tailored calculation tool to define nutritionally and economically optimized diets for animals

Health and wellbeing

- Products to help manage non-alcoholic fatty liver disease
- Plant-based peptides to help modulate inflammation
- Microbiome and epigenetics technology platform targeting individual skin care

Convenience and aging population

- Super-concentrated single-dose detergents
- Excipients for enhanced bio-availability of pharmaceutical ingredients
- UV filters providing broad-spectrum UV protection

BASF offering/solution

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Nutrition & Care – Become a leading provider of nutrition and care ingredients for consumer products

Divisions	▪ Care Chemicals ▪ Nutrition & Health
Strategy	▪ Achieve a leading position in nutrition and maintain market leadership in care ingredients ▪ Enhance and broaden the product and technology portfolio through selective acquisitions ▪ Drive strong organic growth by focusing on emerging markets, new business models and sustainability trends in consumer markets
Verbund integration	▪ Care chemicals to a large extent based on BASF's C2 value chain ▪ Citral value chain, based on BASF's integration into C4 products, is core for Nutrition & Health ▪ Catalysis, formulation know-how and white biotechnology
Innovation	▪ Develop tailor-made solutions for new functionalities via product and process innovation ▪ Address unmet needs beyond existing chemical solutions with R&D in white biotechnology and fermentation technologies
Capex	▪ Expand capacities and enhance operational excellence to drive organic growth ▪ Support further portfolio development and diversification
Sustainability	▪ Build on trends driven by changing consumer behavior, e.g., biodegradable and bio-based products, traceability
Peers	▪ Croda, Clariant, DSM, DuPont, Evonik

BASF
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Agricultural Solutions – We are growing to help our customers to grow better

Population growth

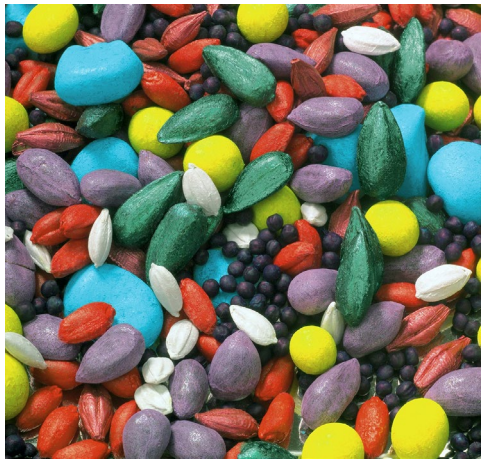
~10 billion

people by 2050*

Shrinking arable land

minus 35%

hectares per person by 2050**



* United Nations: World Population Prospects, The 2018 Revision
** Food and Agriculture Organization of the United Nations: Key Facts (base year: 2000)

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Agricultural Solutions – Comprehensive offering as integrated agricultural solutions provider

Indications and sectors	BASF's offering for our customers
Crop Protection	▪ Herbicides ▪ Fungicides ▪ Insecticides
Seeds & Traits	▪ Field crop seeds ▪ Vegetable seeds
Seed Treatment	▪ Seed treatment ▪ Biologicals
Digital	▪ Digital farming solutions

Financial figures billion €		2017	2018	H1 2019
Sales		5.7	6.2	4.4
Thereof	Crop Protection	5.4	5.4	3.1
	Seeds & Traits	-	0.3	1.0
	Seed Treatment	0.3	0.5	0.3
EBITDA bsi		1.3	1.1	1.2
EBITDA bsi margin (%)		22.8	18.3	27.2
EBIT bsi		1.0	0.7	0.9
ROCE (%)		12.0	5.1	-
Investments (incl. M&A)		0.2	7.1	0.1
R&D		0.5	0.7	0.4

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Agricultural Solutions – Providing solutions for a sustainable future, adding value with products, solutions and technologies for farmers

Market trend/growth driver

Increasing population and decreasing resources

- Innovative solutions for modern sustainable agriculture to increase quality and yields, comprising crop protection, seeds & traits, seed treatment and digital solutions

Innovation

- Annual investment of around €900 million in R&D for agricultural solutions
- Pipeline value of more than €6 billion, with >30 projects to be launched globally by 2028

Sustainability

- Portfolio steering along defined sustainability criteria
- Increasing offer of “Accelerators”
- Thought and action leadership on stewardship, biodiversity and sustainability assessment, with global networks and partnerships

Digital farming

- Supporting better decision-making with global rollout of digital platform xarvio™
- More efficient and sustainable resource allocation

BASF offering/solution

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Agricultural Solutions – Focus on innovation-driven growth as integrated agricultural solutions provider

Division	▪ Agricultural Solutions
Strategy	▪ Further strengthen market position as integrated agricultural solutions provider ▪ Focus on innovation-driven organic growth ▪ Selective acquisitions, especially in seeds & traits and digital farming
Verbund integration	▪ Sourcing of key raw materials for crop protection products ▪ Integrated biotechnology research platform ▪ Formulation know-how and development platform
Innovation	▪ Realize R&D synergies between crop protection, seeds and traits ▪ Leverage BASF's biotechnology research platform ▪ Develop digital business models to provide holistic solutions for farmers
Capex	▪ Selectively expand capacities for crop protection products
Sustainability	▪ Digital solutions to increase input efficiency and enable smarter stewardship ▪ Sustainability firmly embedded in management processes, operations, R&D and portfolio development
Peers	▪ Bayer, Corteva, Syngenta, FMC

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