



# Annual Press Conference

Ludwigshafen, February 24, 2023



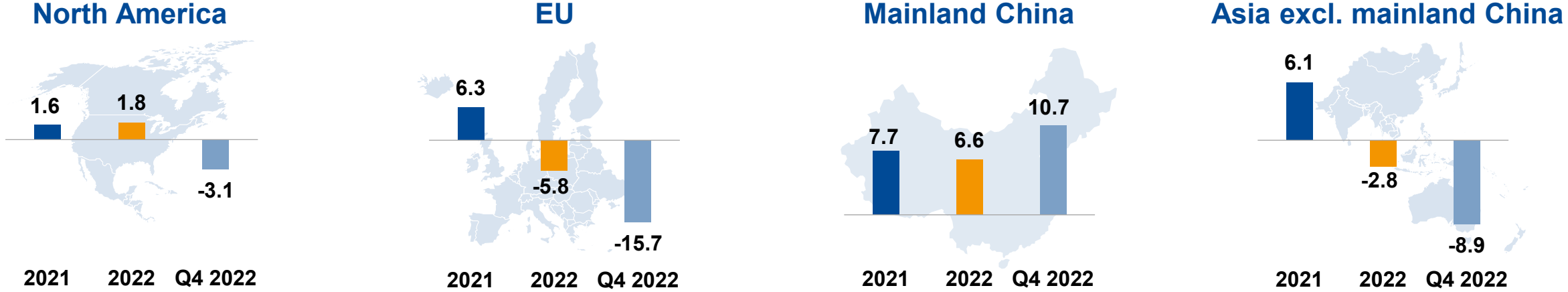
# Agenda

1. Full-year 2022 reporting
2. Measures to increase competitiveness
3. Concluding remarks



# Global chemical production grew by 2.2% in the full year 2022 and by only 1.0% in Q4 2022

Chemical production compared with prior year<sup>1</sup>  
%



## Growth rates

%	2022	2021
Global GDP	3.0	6.1
Global industrial production	2.5	6.2
Global chemical production	2.2	6.1

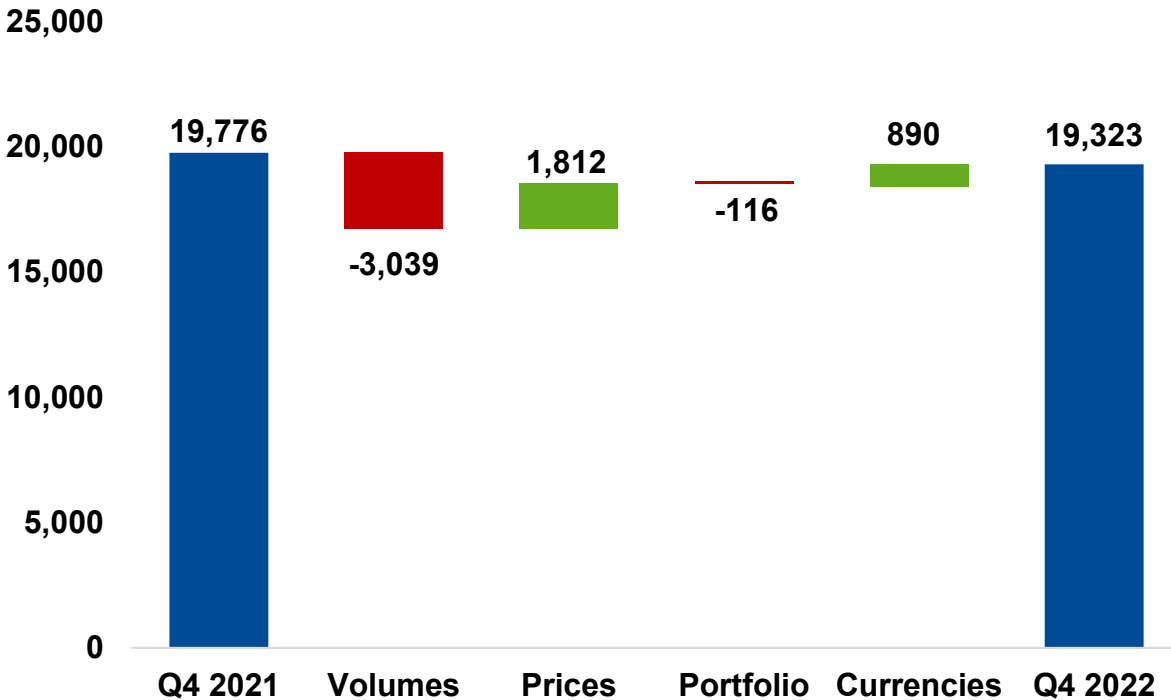
<sup>1</sup> Source: BASF, Q4 2022 partly based on estimates. Data sources: IHS, Oxford Economics, NBS China, Feri, Fed, Eurostat, METI, ONS. All data subject to statistical revision. Growth rates for regional aggregates might differ from official data releases due to different country coverage and weights.



# Q4 2022: Sales decreased slightly, mainly due to lower volumes

## Sales bridge Q4 2022 vs. Q4 2021

Million €

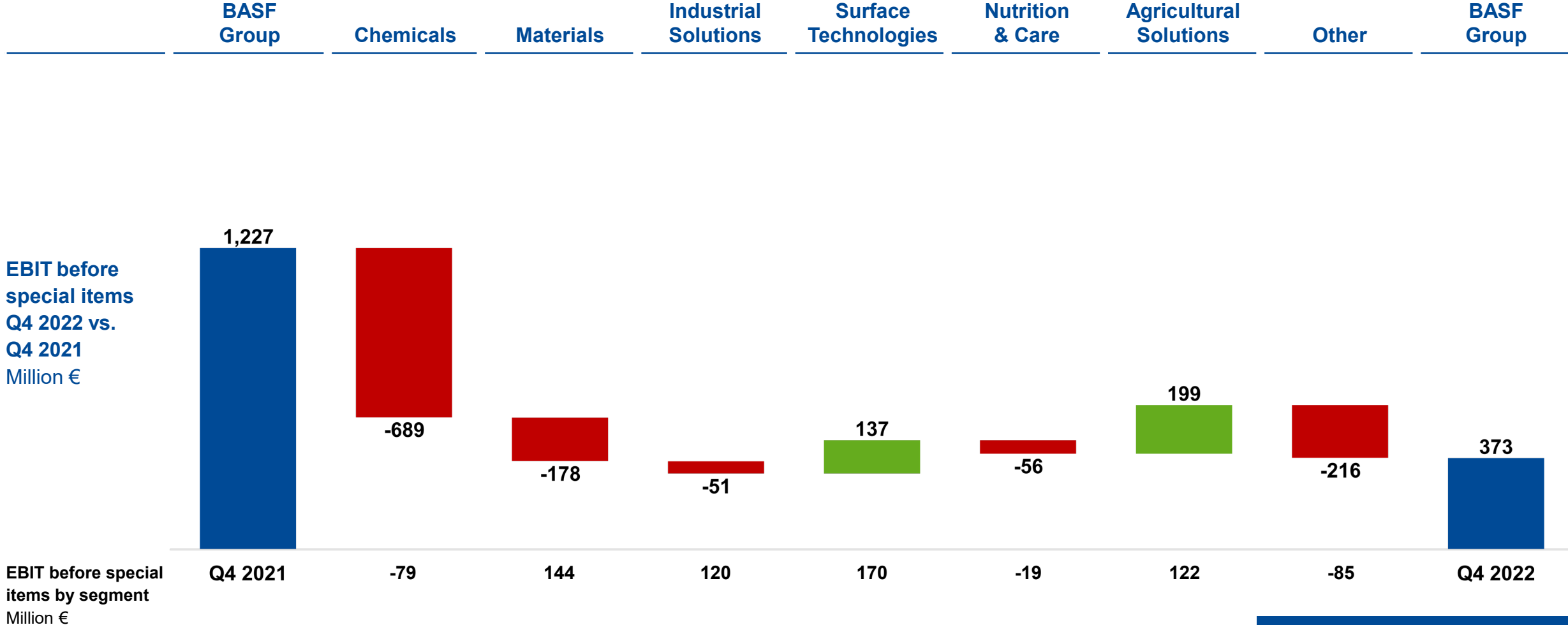


- **Sales** decreased by 2.3% to €19,323 million
- **Volumes** declined by 15.4%
  - Agricultural Solutions increased volumes slightly, all other segments recorded lower volumes
  - Excluding precious metals volumes, BASF Group sales volumes declined by 12.7%
- **Prices** increased by 9.2%
  - All segments increased prices, except for Chemicals
- **Portfolio** effects of minus 0.6% were mainly related to the sale of the kaolin minerals business
- **Currency** effects of plus 4.5%, mainly from the U.S. dollar

### Sales development

Q4 2022 vs. Q4 2021	↓ -15.4%	↑ 9.2%	↓ -0.6%	↑ 4.5%
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# Q4 2022: BASF's EBIT before special items declined primarily due to lower contributions from the upstream segments

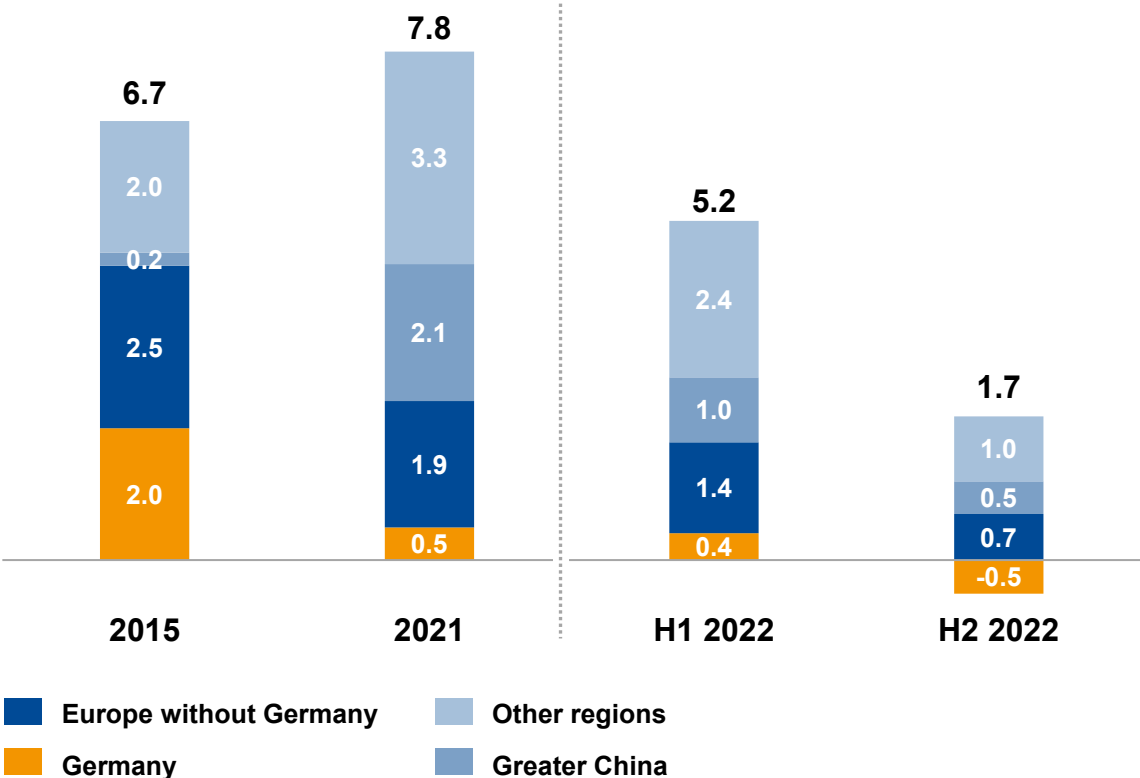


# BASF Group Q4 2022 and full year 2022: Financial figures

Financial figures	Q4 2022	Change	FY 2022	Change
	Million €	%	Million €	%
Sales	19,323	-2.3	87,327	11.1
EBITDA before special items	1,401	-35.7	10,762	-5.2
EBITDA	1,389	-38.3	10,748	-5.3
EBIT before special items	373	-69.6	6,878	-11.5
EBIT	119	-90.3	6,548	-14.7
Net income	-4,847	.	-627	.

# Competitiveness in Europe declined – negative operational earnings in Germany in 2022

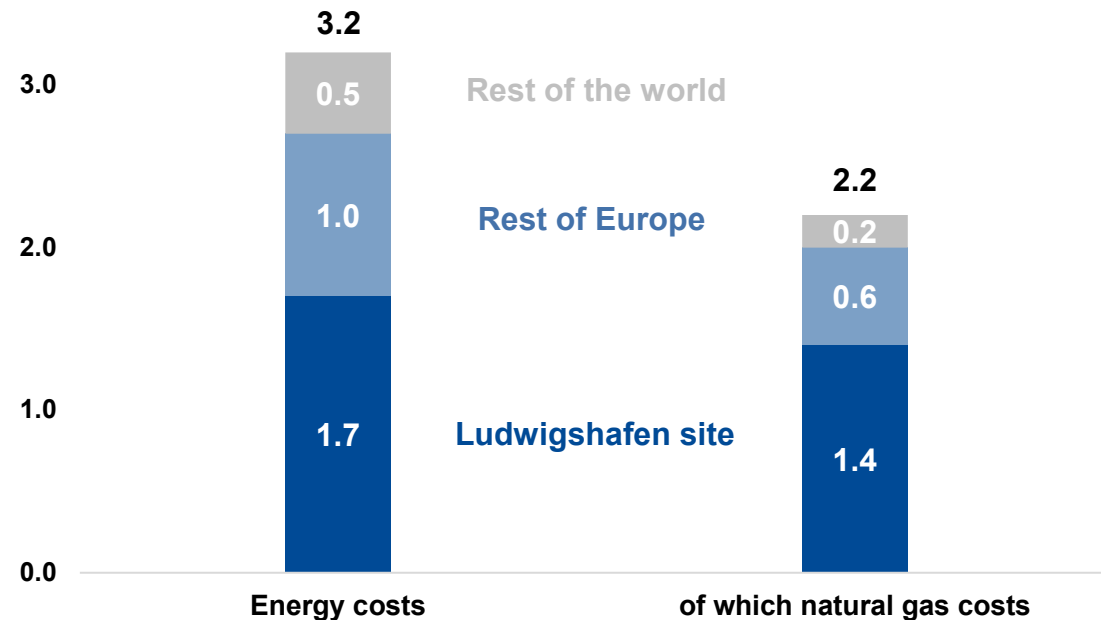
EBIT before special items of BASF Group  
Billion €



- In **2015**, Germany, Europe excluding Germany, and the other regions each contributed around one-third
- In **2021**, Europe including Germany contributed only one-third, while the other regions contributed two-thirds
- **2022:**
  - 1st half: Strongest ever half-year earnings
  - 2nd half: Sharp decline, especially in Germany, where earnings were negative

# In the full year 2022, BASF incurred €3.2 billion higher costs for energy globally

## Additional energy costs<sup>1</sup> 2022 vs. 2021 Billion €



## Full year 2022 compared with 2021:

- €3.2 billion higher energy costs globally
- €2.2 billion related to higher natural gas costs globally
- €2.0 billion additional costs for natural gas in Europe, despite ~33% lower gas consumption:
  - BASF's natural gas demand in Europe 2022: ~32 TWh versus ~48 TWh in 2021
- €1.4 billion higher natural gas costs at the Ludwigshafen site, despite ~35% lower gas consumption:
  - BASF's natural gas demand at the Ludwigshafen site 2022: ~24 TWh versus ~37 TWh in 2021



# Recent developments relating to Wintershall Dea AG

- **Recent developments in Russia**

- Wintershall Dea has been economically expropriated in Russia
- Wintershall Dea has practically no longer any possibility of exerting influence on its holdings in Russia

- **Wintershall Dea's decision to fully exit Russia**

- Continuing to operate in Russia is not tenable
- Therefore, Wintershall Dea intends to fully exit Russia in an orderly manner complying with all applicable legal obligations

- **Earnings and cash flow impact on BASF Group level**

- Non-cash-effective impairments amounted to €6.5 billion in 2022, of which €4.7 billion in Q4 2022, reducing net income from shareholdings accordingly
- Wintershall Dea transferred around €1 billion in dividends to BASF and thus made a strong contribution to the BASF Group's cash flow in 2022

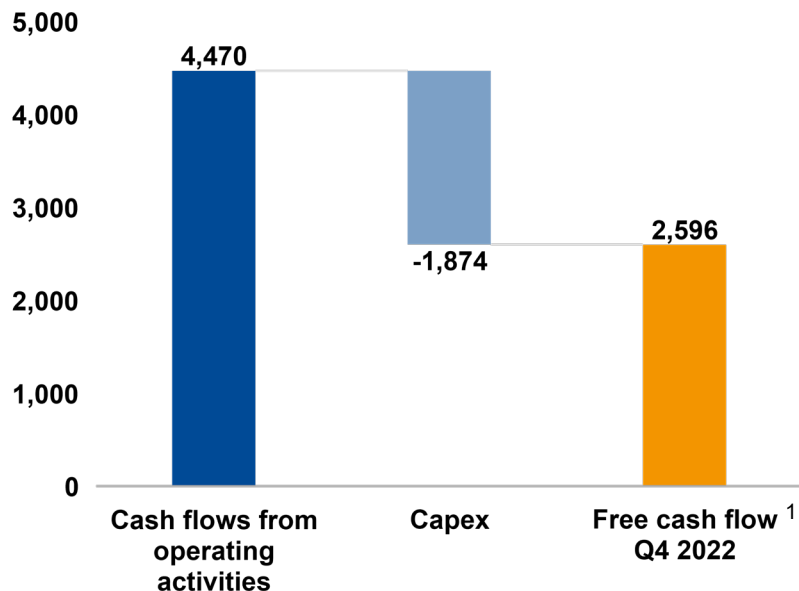
- **Monetization of Wintershall Dea**

- BASF is standing by its strategic goal of selling its share in Wintershall Dea

# Strong operating cash flow development in Q4 2022 lifted full-year free cash flow to more than €3.3 billion

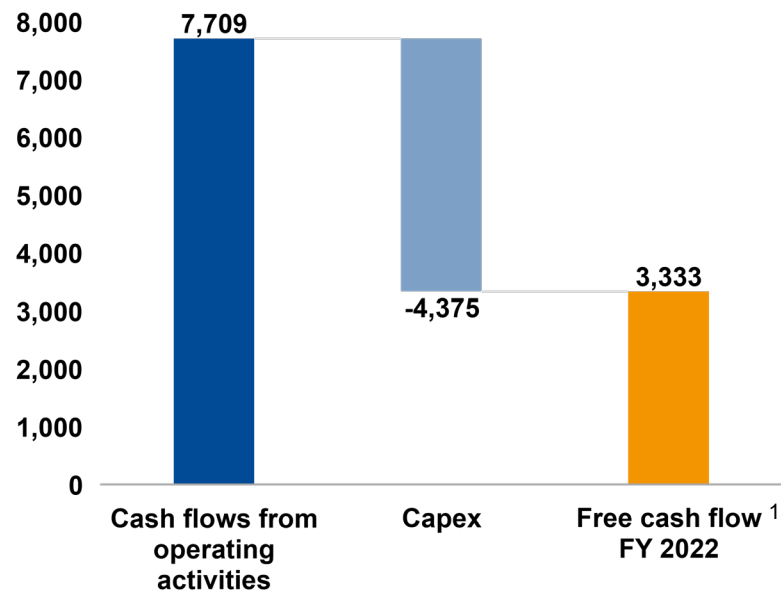
## Q4 2022

Million €



## FY 2022

Million €



## Q4 2022 vs. Q4 2021

- **Cash flows from operating activities** increased by €1.1 billion to €4.5 billion
- **Changes in net working capital** led to a cash inflow of €3.5 billion
- **Cash flows from investing activities** amounted to -€1.9 billion compared with -€692 million
- **Payments made for property, plant and equipment and intangible assets** rose by 26% to €1.9 billion
- **Free cash flow** increased by €749 million to €2.6 billion

<sup>1</sup> Free cash flow: cash flows from operating activities minus payments made for property, plant and equipment and intangible assets

# BASF Group 2022: Overview of financial and non-financial targets

	2022 target	2022 status
Grow sales volumes faster than global chemical production every year	>2.2%	-7.0%
Increase EBITDA before special items by 3% to 5% per year	+3-5%	-5.2%
Achieve a return on capital employed (ROCE) <sup>1</sup> considerably above the cost of capital percentage every year	>9%	10.0%
Increase the dividend per share every year based on a strong free cash flow	>€3.40	€3.40 <sup>4</sup>
Reduce our absolute CO <sub>2</sub> emissions <sup>2</sup> by 25% to 16.4 million metric tons by 2030 (baseline 2018) <sup>3</sup>	≤20.2 million metric tons	18.4 million metric tons

<sup>1</sup> Return on capital employed is a measure of the profitability of our operations. We calculate ROCE as the EBIT generated by the segments as a percentage of the average cost of capital basis.

<sup>2</sup> The goal includes scope 1 and scope 2 emissions. Other greenhouse gases are converted into CO<sub>2</sub> equivalents according to the Greenhouse Gas Protocol.

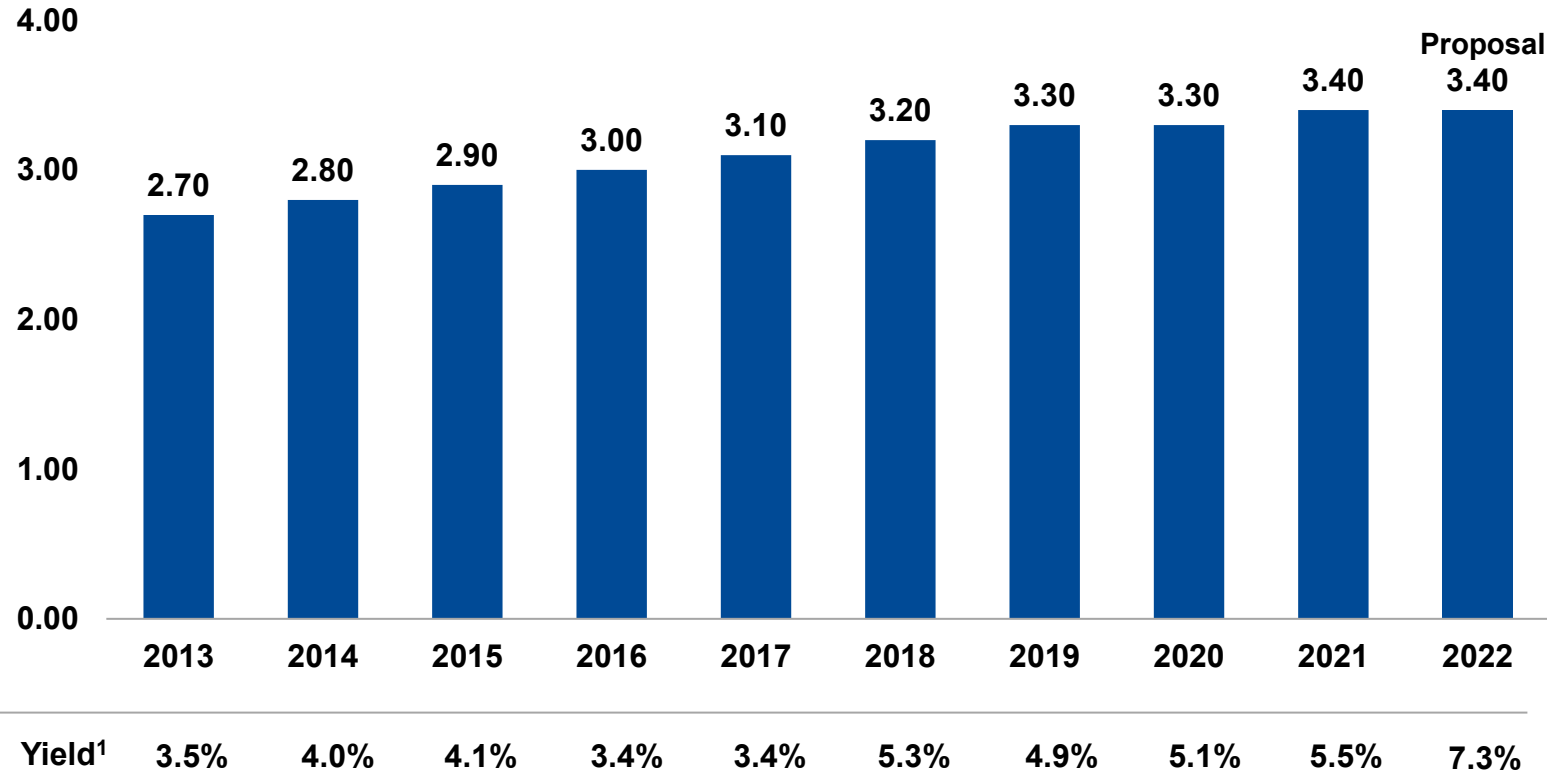
<sup>3</sup> 2030 target compared with 1990: 60% CO<sub>2</sub> reduction

<sup>4</sup> Dividend proposal to Annual Shareholders' Meeting

# Attractive shareholder return – also in challenging times

## Dividend per share

€



## Key facts 2022

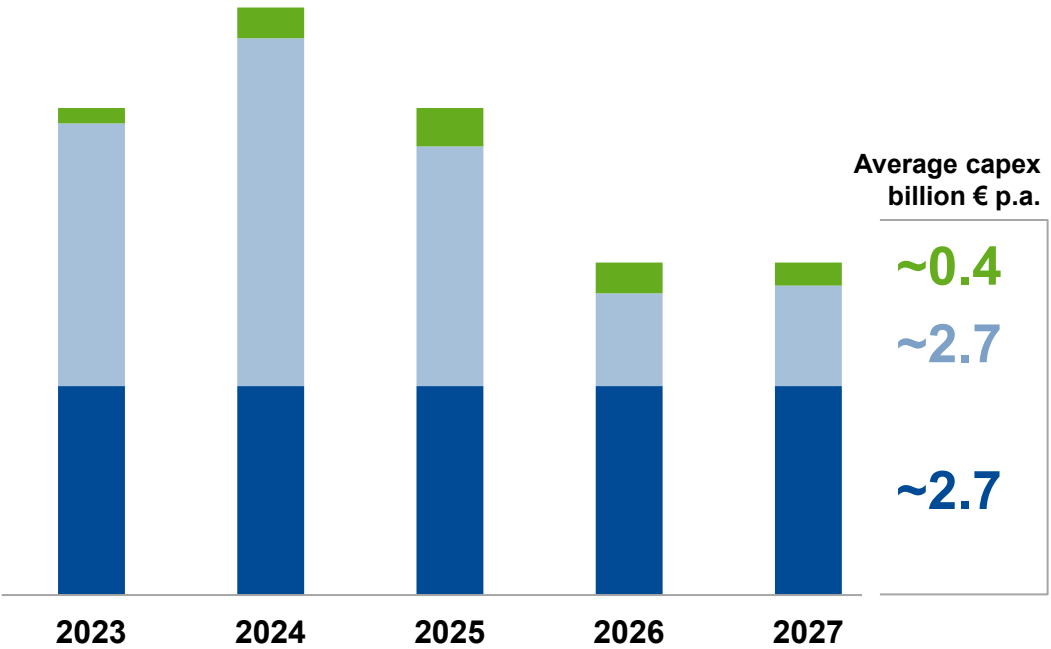
- Dividend proposal to Annual Shareholders' Meeting of €3.40 per share
- In total, we would pay out €3.0 billion<sup>2</sup>, which is fully covered by our free cash flow of €3.3 billion
- Dividend yield of 7.3% based on the share price of €46.39 at year end 2022

<sup>1</sup> Dividend yield based on share price at year end

<sup>2</sup> Based on the 893,854,929 shares outstanding as of December 31, 2022

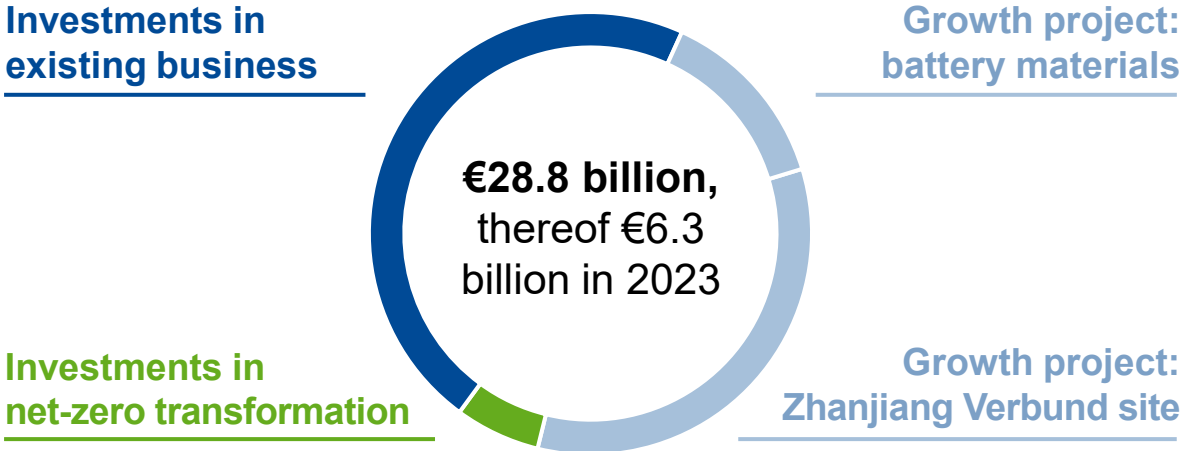
# Capex to support future organic growth will peak between 2023 and 2025

Capex budget by type of investment  
Billion €, 2023–2027



- Investments in net-zero transformation
- Growth projects: Zhanjiang Verbund site and battery materials
- Investments in existing business

Capex budget by type of investment  
Billion €, 2023–2027



# Outlook 2023 for BASF Group

## Outlook 2023

Sales	€84 billion – €87 billion
EBIT before special items	€4.8 billion – €5.4 billion
ROCE	7.2% – 8.0%
CO <sub>2</sub> emissions	18.1 – 19.1 million metric tons

## Underlying assumptions (prior-year figures in parentheses)

- Growth in gross domestic product: 1.6% (3.0%)
- Growth in industrial production: 1.8% (2.5%)
- Growth in chemical production: 2.0% (2.2%)
- Average euro/dollar exchange rate: \$1.05 per euro (\$1.05 per euro)
- Average annual oil price (Brent crude): \$90 per barrel (\$101 per barrel)

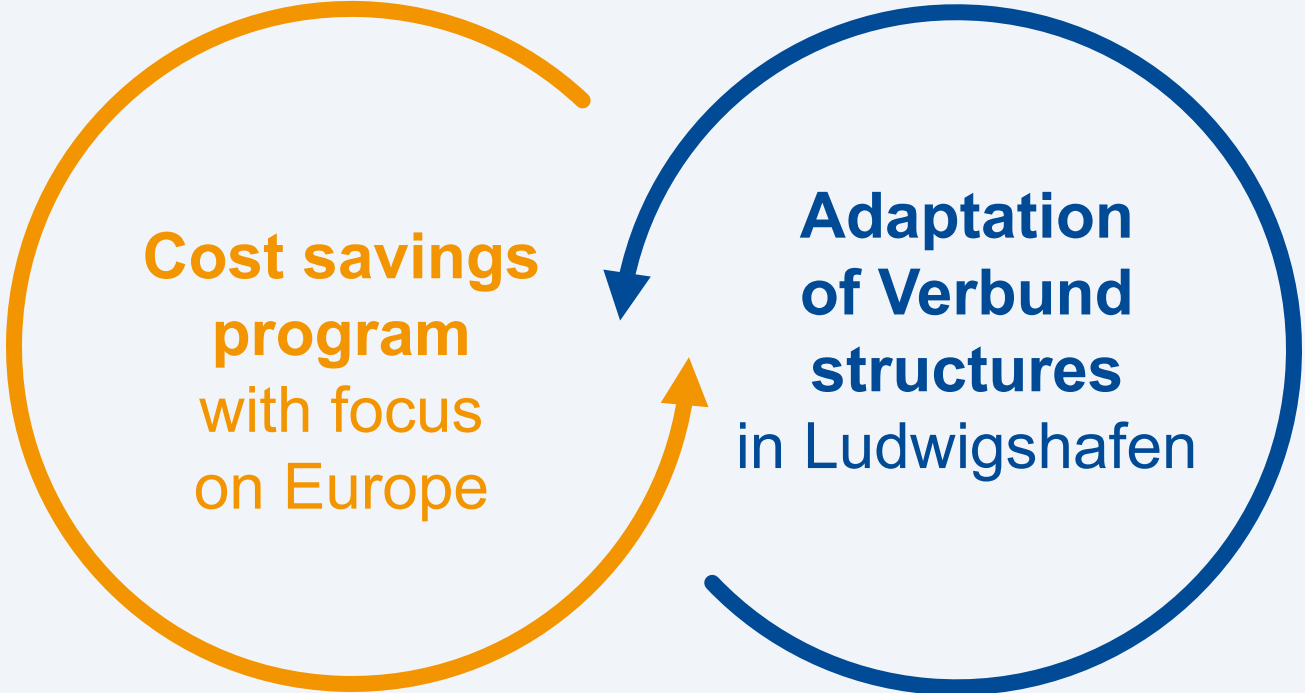


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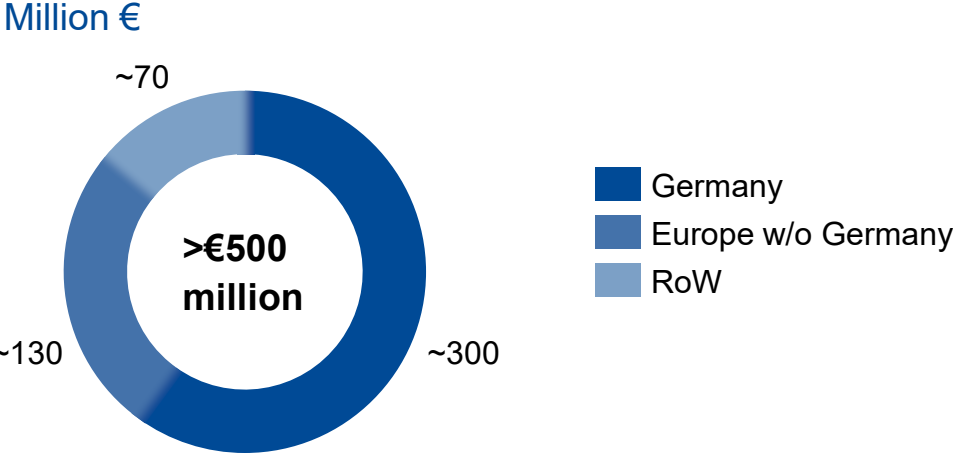
# Measures to increase competitiveness



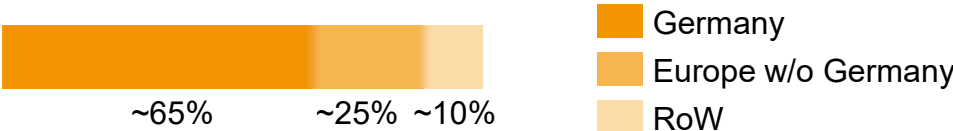


# Cost savings program with focus on Europe successfully started

## Expected cost savings by the end of 2024

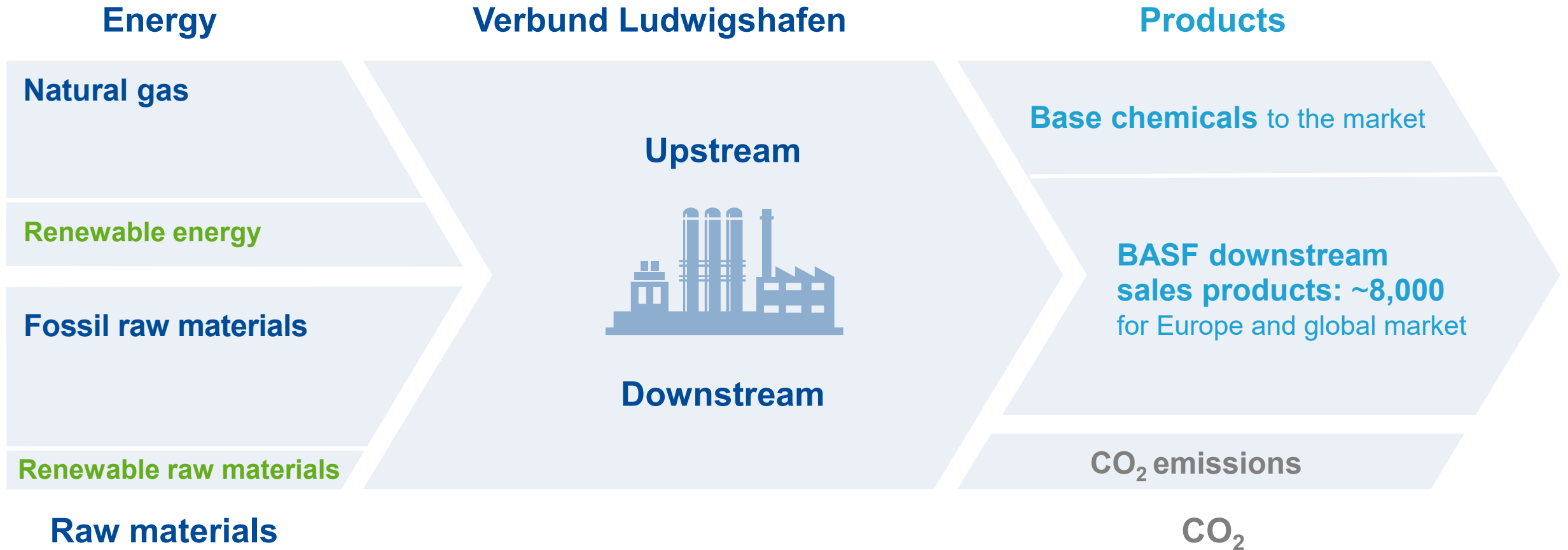


## Expected distribution of affected positions



- **Annual cost savings of more than €500 million** expected to be achieved in non-production areas by the end of 2024; roughly half of the savings to be realized at the Ludwigshafen site
- Key areas for cost savings are service, operating, research & development divisions as well as the corporate center; the focus is on Europe, particularly Germany
- **Defined measures include:**
  - consistent bundling of services in hubs
  - simplified structures in divisional management
  - phase-out and rightsizing of services and activities
  - re-focusing and efficiency increase of R&D activities
- Net effect on **around 2,600 positions** expected globally; this figure includes new positions to be created, in particular in hubs
- **Expected program costs of around €400 million**, including severance packages, training and qualification measures as well as relocation costs
- Employee representatives in all relevant bodies have been and will continue to be involved

# Verbund Site Ludwigshafen – Today



# Thorough analysis of Verbund structures in Ludwigshafen over the last months

Analyzed factors such as

- **competitiveness**
- **production cost**
- **energy and CO<sub>2</sub> intensity**
- **contractual obligations**
- potential impacts on the **workforce**

Identified critical structures and interdependencies between key value chains

**Increase competitiveness** while ensuring continuity of profitable businesses

# Stepwise approach streamlines ammonia value chain while limiting impact on profitable downstream businesses

## Rationale

- Reduce exposure to low-margin **caprolactam export market** and **rightsize caprolactam capacity** to core European demand
- Ensure **caprolactam supply to European customers** from BASF's plant in Antwerp, Belgium

## Measures and results

- Closure of **caprolactam plant** in Ludwigshafen; adaptation of capacities of precursors and by-products with closure of one **ammonia plant** and **fertilizer facilities**
- Reshaping of **polyamide 6 asset setup** in Ludwigshafen to strengthen this core business of BASF
- Overall **significant fixed cost reduction** and streamlining of asset base; **reduced dependency** on **natural gas** and **lower CO<sub>2</sub> emissions** from operations



# Reduction in production scope for adipic acid safeguards profitable captive offtake while enabling further asset optimization

## Rationale

- Reduce exposure to low-margin adipic acid merchant market; focus on profitable business and enhance value creation in the value chain via conversion to polyamide 6.6
- Respond to changed European supply/demand situation due to weaker demand development for adipic acid in Europe, Middle East, Africa and significant capacity build-up in Asia

## Measures and results

- Reduction of adipic acid production capacity in Ludwigshafen will improve overall cost efficiency; the plant setup for adipic acid in Chalampé, France, will remain unchanged
- Polyamide 6.6 capacities in Ludwigshafen will remain unchanged
- Closure of cyclohexanol and cyclohexanone as well as soda ash plants in Ludwigshafen
- Significant reduction of energy demand and correspondingly lower CO<sub>2</sub> emissions – adipic acid is one of the major energy consumers in Ludwigshafen



# Closure of TDI plant addresses sharp input cost increase and lower market growth

## Rationale

- **Weak demand development** for TDI<sup>1</sup> in Europe, Middle East, Africa over the past years
- **Energy cost environment** in Europe has further **worsened the situation** for TDI production in Ludwigshafen
- TDI plant in Ludwigshafen has not met BASF's expectations in terms of **economic performance**

## Measures and results

- **Closure of TDI plant** including precursor plants for **TDA<sup>1</sup> and DNT<sup>1</sup>**, resulting in significant fixed cost reduction and improved cash-contribution
- **Commitment to European TDI customers: Continuous reliable supply is ensured from BASF's global network**; overall higher utilization rates of competitive TDI assets in Asia and North America
- **Reduced dependency** on **natural gas** and **lower CO<sub>2</sub> emissions** from operations



# Planned measures structurally improve the competitiveness of BASF's Ludwigshafen site and contribute to net-zero target

Affected production assets

10% of the asset replacement value at the site

Fixed cost reduction

>€200 million per year

Natural gas demand

-4.8 TWh/a (~15% of 2021)

Expected affected positions

~700

Power demand

-0.7 TWh/a (~11% of 2021)

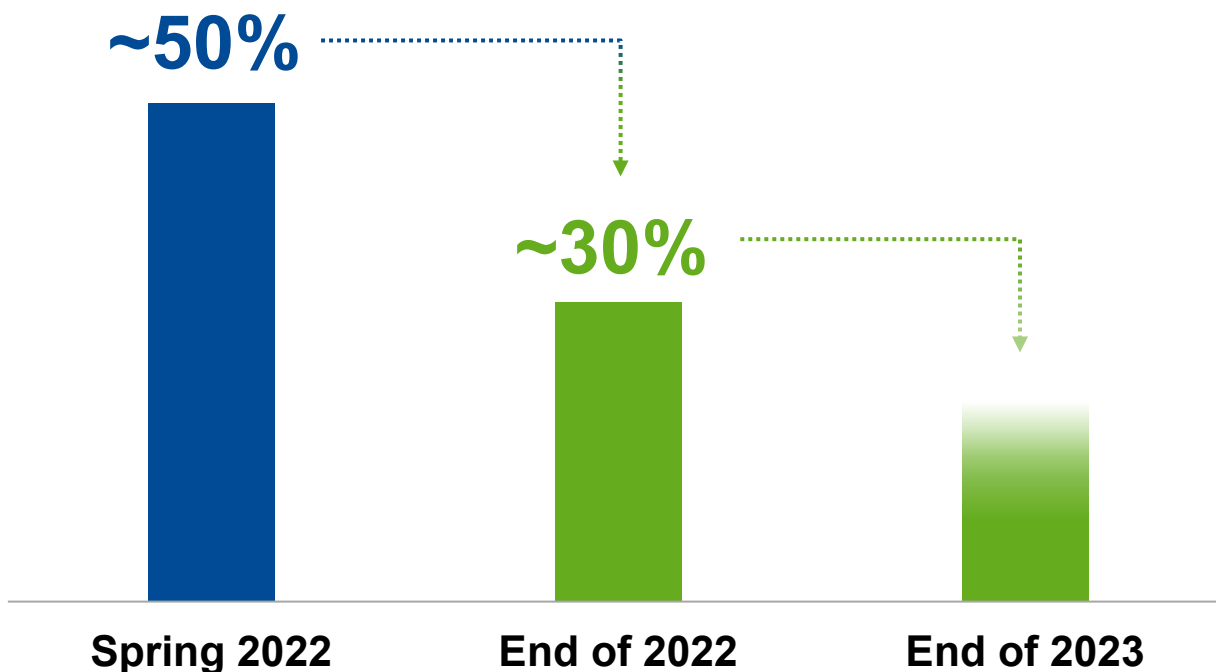
CO<sub>2</sub> emissions<sup>1</sup>

-0.9 Mt/a (~12% of 2021)

<sup>1</sup> Expected scope 1 and 2 emission reduction for BASF SE

# Technical optimizations and substitution of natural gas significantly lower threshold at which the Ludwigshafen site must be shut down

Gas supply threshold in %  
based on average consumption in 2021



## Measures implemented in 2022

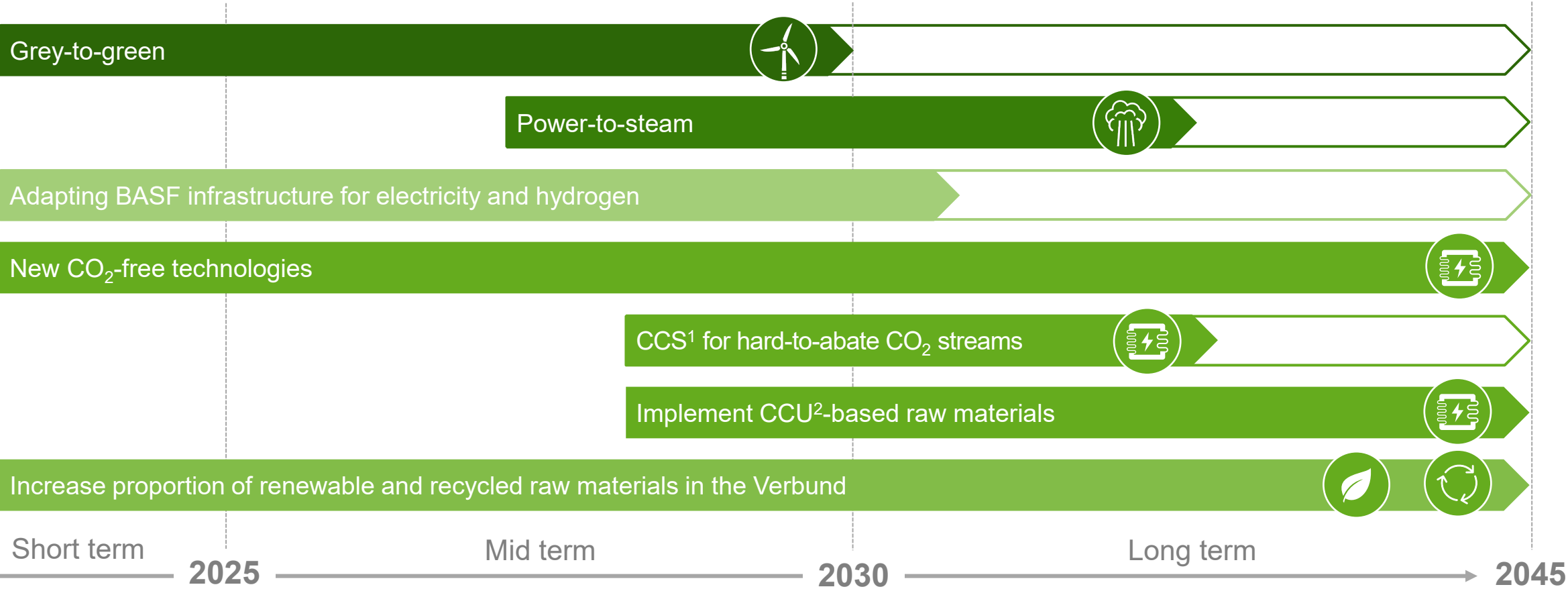
- Optimized steering of the Production Verbund, e.g., using the by-product ethane from our steam crackers to feed our acetylene plant
- Increased imports of base chemicals, e.g., ammonia, butanediol; switch to power imports
- Natural gas substituted by fuel oil in steam boilers
- Recommissioning of section of the synthesis gas plant that is independent of natural gas

## Measures to be implemented by end of 2023

- Conversion of gas turbines in combined heat and power plants to allow operation with either gas or fuel oil (bivalent operation)

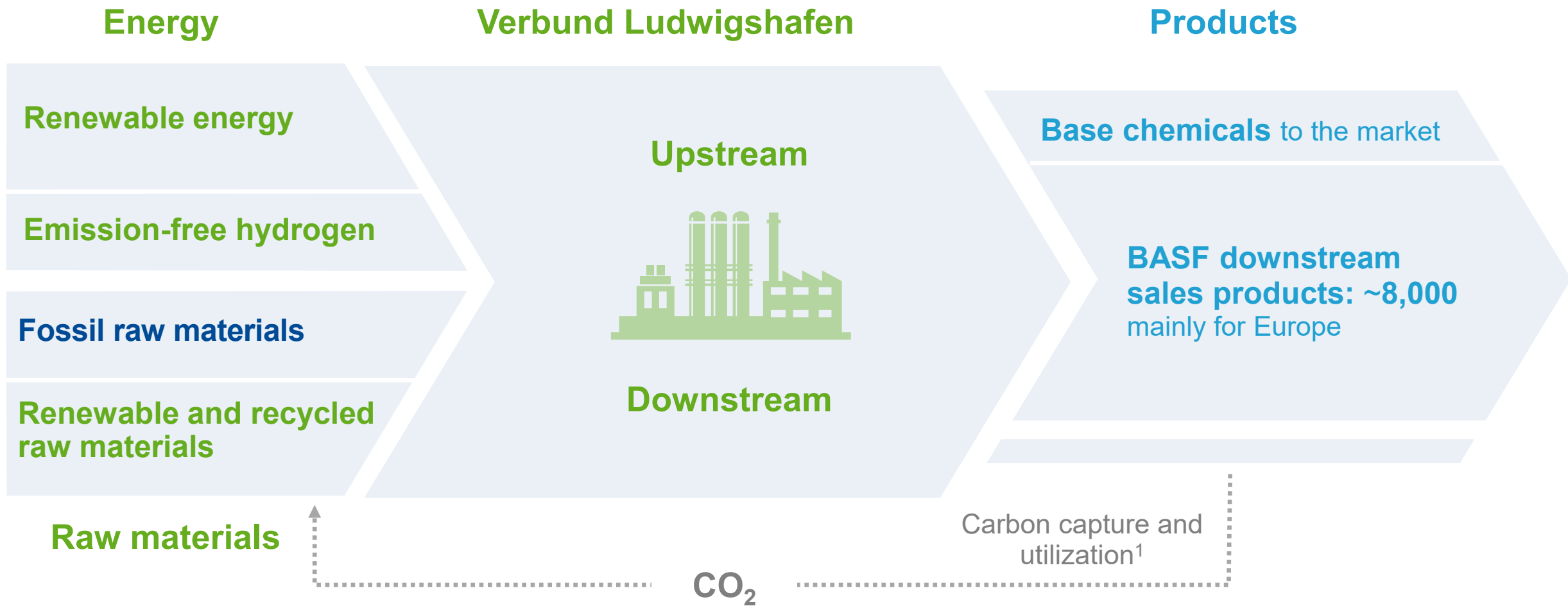


# Key pillars to transform the Ludwigshafen Verbund site to net zero by 2045



<sup>1</sup> Carbon capture and storage  
<sup>2</sup> Carbon capture and utilization

# Verbund Site Ludwigshafen – Vision for the future



# Measures to increase competitiveness



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# What BASF stands for

- Competitive advantages through **flexible Verbund concept** for integrated production
- Strategic focus on **local production for local markets** and on **high-growth market segments**, e.g., battery materials
- Industry leader in **shaping the transformation to net zero CO<sub>2</sub> emissions** with an ambitious carbon management program
- **Powerful innovation** across a broad range of technologies to provide solutions for various customer industries and to increase our productivity
- Diverse team of **committed, capable and creative employees**
- Long-term shareholder **value creation** and **attractive dividend**



We create  
chemistry  
for a  
sustainable  
future



We create chemistry