

Agenda

Trends in the chemicals market

Chemicals segment within BASF

Chemicals: At the core of the Verbund

Chemicals support growth of BASF

Capital expenditures drive profit growth

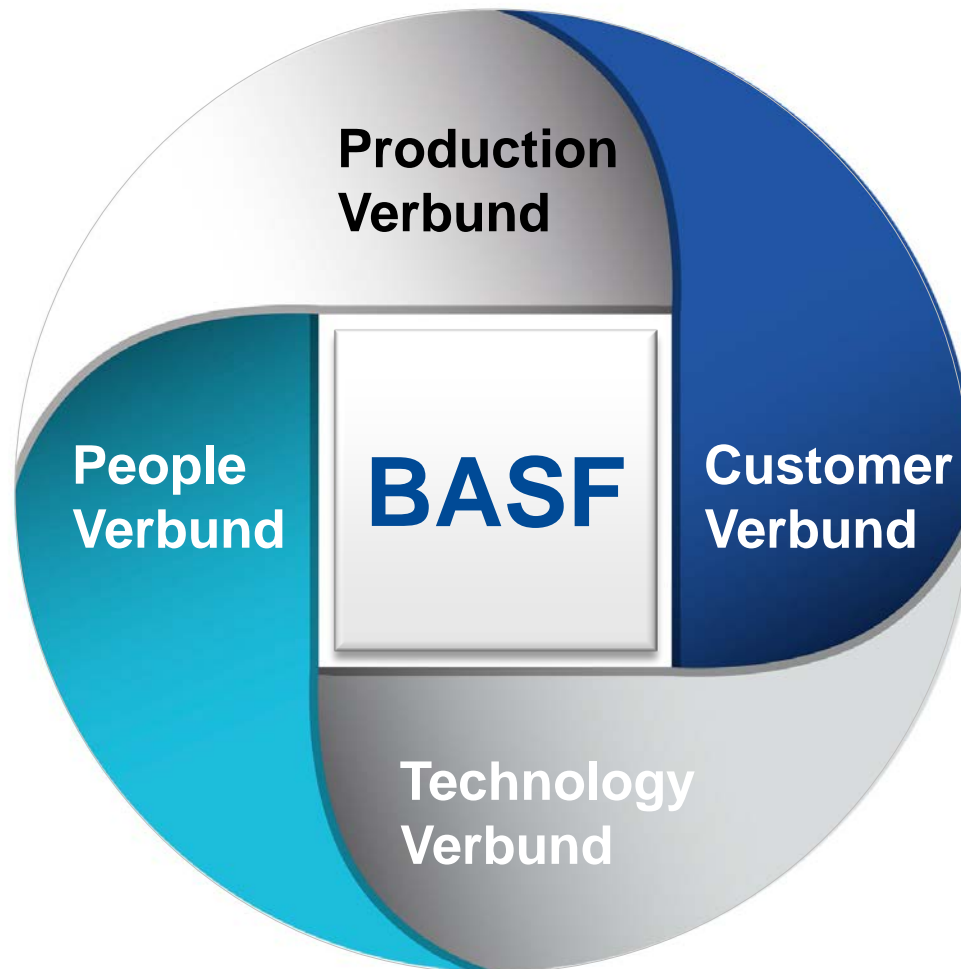
Shale Gas – An opportunity

Chemicals 2020



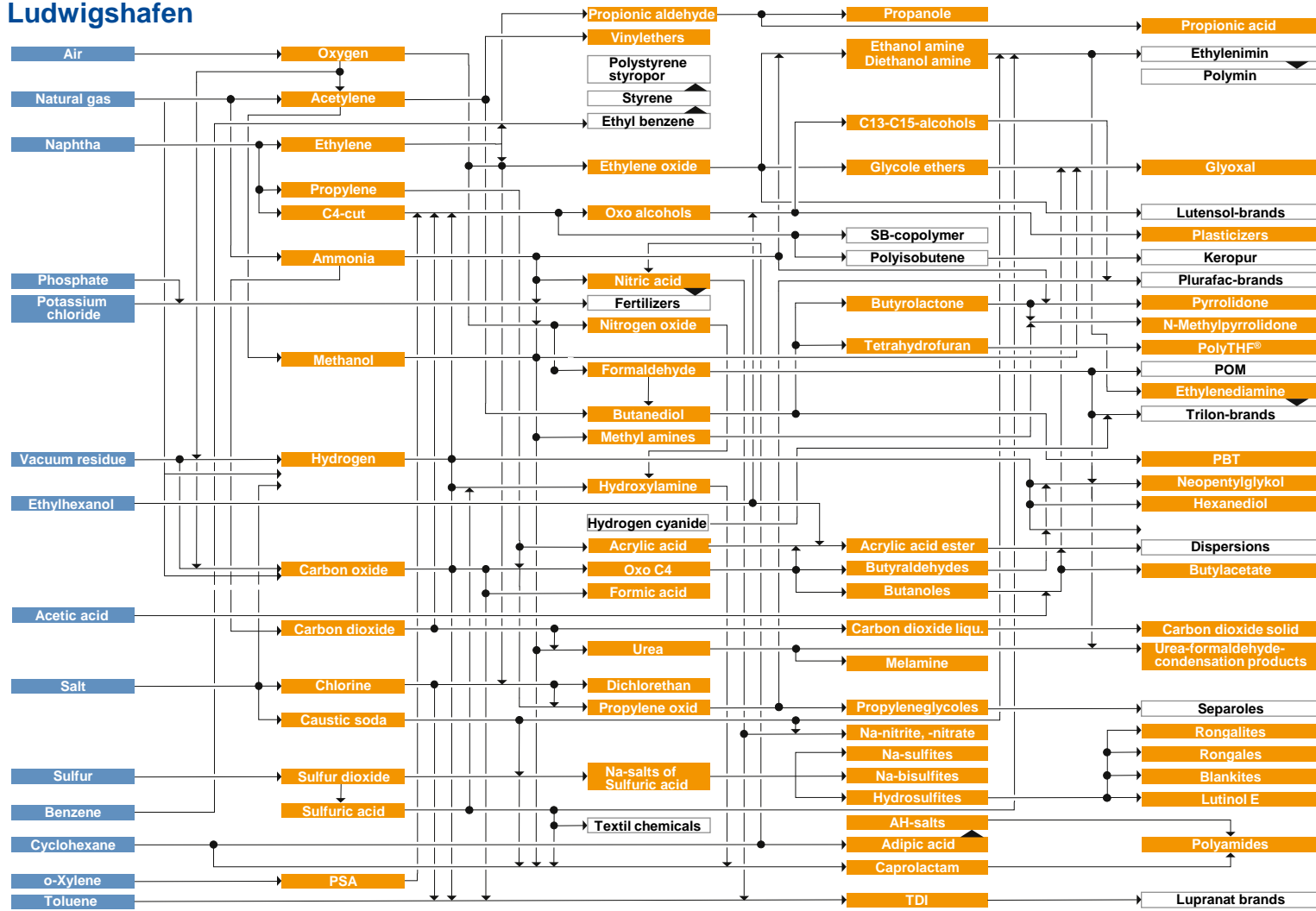
We add value as one company

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Verbund is in our DNA and hard to copy!

Ludwigshafen



- Raw materials
- Chemicals Segment

Ludwigshafen – the role model Verbund site



2,000 buildings

250 production
assets**

2,800 km pipeline

2,100 trucks per day

230 km rail tracks

~400 rail cars
per day

~20 barges
per day

Chemicals global asset footprint: Verbund and major production sites



Verbund generates >€1 billion p.a. global cost savings*, supports sustainability



Energy Verbund
>€300 million
annual cost savings



Logistics Verbund
>€600 million
annual cost savings



Infrastructure Verbund
>€100 million
annual cost savings

Global reduction in carbon emissions of 6.1 million metric tons/a and reduction of waste

Example Ludwigshafen:
avoidance of 7 million metric tons of freight/a
= 280,000 fewer truckloads

Shared use of on-site facilities:
fire department, security, waste water treatment and analytics

Verbund means efficiency and also flexibility – if steered intelligently



Verbund simulator enables

- Optimized operations
- Efficient utilization of assets
- Management of value chains

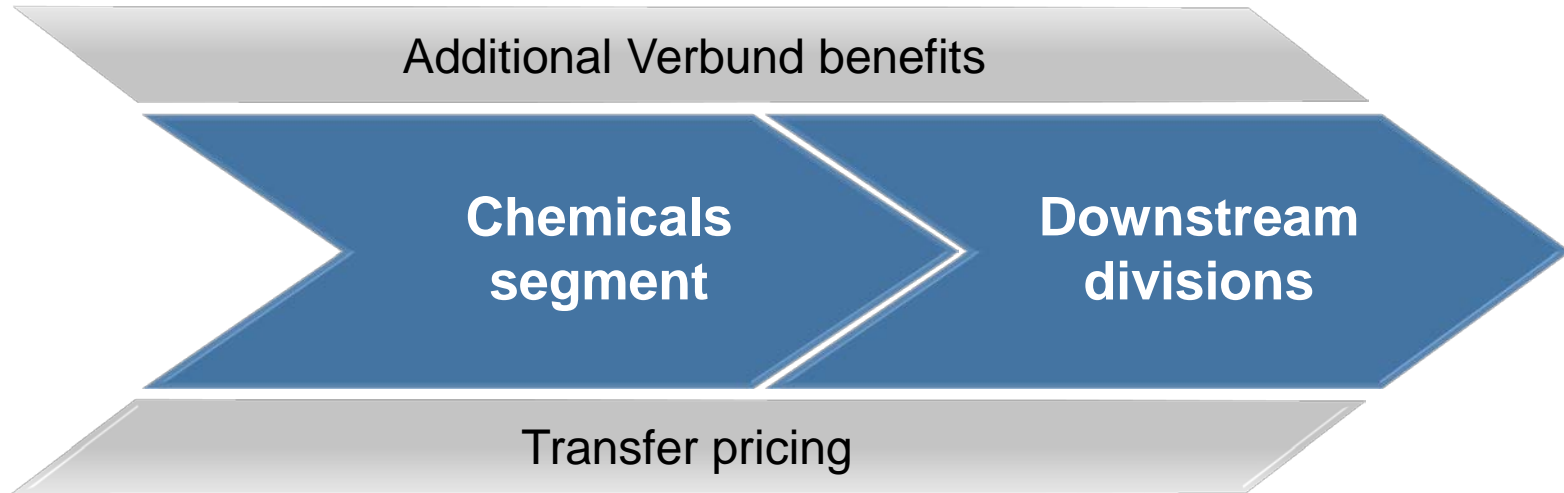
Verbund proved flexible in 2008 / 2009 crisis

- Capacity reductions
- Flexible placement of people
- Retained profitability
- Flying start out of crisis

Verbund does allow for portfolio changes

- e.g. fertilizers, styrenics

Chemicals is at the heart of the BASF Production Verbund



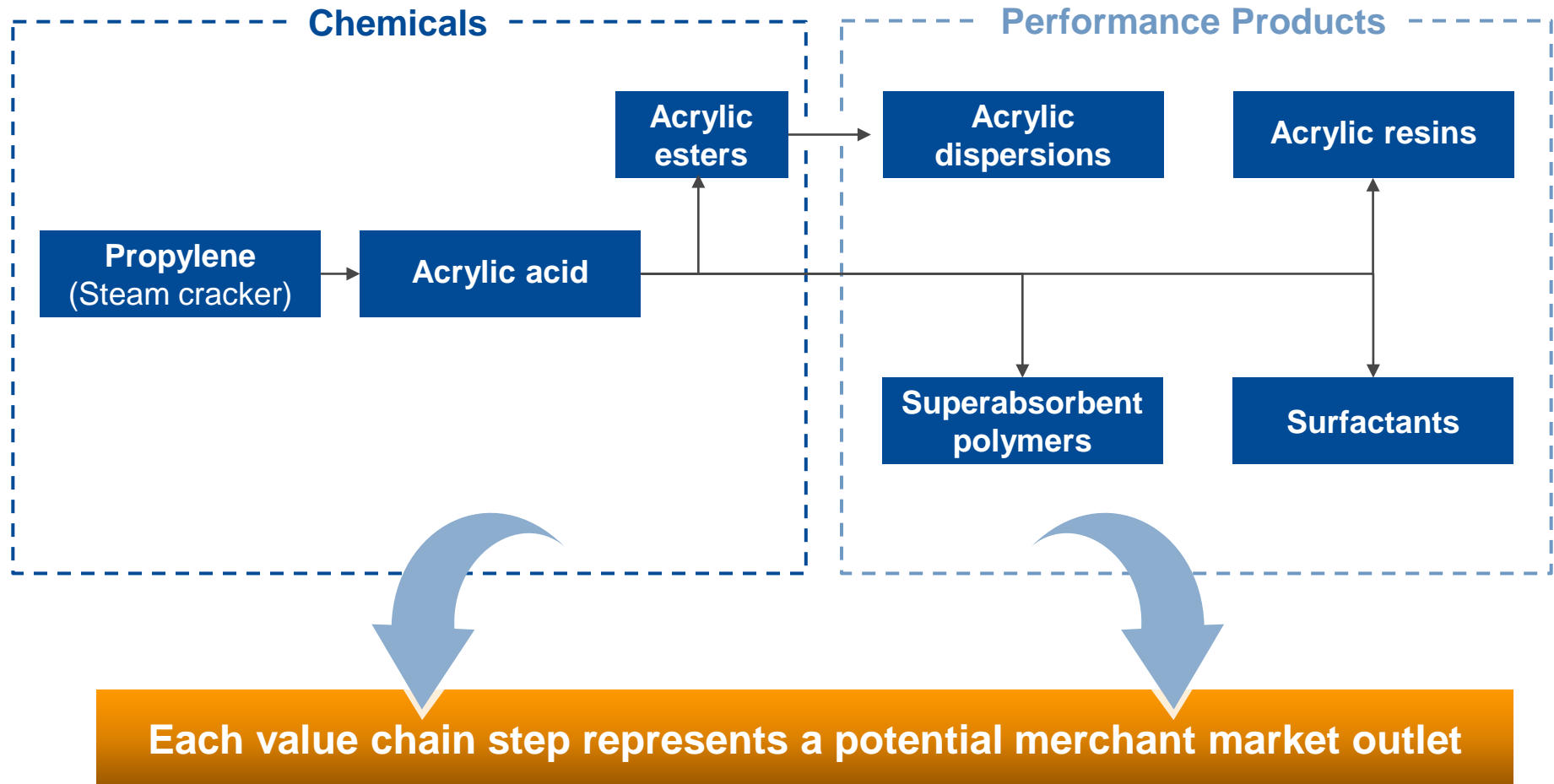
Additional Verbund benefits

- Flexible planning along value chains
- High security of supply, low logistics costs, no sales and sourcing costs
- Joint quality management
- Joint engineering and process development
- Cross-functional knowledge exchange
- Additional capacity at Verbund sites dilutes fixed costs

Philosophy of transfer pricing

- Safe and flexible supply at competitive prices
- Transfer prices linked to market prices
- No cross-subsidizing
- Value driven management in all steps of the value chain

Case study acrylic acid: Value chain contributes cash flow of approx. €1 billion*



Case study acrylic acid: Leveraging the BASF Technology Verbund



Focused R&D to continuously improve acrylic acid process

- Highly selective and efficient process catalysts
- Proprietary technology for new process
 - Higher yield
 - Lower energy consumption
 - Lower investment costs

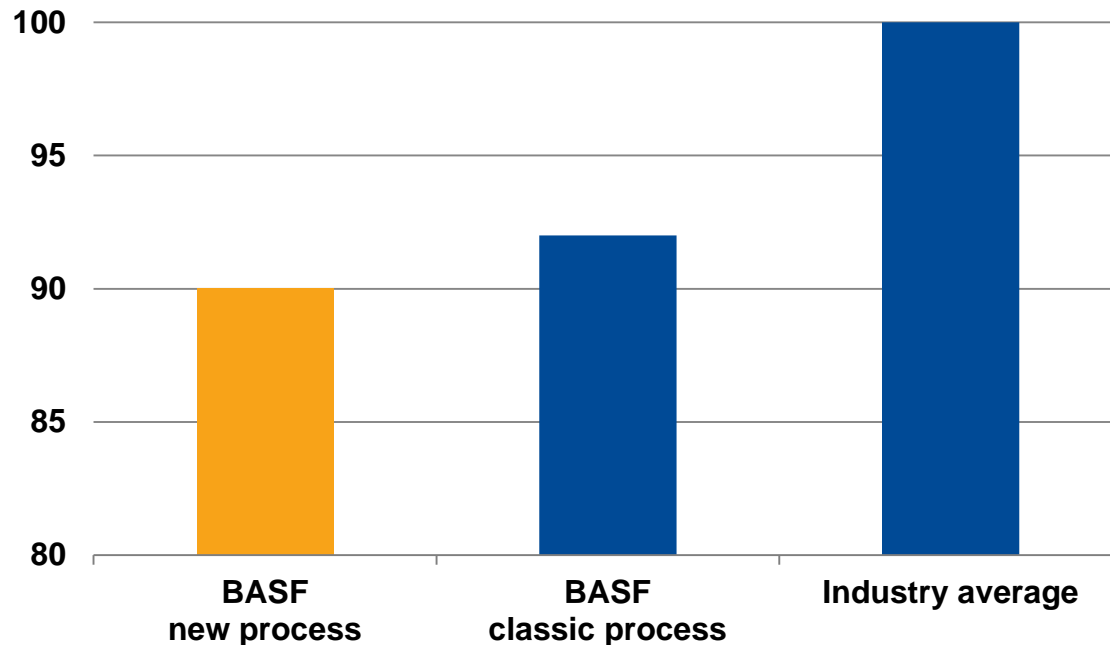
In addition, four radically new processes being investigated in research

- One based on renewable raw materials

Case study acrylic acid: Leading technology strengthens profitability

Acrylic acid production technology benchmark

Industry average costs = 100; normalized



BASF with best-in-class acrylic acid process

Continuous productivity improvements

- Smart production increase by run-time extension and higher throughput
- All production sites contribute to innovation and improvement ideas
- Quick transfer around the world ensured

Case study acetylene value chain: cash flow of approx. €500 million*

