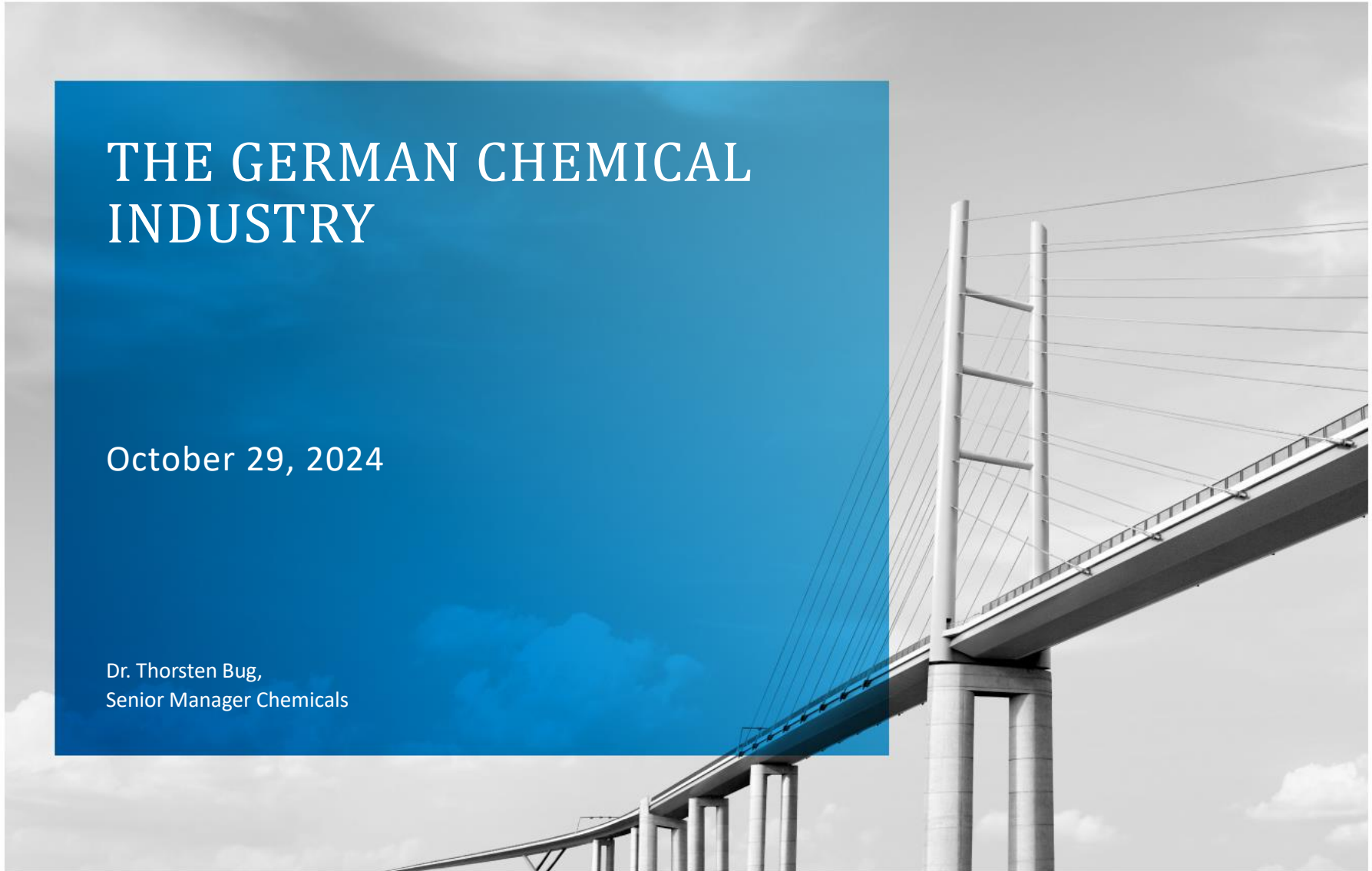


# THE GERMAN CHEMICAL INDUSTRY

October 29, 2024

Dr. Thorsten Bug,  
Senior Manager Chemicals



# Agenda

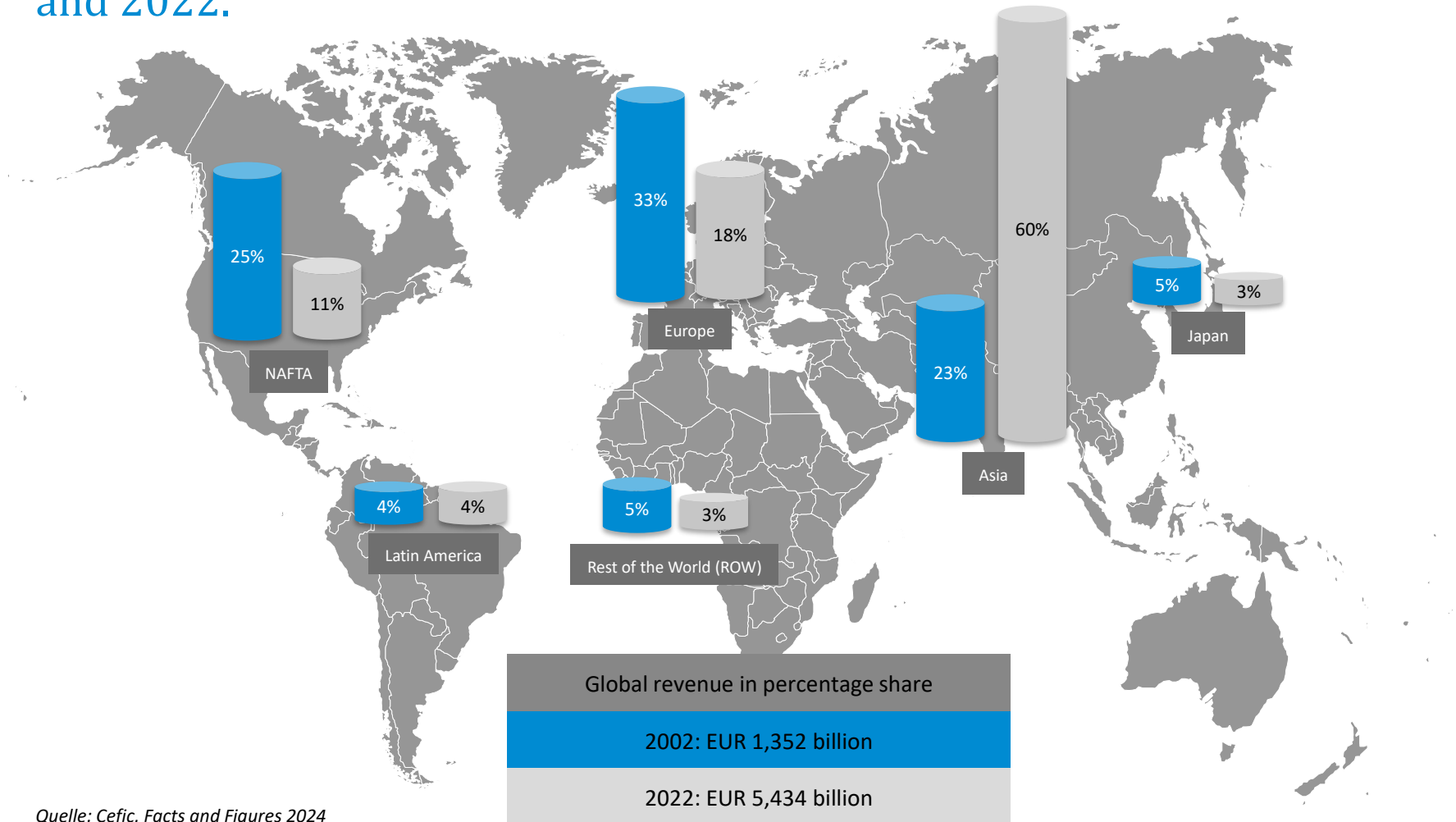
1. **The Chemical Industry Globally**
2. The German Chemical Industry
3. Opportunities for Chemicals Producers in Germany

*Main sources:*

- *Cefic: The European Chemical Industry Council, Brussels, [www.cefic.org](http://www.cefic.org)*
- *Destatis: Statistisches Bundesamt (engl.: Federal Statistical Office), Wiesbaden, [www.destatis.de](http://www.destatis.de)*
- *VCI: Verband der chemischen Industrie (engl.: German Chemical Industry Association), Frankfurt/Main, [www.vci.de](http://www.vci.de)*

# Global chemical revenue

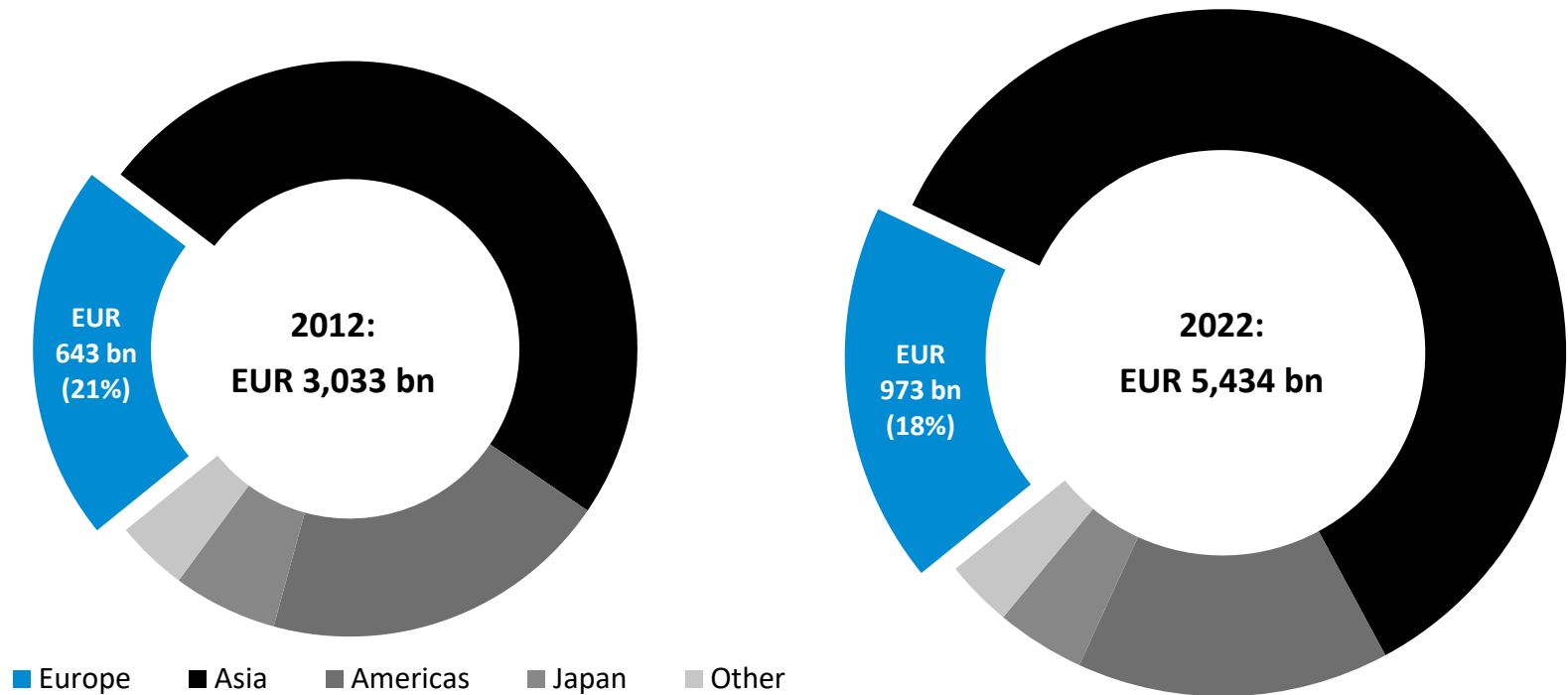
With average annual growth of 7.2% globally, the market shares of the industrialized regions have increasingly shifted to Asia between 2002 and 2022.



Quelle: Cefic, Facts and Figures 2024

# Global Chemical Revenue

Despite the Asian market growth in the period 2012-2022, Europe continues to be a relevant chemicals market with almost 1 tn in sales.

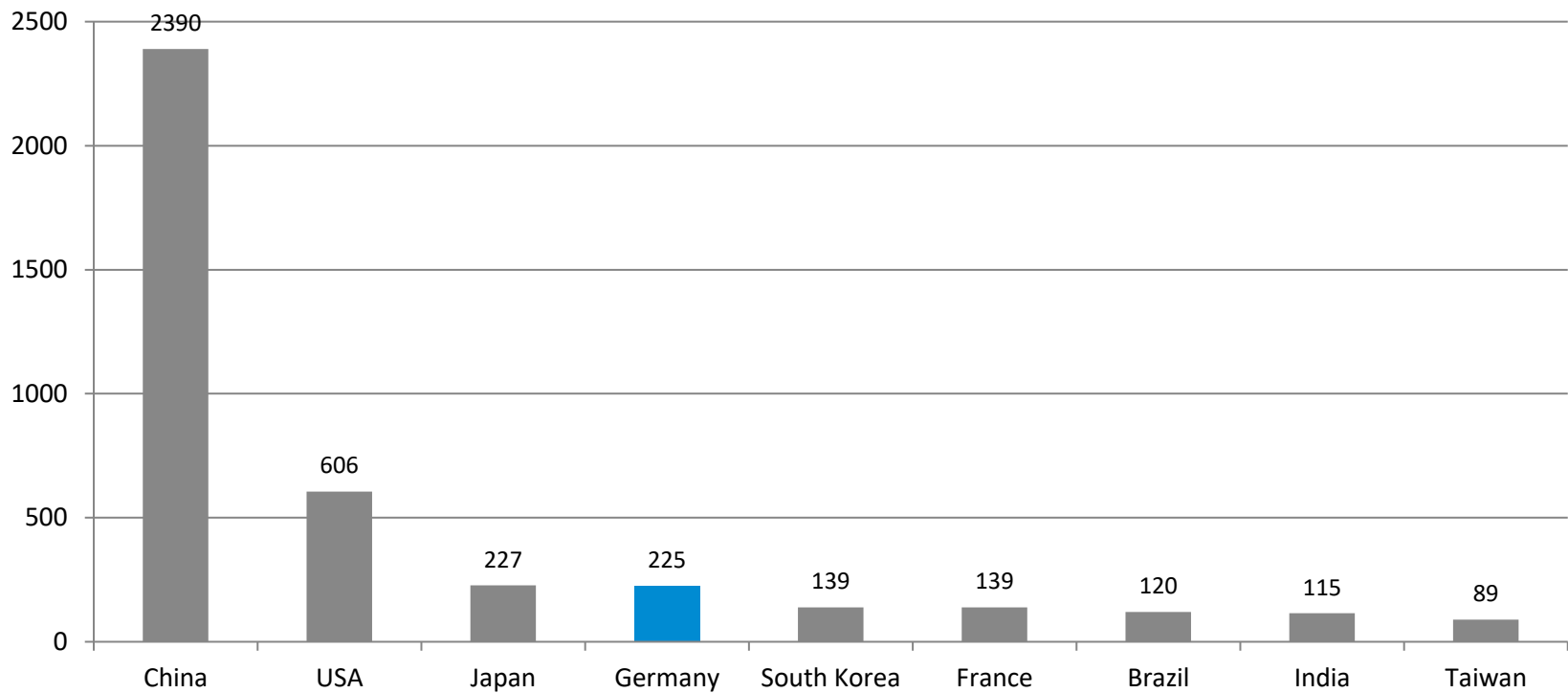


Quelle: Cefic, Facts and Figures 2024

# Global Chemical Revenue

Germany is the world's fourth largest chemical market, being surpassed only by China, the US and Japan in terms of revenues.

## Chemical Revenue in EUR billion, 2022

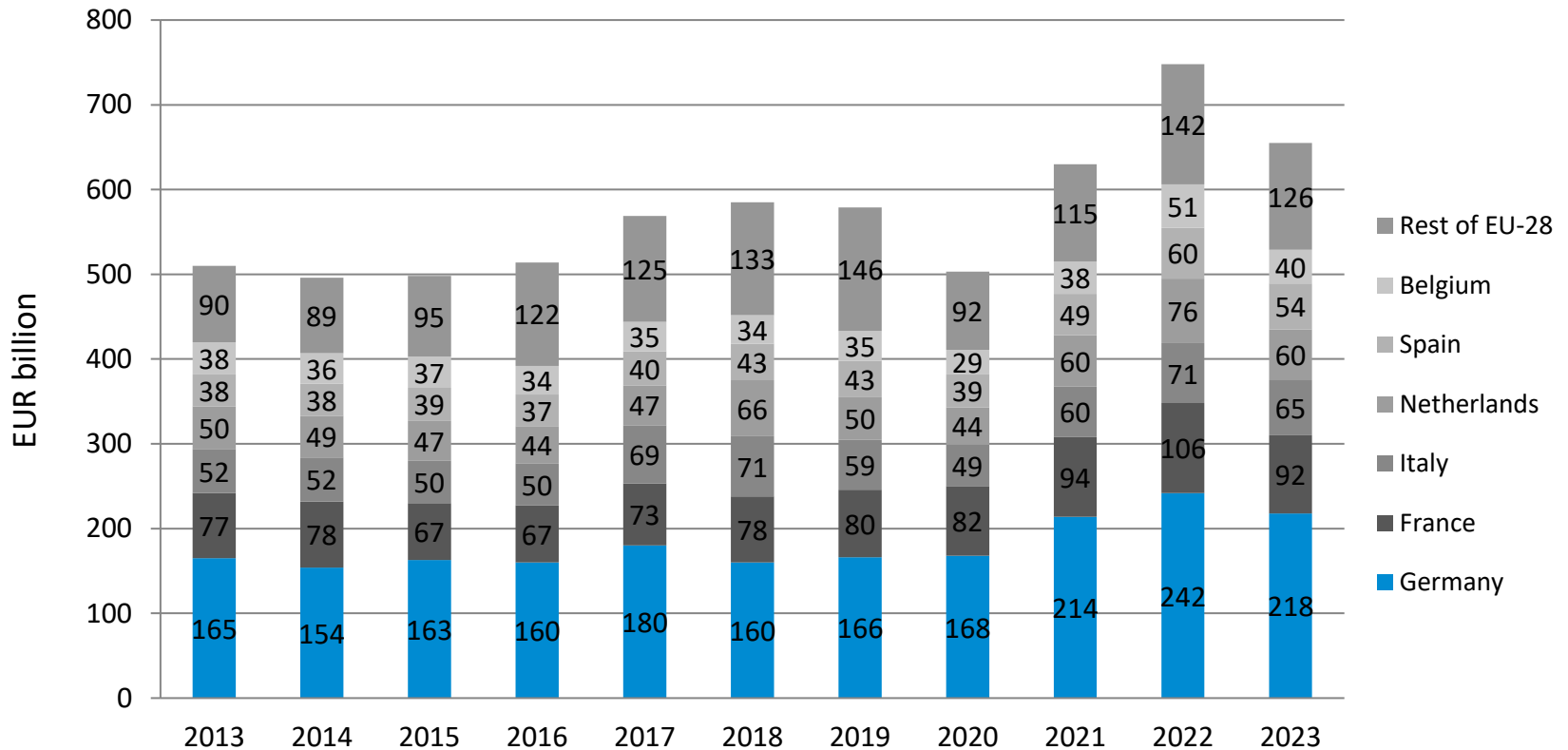


Source: Cefic Chemdelta International 2024

# European Revenues

With a share of 33% in 2023, the German chemical industry has consolidated its leading role within the EU during the recent years.

European (EU-28) Chemical Industry Revenues in EUR billion, 2013–2023



Quelle: VCI, *Chemiewirtschaft in Zahlen 2024* (Table 59b)

# Agenda

1. The Chemical Industry Globally
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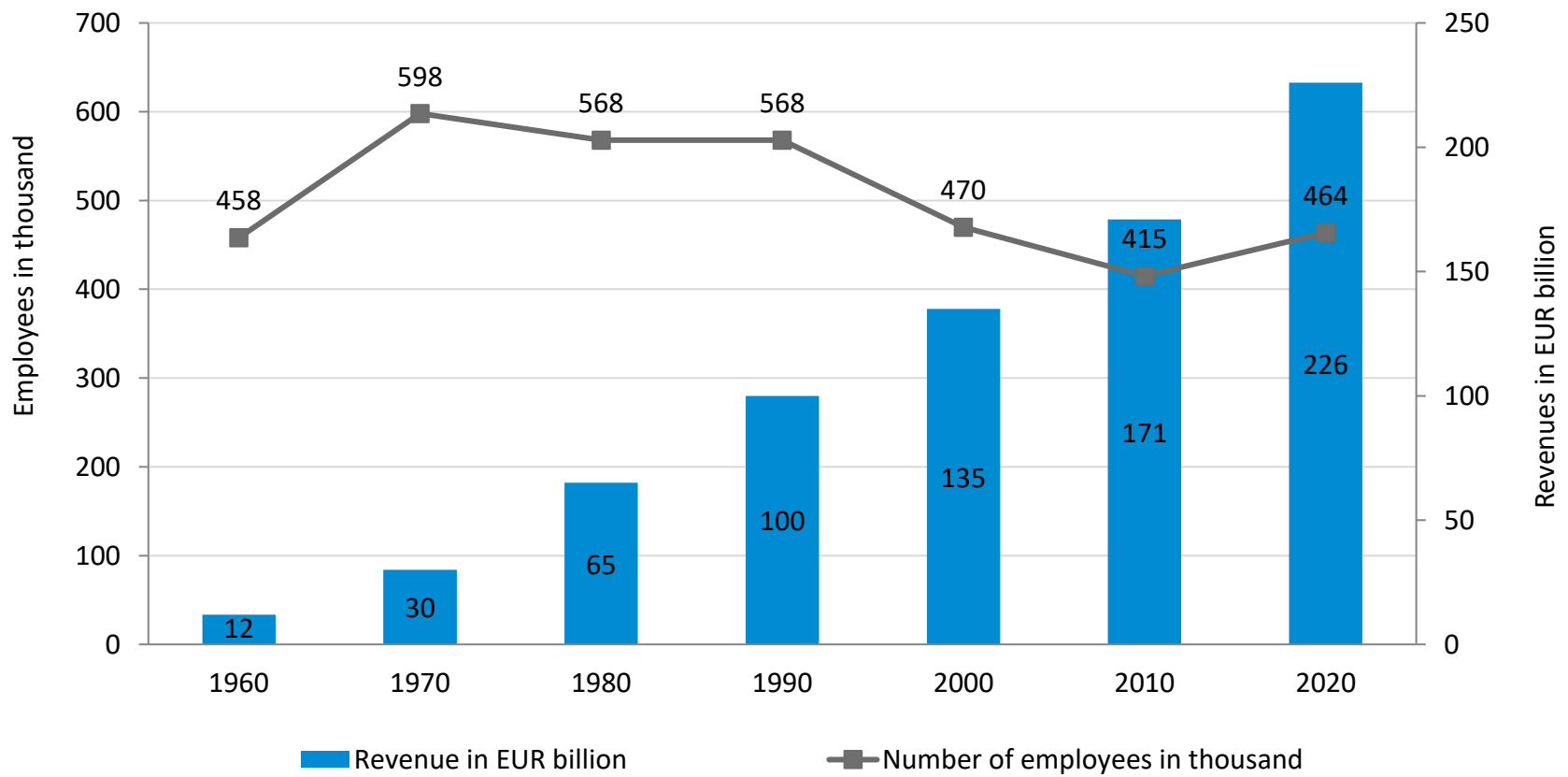
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# The History of the German Chemical Industry

Within 60 years, revenues increased by a nominal 5.0 % (real 2.7%) on average a year, while the number of employees has remained constant.

## Revenues and Number of Employees of the German Chemical and Pharmaceutical Industry, 1960-2020



Quelle: VCI, *Chemiewirtschaft in Zahlen 2021*

Details: 1960 without Saarland. From 1964 on including West-Berlin; 1970, 1995, and 2008 new Classification. From 1991 Germany reunified.

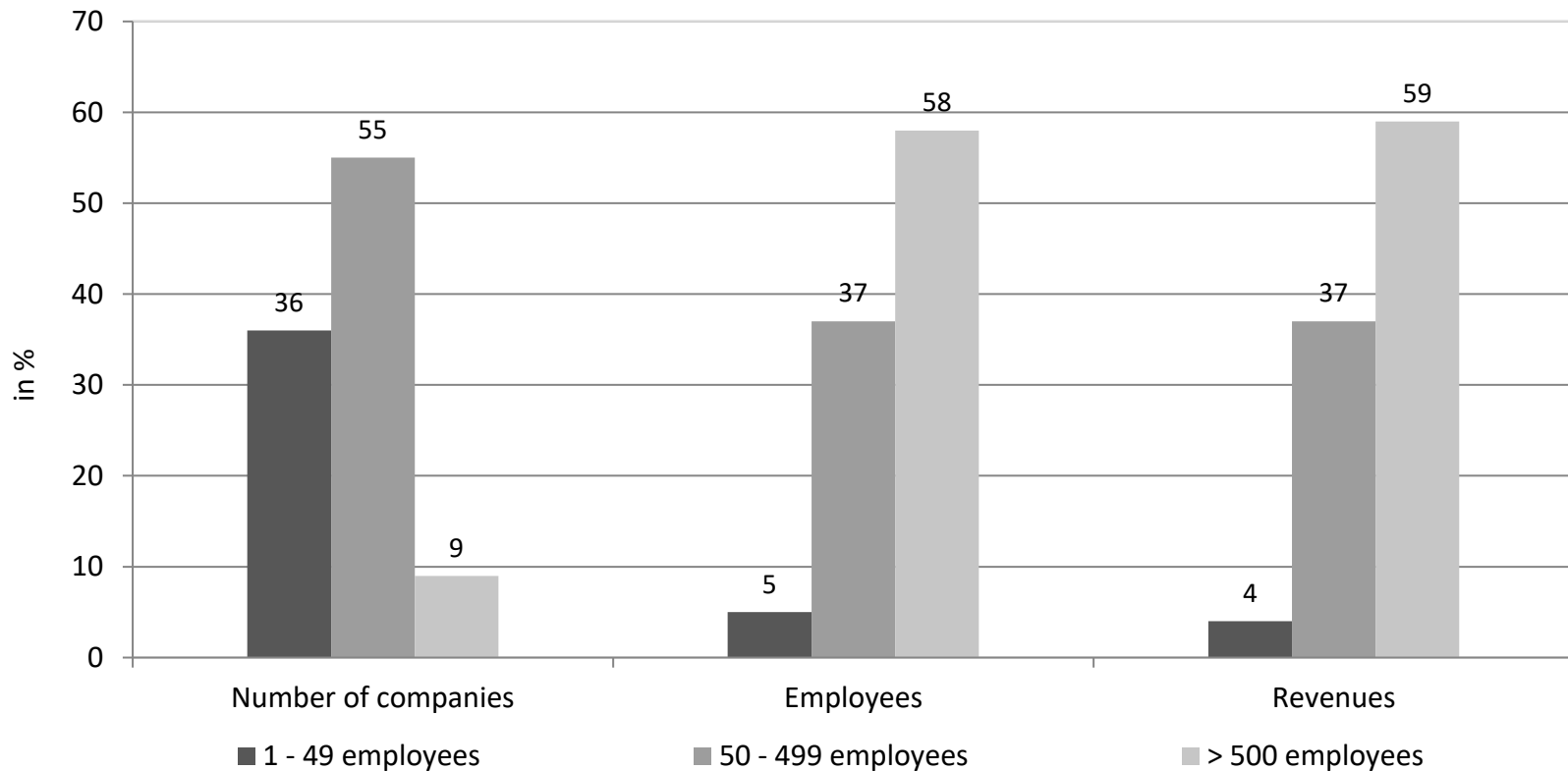
© Germany Trade & Invest



# German Chemical Companies Structure

The industry is “dominated” by small and medium-sized companies, whereas the lion’s share of revenues (59%) is raised by large caps.

## Number of Chemical Companies, Employees and Revenues by Company Size, 2023

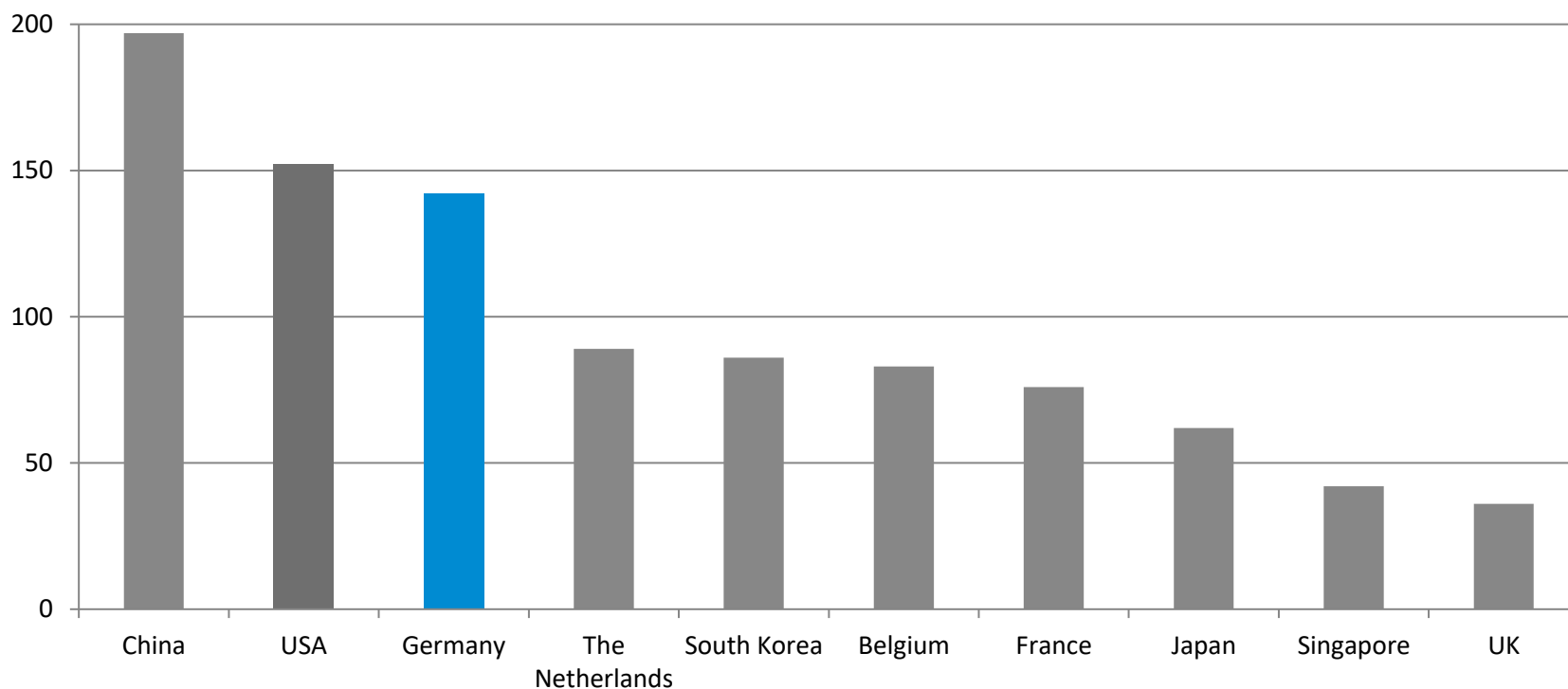


Source: VCI, *Chemiewirtschaft in Zahlen 2024*, Table 17a.

# Chemical Exports

In 2020, China's exports has surpassed the US for the first time and has widened the gap since then. Germany still maintains the No. 3 spot.

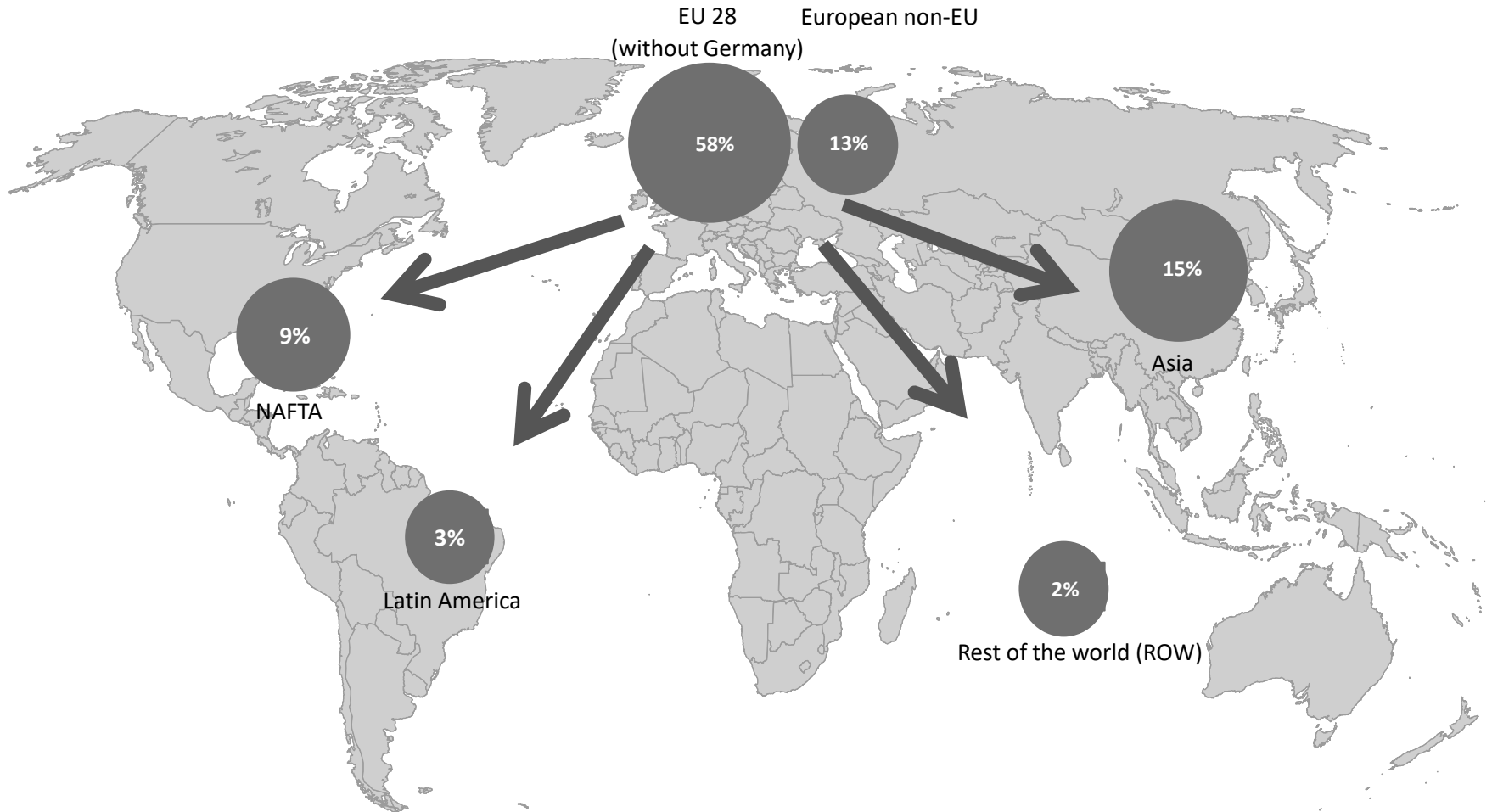
## Chemical Exports by Country in EUR billion, 2023



Source: VCI, *Chemiewirtschaft in Zahlen 2024*, Table 60b.

# German Chemical Exports

European countries are dominating German Chemical Exports in 2023.

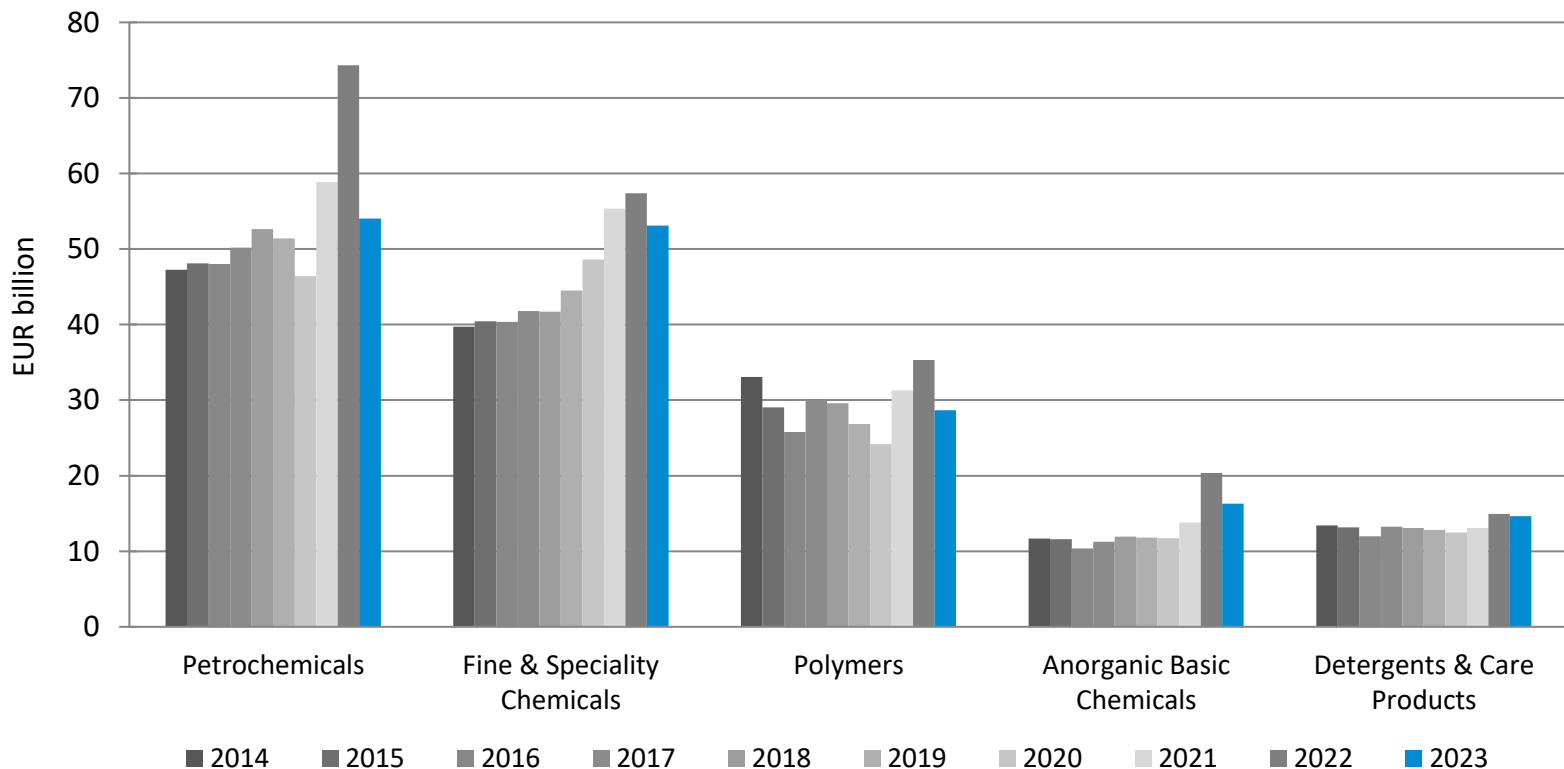


Source: VCI, *Chemiewirtschaft in Zahlen 2024*, Table 41b.

# Chemical Market Segmentation

Petrochemicals as well as Fine and Specialty Chemicals continue to constitute the backbone of the German chemical production market.

Chemical Market Segmentation by Revenues in EUR billion, 2014–2023

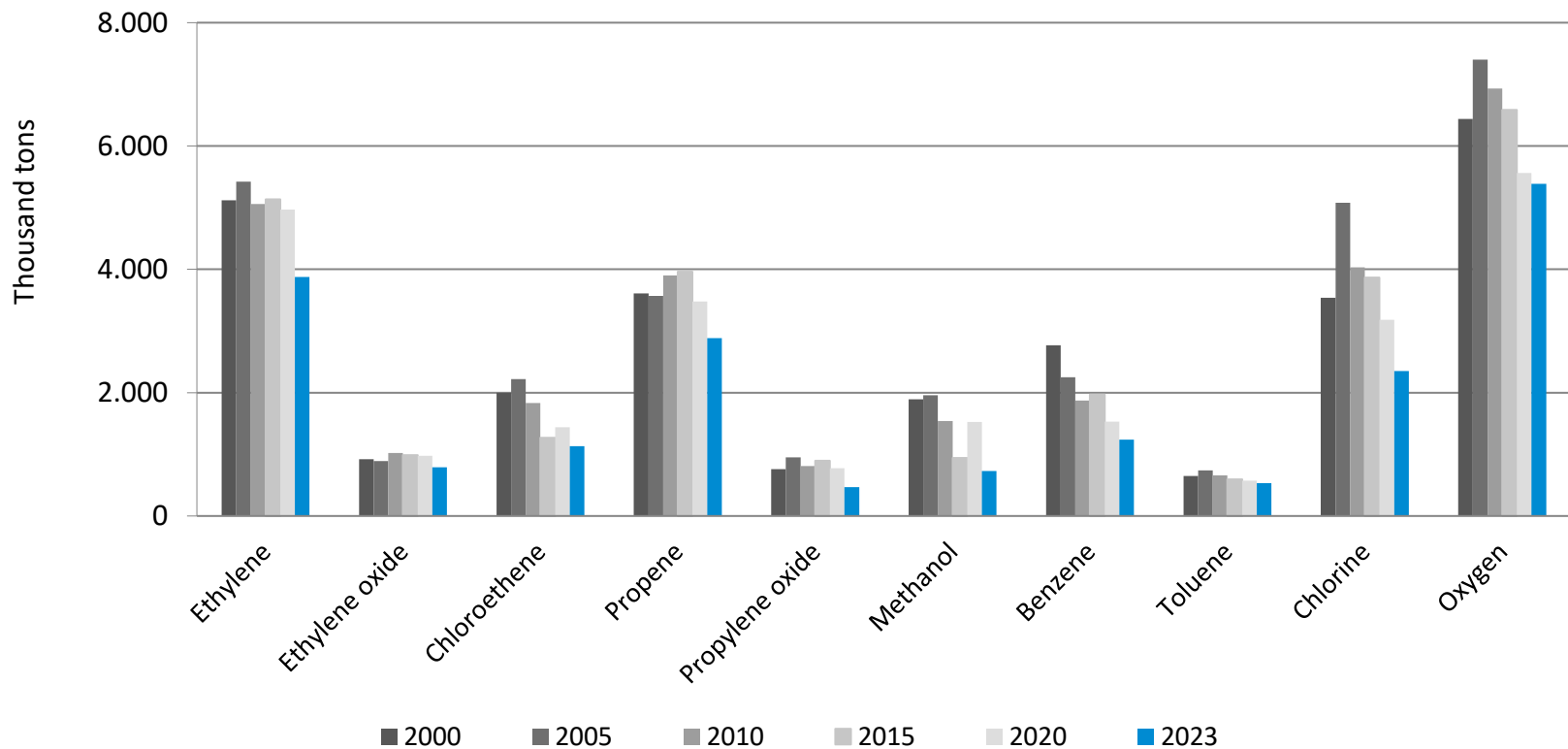


Source: VCI, *Chemiewirtschaft in Zahlen 2024*, Table 14a

# German Chemicals Production

Since 2015, production volumes of basic chemicals are slightly decreasing.

## Production Volumes of Basic Chemicals in Germany, 2000–2023

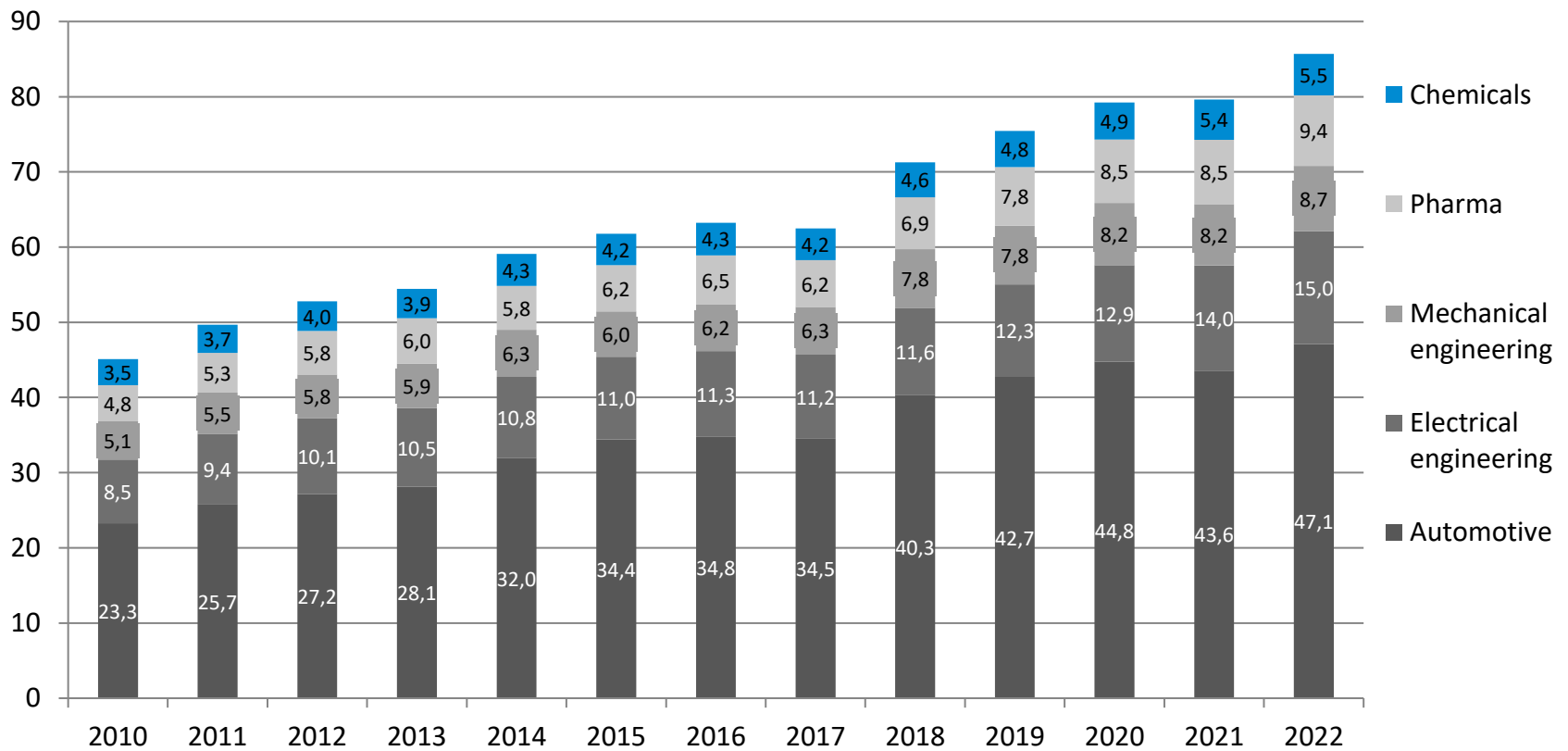


Source: VCI, *Chemiewirtschaft in Zahlen 2024*, Table 4a and 4b; Oxygen in million m<sup>3</sup> under normal conditions..

# Germany's private R&D spending

German chemical industry R&D expenditure was EUR 5.5 billion in 2022, making the sector the fifth strongest in Germany.

## R&D Expenditure by Industry, 2010–2022

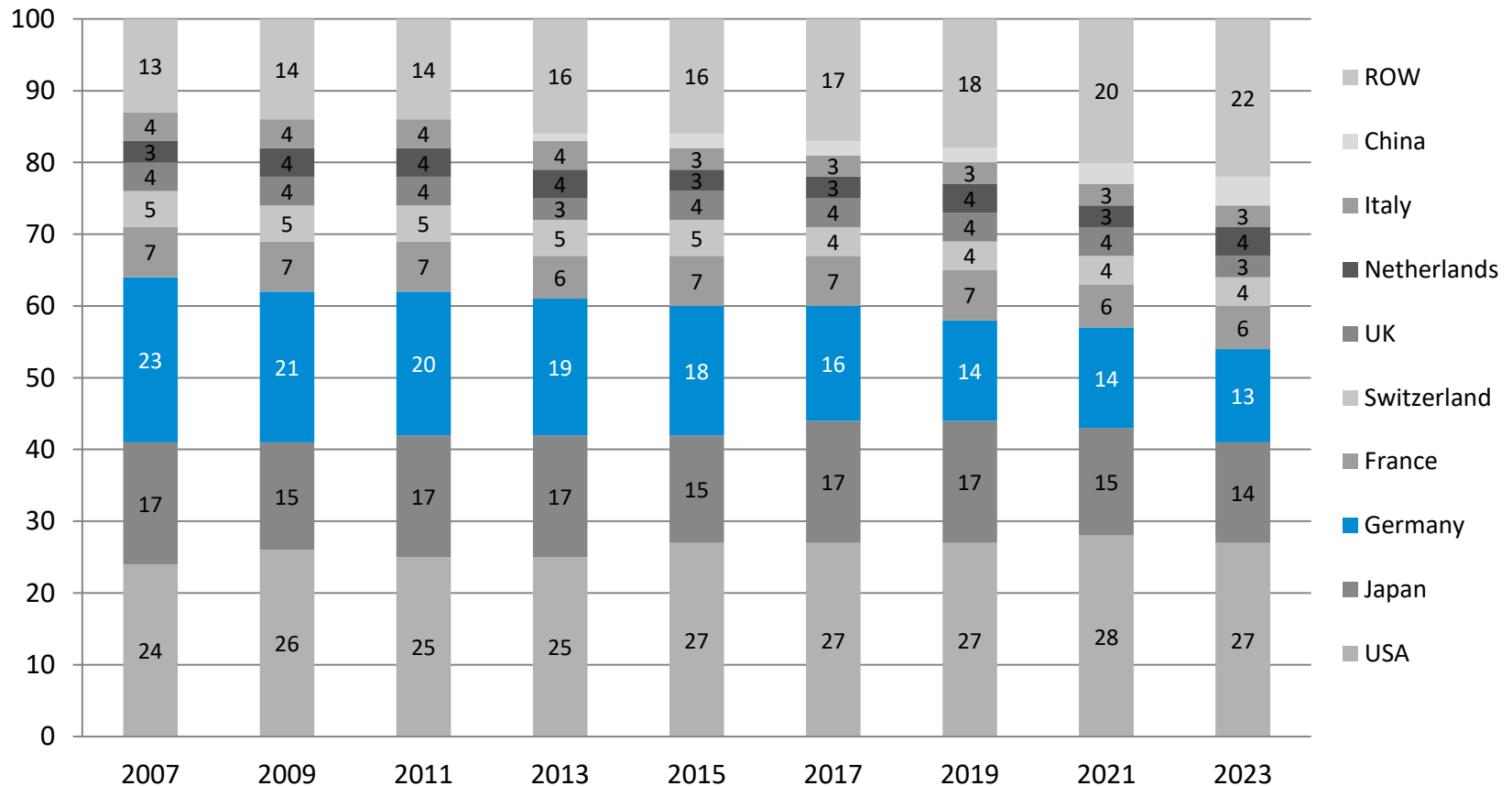


Source: VCI: Chemiewirtschaft in Zahlen 2024, Table 47

# Chemical Patents

Germany is number three spot for European chemical patent registrations, only surpassed by the US and Japan.

European Chemical Patents granted by the EPO by Source Country in %, 2007–2023

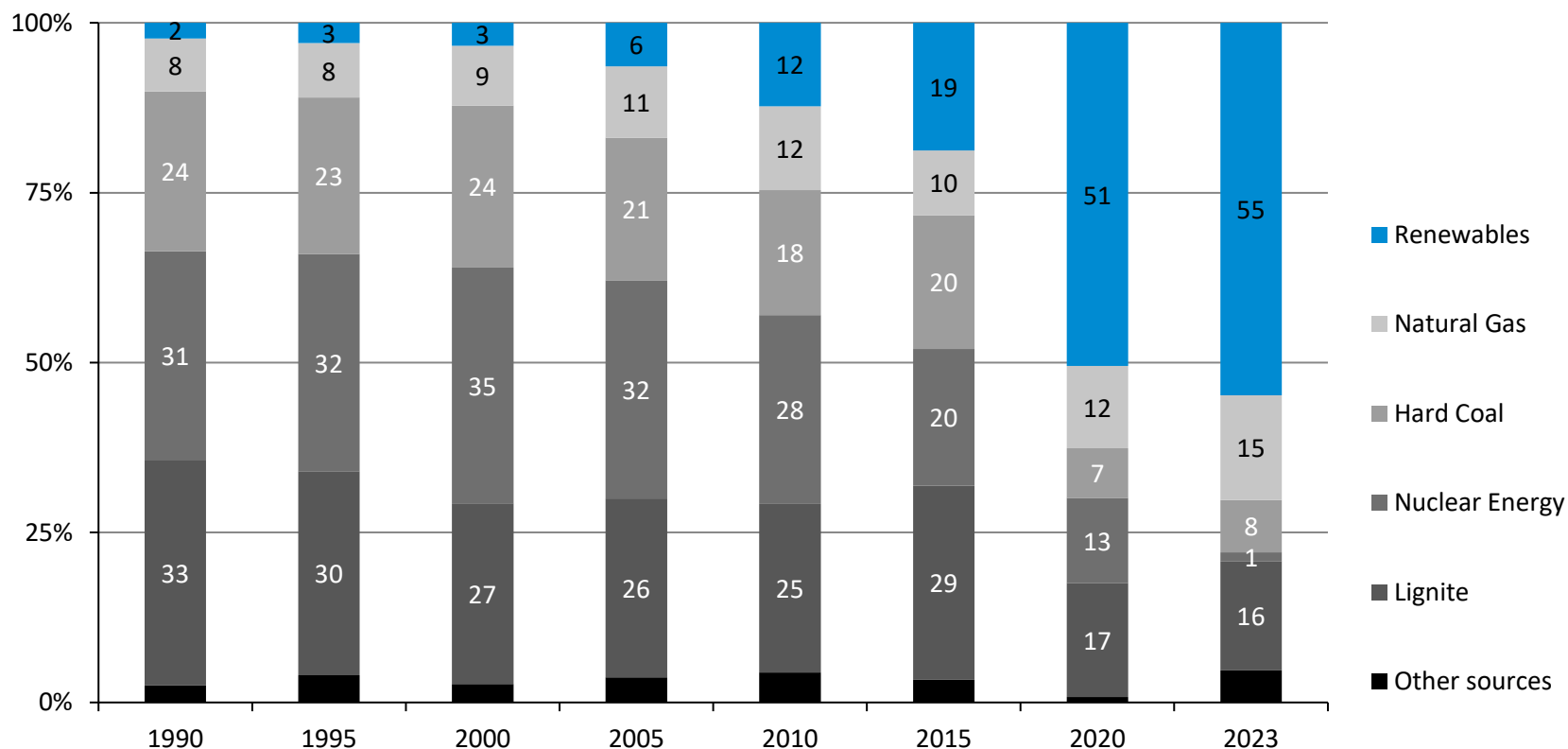


Source: European Patent Office (EPO), 2024

# Electricity generation

In the last 30 years Germany got “greener”, as Renewables has grown from 2% over more than half of the entire electricity production.

Electricity Generation in Germany by Energy Carrier in %, 1990–2023



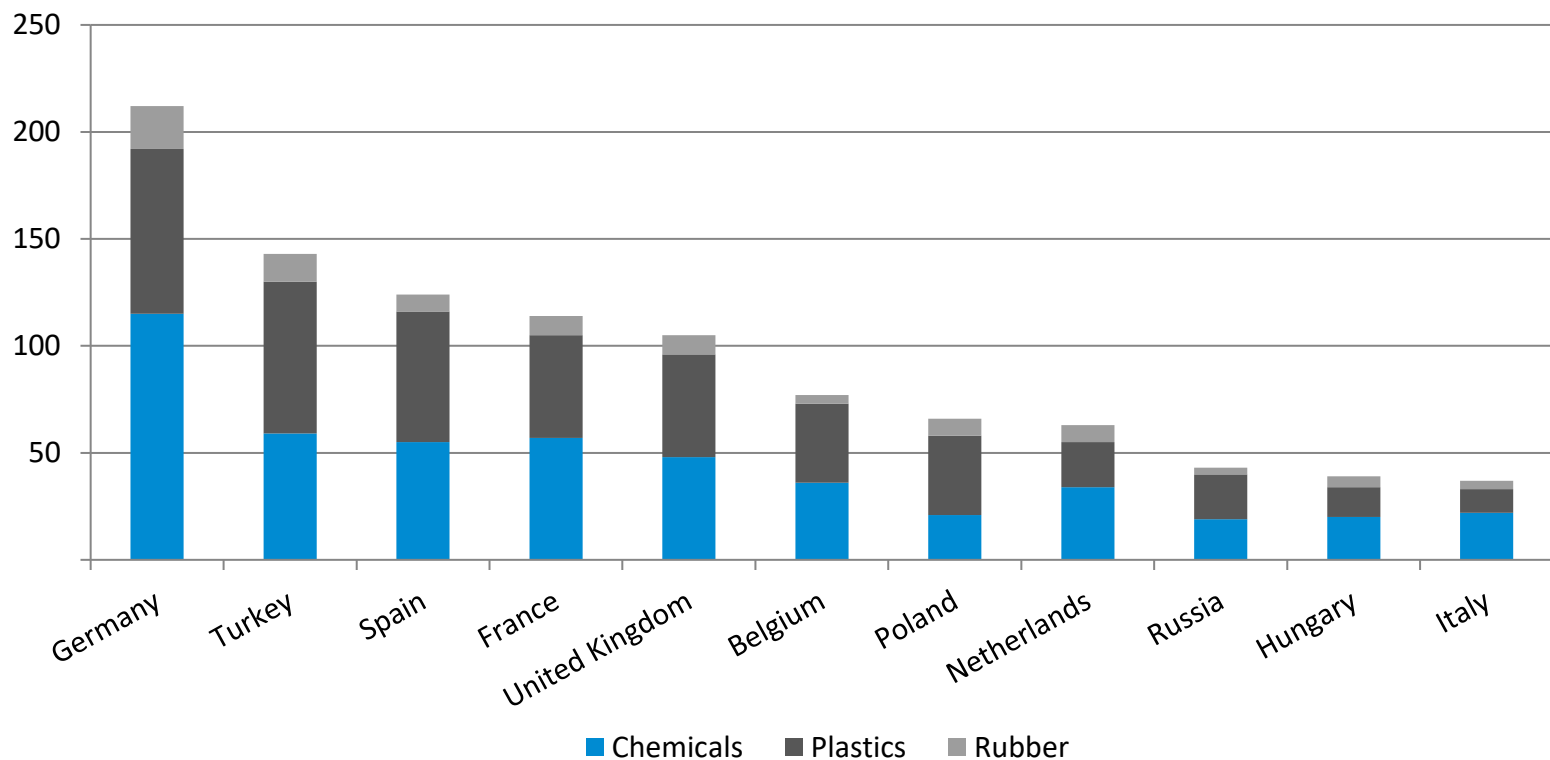
Source: AG Energiebilanzen e.V. (<http://www.ag-energiebilanzen.de/>)



# Investments in Europe

Thanks to market attractiveness, most chemical, plastics and rubber investments in Europe for the period 2019 to 2023 occurred in Germany.

## Number of Investments in Europe, 2019–2023



Source: fDi markets (as of October 24, 2024). Total number of investments (1,186): Chemistry (556), Plastics (522), Rubber (108). Graph represents 87% of all investments.

# Agenda

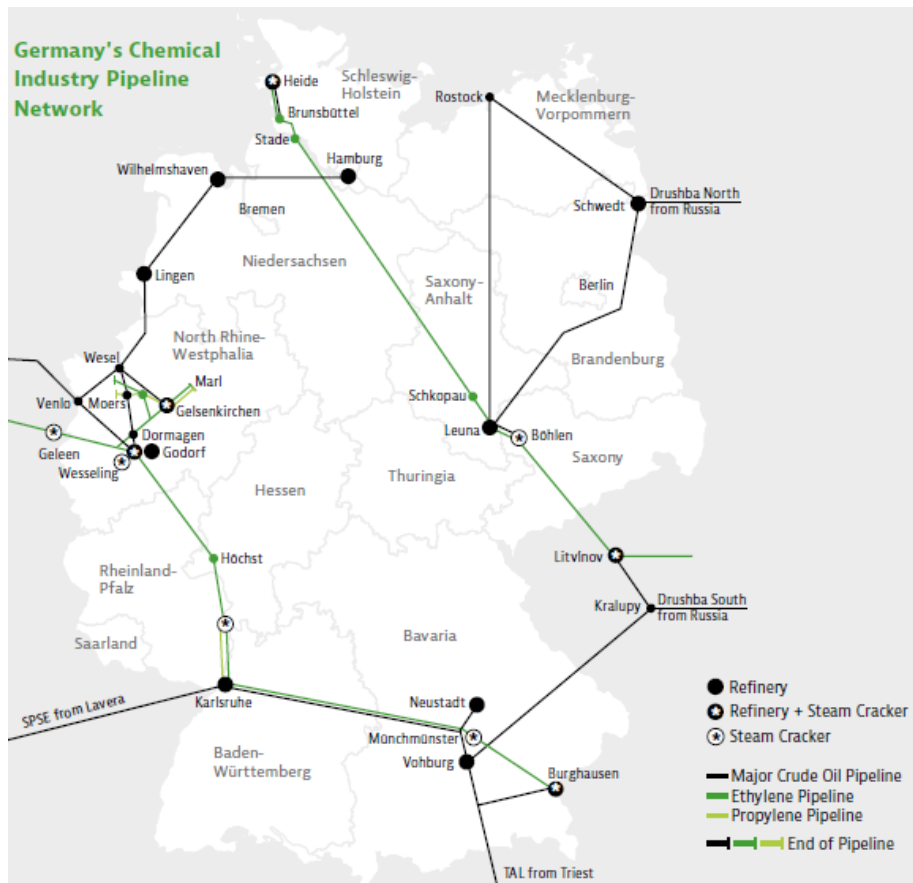
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# Raw Materials Supply

Germany's chemical industry regions are well connected to the European pipeline grid.

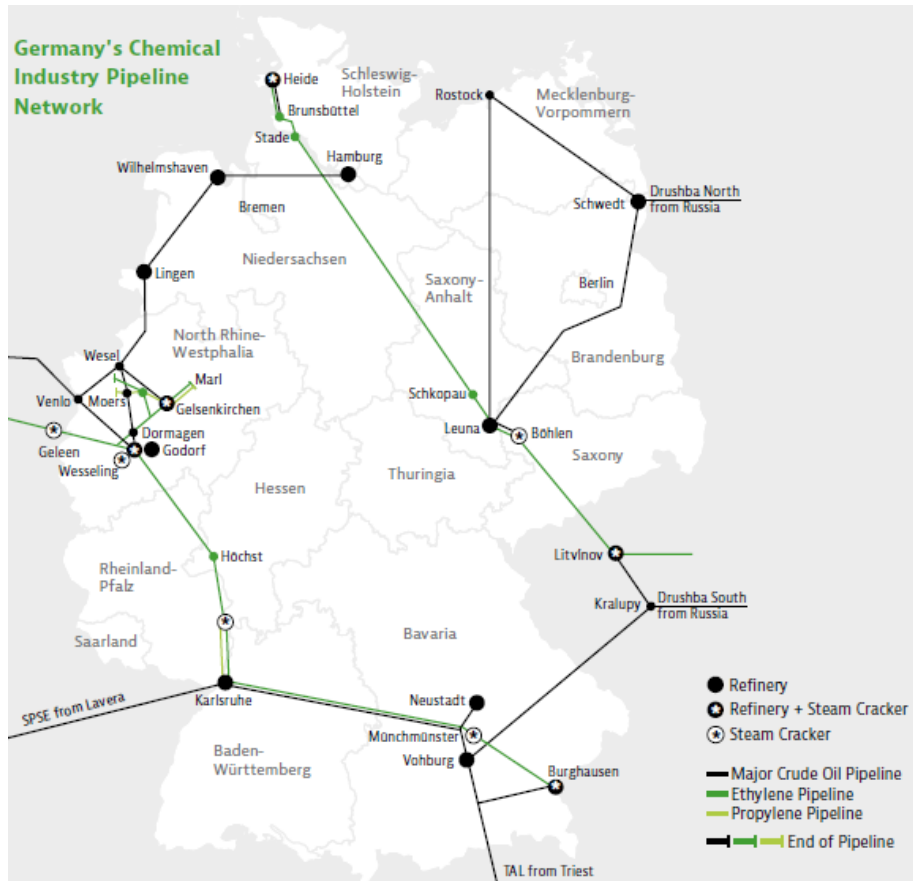


## Infrastructure of raw materials supply:

- Crude oil via pipelines from:
  - Russia
  - the Mediterranean Sea
  - France
  - the North Sea
- Crude oil processing via:
  - 14 refineries
  - 8 steam crackers
- Pipelines for:
  - ethylene and propylene
  - natural gas
  - hydrogen
  - carbon monoxide

# Phlethora of Logistics

Additionally to the pipeline grid, Europe's longest autobahn, rail and waterway network connects Germany with its nine neighboring states.



Autobahn **12,550 km**

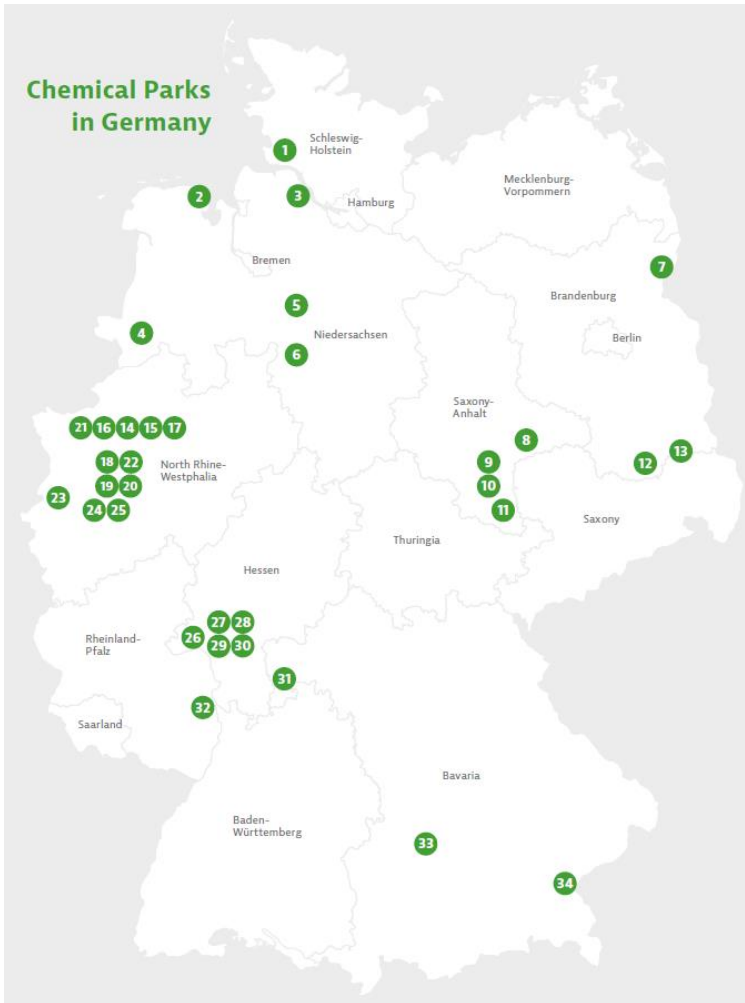
Railways **40,330 km**

Waterways **7,450 km**

Seaports **9**

Major Airports\* **12**

# Chemical Parks „Plug & Play“ concept

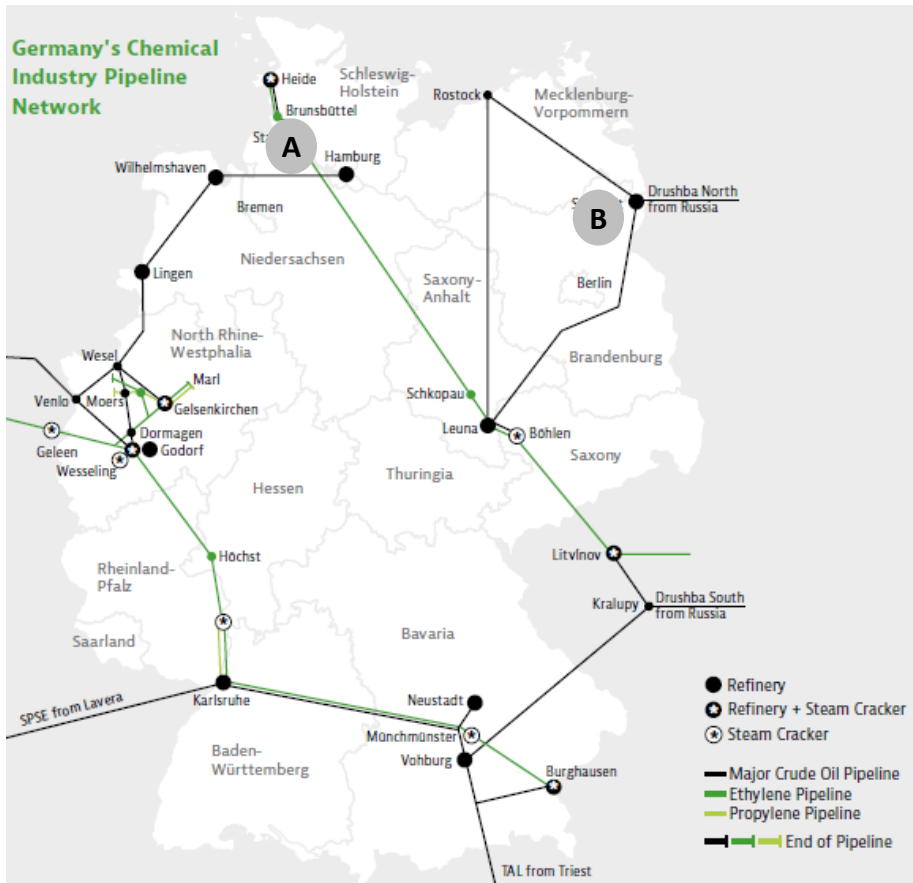


## Chemical Parks – Advantages:

- About 30 chemical parks offer cost-efficient and unique benefits through:
  - excellent infrastructure
  - chemical raw materials via pipelines
  - gases and steam via pipelines
  - secure energy supply
- Site operators offer expertise and services from one source
- Investors choose the services from site operator that suits their business model best

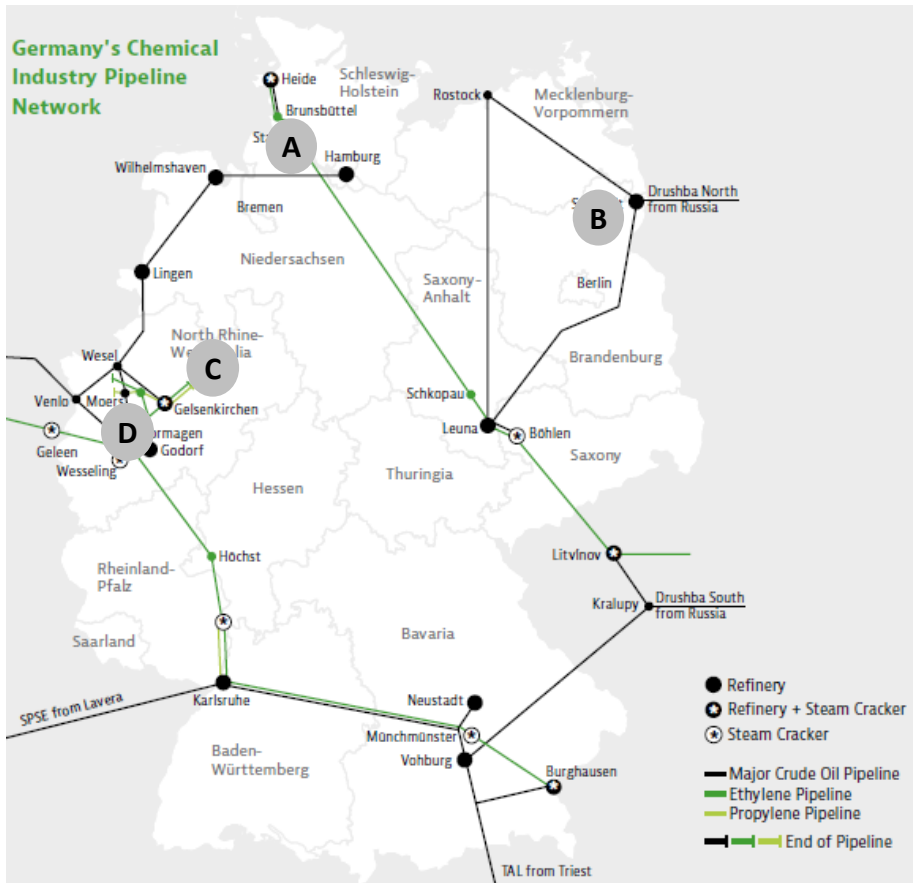
Source: Factsheet „Chemical Parks in Germany“, Germany Trade & Invest, February 2017

# Chemical Parks – Selected Locations

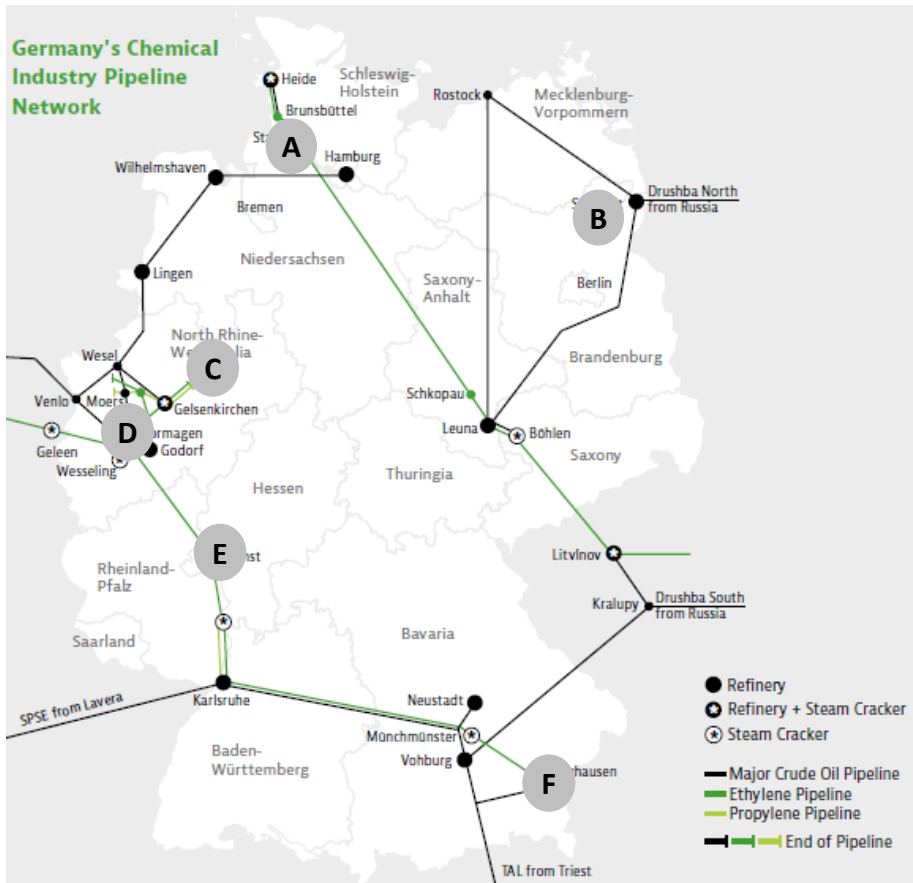




# Chemical Parks – Selected Locations



# Chemical Parks – Selected Locations





# Germany Trade & Invest

## Contact

### Germany Trade & Invest

### Foreign Trade and Inward Investment Promotion Agency

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