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Future of the European chemical industry
A positive outlook



# Agenda

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## European chemical industry | Status quo

Even as Europe's chemical industry faces major changes, the sector boasts promising and attractive value chains backed by technology leadership and a strong R&D base.



#### Status quo European chemical industry













Europe is the world's second-largest chemical market known for pioneering technologies and advanced infrastructure.



Despite past and future challenges, Europe still offers promising value chains with high growth potential.

One of the major global trends impacting Europe is the transition to a circular economy.

Chemical innovation and emerging local value chains are key building blocks of this transition.

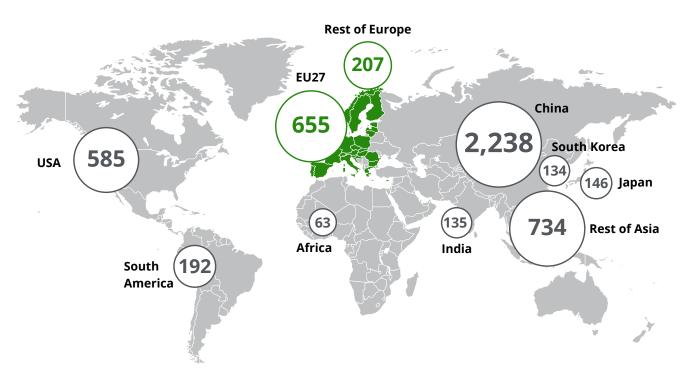
The European chemical industry stands to benefit from the twin trends of sustainability (both in the industry itself and at the customer level) and increased regionalization.



### Overview

Europe is the world's second-largest regional market for chemicals, renowned for pioneering new technologies and efficient, state-of-the-art infrastructure.

#### World chemical sales in 2023 (in bn €) – Europe as the second largest market



EU27 chemical sales by country in 2023 (in %)



14% France

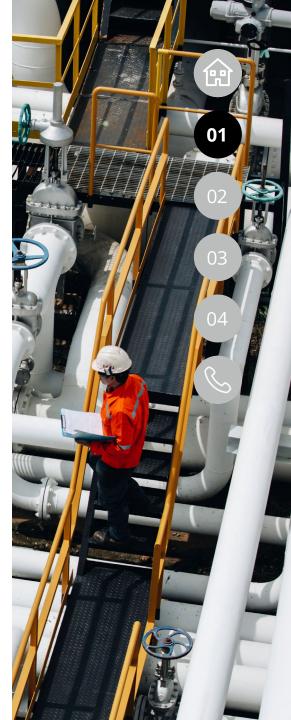
(10%) Italy

9% Netherlands

8% Spain

6%) Belgium

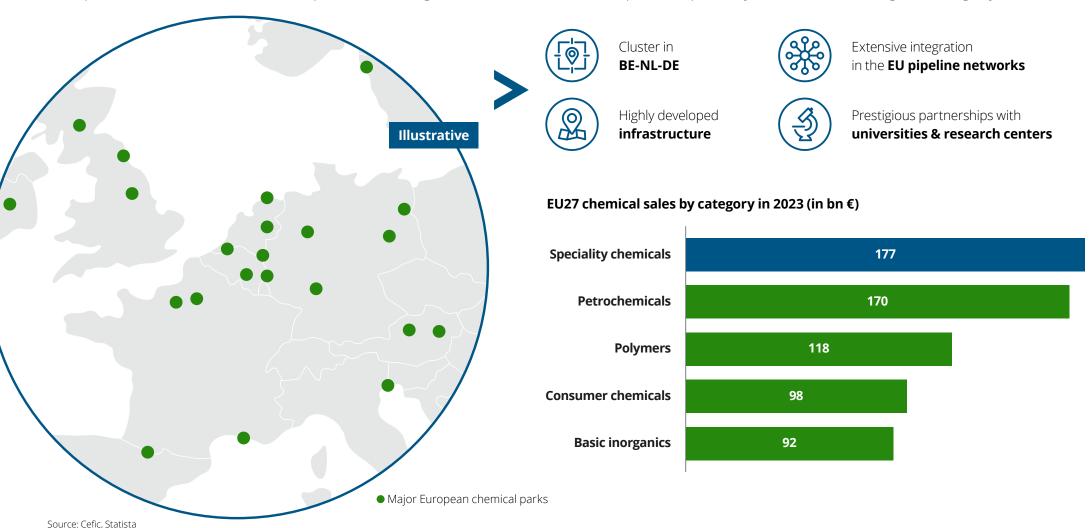
20% Others



Source: Cefic, Statista

### Status quo

Europe is home to 60+ chemical parks, an integrated and efficient set-up with Specialty Chemicals as largest category











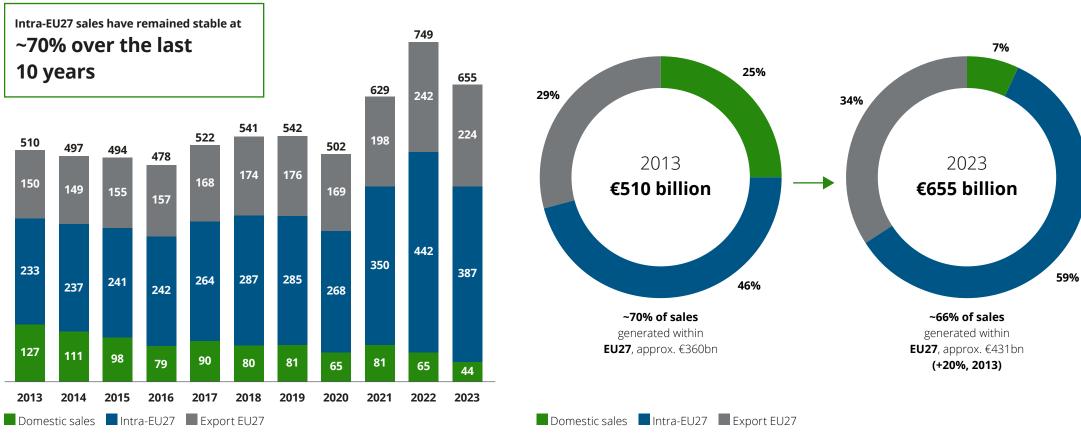




### Status quo

Over the past decade, roughly 70% of the EU chemical industry's revenues have come from intra-EU27 sales. This "Europe for Europe" business provides a sound foundation of advanced, local customers.

#### EU27 sales (in € bn, 2013-2023)















#### Strong Intra-EU27 sales fuel domestic and international growth



Over the past 10 years, roughly **70% of chemical sales in the EU** are attributable to **intra-EU27** and domestic sales.



Intra-EU sales increased by 20% from €360bn in 2013 to €431bn in 2023 – with a trade surplus of €35bn in 2023 (resulting in a total EU27 chemicals market of approx. €655bn in 2023).



In terms of sales volume and historical sales growth, it makes sense to pursue a "Europe for Europe" sales strategy, though export sales offer additional opportunity for European chemical companies.

#### Outlook



The European Commission actively supports making **EU chemical production** more resilient<sup>1)</sup> – and a "Europe for Europe" strategy.



The industry was officially recognized as **one of five strategic priority sectors for Europe's industrial future**, signaling renewed political commitment and support.



Shift towards a **circular economy in Europe** drives development of end-of-life solutions and demand for **resilient European value chains.** 



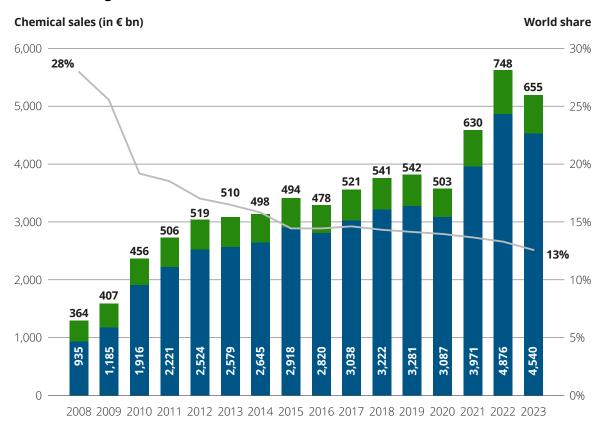
**Export markets** remain vital for European chemical players, especially when it comes to **high-end chemical products.** 



On a global scale, European chemical industry stabilized on a 13–14% share, stabilizing overall sales on a however low level



#### EU27 share of global chemical market 1)



Rest of the world (in € bn) ■ EU27 chemical sales (in € bn) ■ World share

#### A sub-sector view of Q4/20242 (% change in revenue)

Sub-sectors	Vs. Q4/2023	Vs. Q3/2024	
Inorganic Base Chemicals	-3.4%	+2.0%	
Petrochemicals and Derivates	-0.5%	-1.1%	
Polymers	-2.4%	-3.2%	
Fine and Specialty Chemicals	-0.6%	-1.4%	
Personal and Home Care Chemicals	+6.3%	+3.3%	
Chemicals total	-0.9%	-0.7%	

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03

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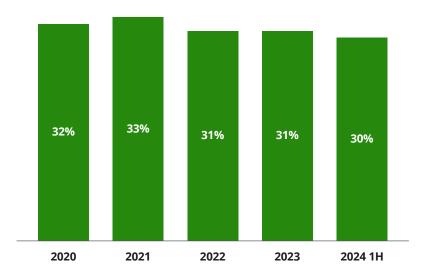


Personal and Home Care Chemicals showing a steady recovery throughout 2024

And let's not to forget that gross profit margins in specialty chemicals have been consistent at roughly 30% for the past four years, which gives investors confidence.



#### Gross margin ratio (publicly-listed specialty chemicals companies)<sup>1)</sup>





**Specialty chemical** companies managed to **keep gross margin ratios stable** over the past 4 years (2020 – H1/2024), even during the **challenging times of 2023 and H1/2024.** 



**Specialty chemicals** are concentrated **in regions of Europe** with **advanced industrial infrastructure** and integrated in chemical parks.

#### Specialty chemicals and industrial gases outperform in EU27

(Avg. last 5 years)<sup>2)</sup>

	EU27	Total Market Cap. (in € bn)	Total Net Profit (in € bn)	Counts	03
Agrochemicals and fertilizers	•	7	n/a	8	04
Commodity	•	14	1	32 	
   Specialties 		100	12	40	P/E ratio above industry avg.;
Industrial gases		58	2	2	outperforming other segments
Diversified		82	6	7	-
Total EU27		261	21	89	

O Circle size representing market capitalization



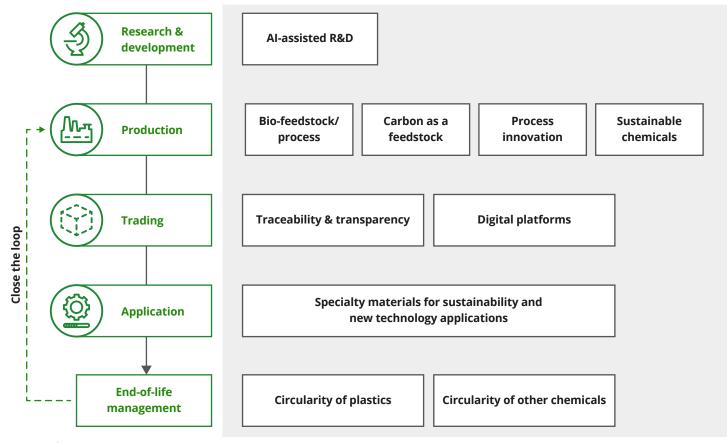
Source: 1) Thomson Reuters Refinitiv; 2) S&P Capital IQ, Deloitte analysis Notes: 2) n=89 companies



### Trends & Innovation

Global trends in the chemical industry impacting the European landscape – chemical innovation plays a key role in the transition to a sustainable and circular economy.

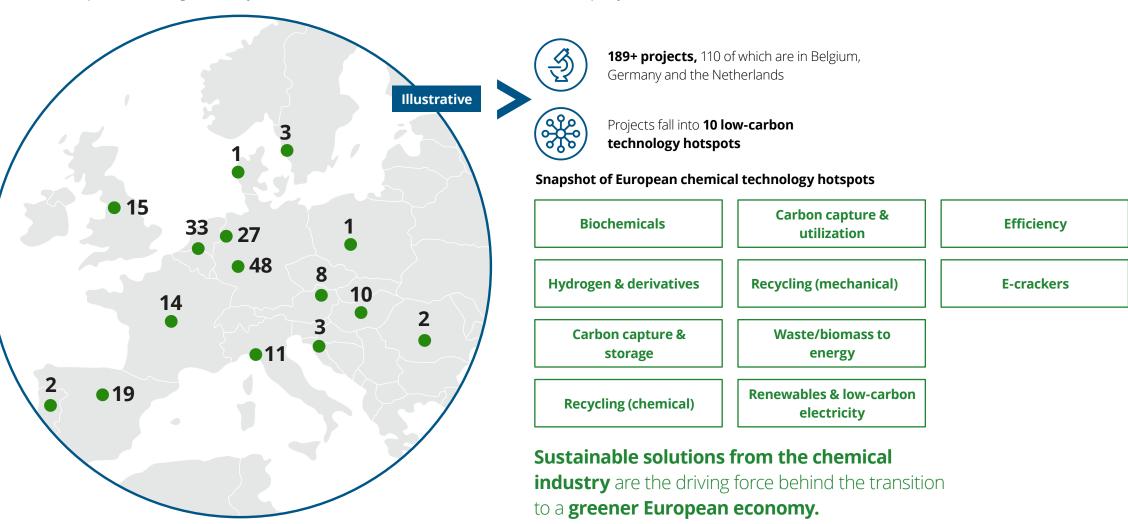
#### Innovation & trends in the global chemical industry





### Trends & Innovation

Europe is leading the way with close to 200 low-carbon innovation projects<sup>1)</sup>















Today's innovations and trends fall broadly into ten technology hotspots driven by established incumbents, startups and academia.

01

02

#### 10 technology hotspots in Europe

Biomass-derived chemicals are

products that come in whole

or in part from materials of

#### Indicative – not exhaustive

### Biochemicals



Carbon capture and storage involves the capture, transport and permanent storage of CO<sub>3</sub>.

#Fuel cell #Carbon transport

#Cross-boarder CCS value chain.

#CCS from ammonia plants

#### # projects: 12

#bio-refinery #bio-plastics #bio-olefins

#bio-ethylene oxide

biological origin.

#### CSS



Carbon capture and utilization refers to the process of capturing CO<sub>2</sub> and then using it to make new products.

#### # projects: 10

CCU

#Power-to-methanol #carbon-captured methanol #CCU EU projects

#### E-cracker



Electrically heated steam crackers and related technologies are still under development.

#### # projects: 3

#electricity #ethylene steam #carbon neutral heat #electrification of crackers

#### **Efficiency**



Efficiency gains through process innovation result in smoother, faster processes that require less energy and/or fewer resources.

#### # projects: 23

#AdiP Technology #heat recovery #natural drying Bentonites #Oxygen-depolarized cathode installation

#### Hydrogen



Hydrogen as a feedstock or a product covers projects that both produce hydrogen and envision its future use

#### # projects: 33

#green hydrogen #blue hydrogen #hydrogen-powered chemical barge #carbon-free ammonia

#### Chem. recycling

# projects: 15



Chemical producers as feedstock suppliers for reuse as secondary raw materials in chemical processes.

#### # projects: 28

#PU foam #sorting plant
#plastic recycling (e.g. solvent based)
#Plastics2Chemicals

#### Mech. recycling



CO<sub>2</sub>

Chemical producers as feedstock suppliers for reuse as secondary raw materials.

#### # projects: 14

#partnerships #recycling hub
#scale up of capacities
#plastic recycling

#### **Renewables**



The use of electricity to power industrial processes requires additional renewable and/or low-carbon energy sources.

#### # projects: 60

#on-site installations #solar & wind #power purchase agreements #offshore wind park investments

#### Waste to energy



The use of waste as a source of energy for industrial processes also Includes biomass used to produce biofuels.

#### # projects: 14

#bio-LNG #biofuel #multi-waste to bio-diesel #biomass to power

### Transition to circular economy

The European chemical industry is moving away from fossil fuels and toward recycled feedstocks, and chemical companies engaged in recycling activities can become the suppliers of those recycled feedstocks.

#### The chemical value chain of tomorrow is circular and regional



Shift towards the use of **recycled or sustainable materials** (e.g., plastics, industrial waste gases including  $CO_2$ , CO,  $CH_4$ ) as the **primary feedstock.** 



**Circular model** with continuous recycling and reuse of materials.



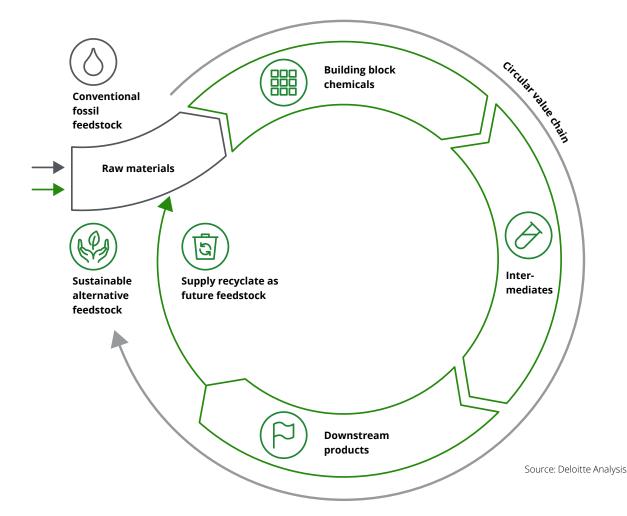
**More regional recycling** (chemical companies as suppliers of recycled feedstocks).



Less reliance on global value chains thanks to strong shift to regionalization.



Europe as a key player in circular chemical value chains, driven by strong regulatory support and investment incentives.















## Summary of key developments

Even as Europe's chemical industry faces major changes, the sector boasts promising and attractive value chains backed by technology leadership and a strong R&D base.







#### **Attractive market segments**



Europe is the world's second-largest chemical market, with pioneering technologies and advanced infrastructure.



Approximately 70% of EU27 chemical revenues come from intra-EU27 sales, supporting a "Europe for Europe" strategy while expanding global sales of European specialty chemicals.



Despite current challenges, there are still promising value chains with high growth prospects, such as specialty chemicals.





Along with specialty chemicals, **Europe boasts** several other **value chains** with critical mass that offer attractive prospects at the European and global level.



The European chemical industry is **moving from fossil-based to recycled** feedstocks, and we expect companies engaged in regional recycling activi**ties** to become the suppliers of recycled feedstocks.

#### Non-attractive market segments



Closure of European petrochemical plants: Versalis, ExxonMobil, Sabic and other companies have announced steam cracker shutdowns to address overcapacity and high operating costs.



Resulting in the closure of additional downstream assets, mainly polyolefins





Impact on ethylene capacity: Announced cuts of >3 Mt/year in ethylene capacity



Overcapacities, weak demand and high energy costs lead to weak cracker margins, which impact the chemical industry.



**Suspension of strategic projects:** Key market players have put their European expansion plans on hold as well as started to review major facilities and production sites for possible closure or divestment.

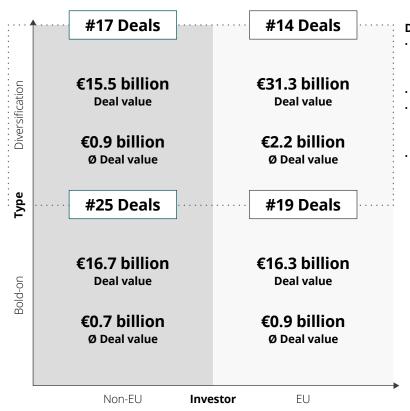
Given the latest developments in European markets and the outlook for new technologies, Europe offers promising and profitable value chains, bolstered by the chemical industry's technology leadership and attractive segments with high-tech downstream applications.



## To start with – Foreign direct investments

Non-EU buyers see Europe as an attractive market, taking a balanced approach to diversification and bolt-on acquisitions as they seek to enhance existing operations while also exploring new avenues for growth.

### Recent M&A deals in the chemical industry (2018–2024)



#### **Deal motivations**

- Vertical integration with higher-value chemical products
- Portfolio synergies
- Opportunity to leverage proprietary R&D and technology
- Strategic portfolio diversification

- · A total **deal value** of **approx. €46.8bn** (~59%) attributable to **diversification.**
- · A total **deal value** of **approx**. **€33.0bn** (~41%) attributable to **bolt-on acquisitions**.
- Deals with buyers from **outside EU** are equally focused on **bolt-on acquisitions** and **diversification** (~€16.7bn and ~ €15.5bn, respectively).
- Deals with **buyers from within the EU are more focused on diversification** (~66% of total deal value).

#### Transaction outlook

Higher average deal value for both non-EU and EU buyers following a diversification strategy.

- Ongoing strategic portfolio diversification is expected.
- Downstream integration (e.g., recycling activities) –
   Chemical players to become feedstock providers.
- Increased pressure to consolidate in Europe opportunity to acquire "cheap" targets.













## Six attractive segments

We strongly believe in six key segments, the European Chemical industry can leverage its particular strengths and capitalizing on the continuing trend toward sustainability and regionalization.

**Building block chemicals** 



#### While Europe might generally not be the best investment option in the upstream value chain, due to ...



#### Lower profit margins

**Feedstock** 

These segments generally have lower profit margins due to standardized products, a high volume/low-cost production model and Europe's high production costs.



#### Limited feedstock access/high competition

Intense global competition, especially from regions with abundant natural resources and lower production costs.



**Intermediate chemicals** 



#### High profit margins and robust market demand

These segments add more value and increase specialization thanks to demanding downstream industries (e.g., pharmaceuticals, automotive, sustainability solutions), resulting in higher profit margins overall.



#### **Europe as an innovation leader**

Europe's strength as an innovation hub is reflected in high-quality, high-performance intermediates and formulated/end products.

The European market leadership in formulated/end products allows chemical players to vertically integrate and diversify their portfolios in line with their ambitious growth agenda. In this context, **Deloitte has identified six key areas:** 

- 1. Advanced polymer materials
- 3. High performance resins

5. Surfactant-related building blocks

2. Advanced materials

6. Advanced intermediates

4. Knowledge chemicals

Future circular chemical value chain

**Downstream products** 



### Six attractive segments

In four segments with strong appeal and two segments with medium to strong appeal, the European chemical industry will not only be able to play to its strengths but also respond to key future trends in society and technology.

#### Value chains with strong appeal



#### 1. Advanced polymer materials

**Instrumental** for several advanced applications/state-of-the art technologies

- Specialty polyamides for automotive
- Thermoplastic copolyester
- Innovative packaging solutions
- Bio-based polyamides for sustainable solutions
- PEEK for medical and industrial applications



#### 2. Advanced materials

Strong alignment with Europe's green deal/circular economy, while also making the most of broader trends toward resilience and regionalization

- Battery materials (anode, cathode, electrolyte)
- Other innovative material types (e.g., memory foam, heat exchange, graphene)
- PV related materials
- Composites
- Catalysts for chemicals



#### 3. High performance resins

Potential **key driver and building block for tomorrow's innovations** and sustainable solutions

- Resins for electrical applications
- UV and EB curable resins
- Polybutadiene-based resins for adhesives
- Specialty resins for automotive applications
- Innovative sealants, adhesives, and laminates



#### 4. Knowledge chemicals

Differentiation based on distinct approaches: **ongoing innovation**, deep understanding of **application technology** and customer centricity

- Food/feed additives and formulations
- Construction chemicals
- Personal care ingredients
- Plastic additives













Within these two segments, the European chemical industry manufactures various specialized products, mostly for applications within Europe

#### Value chains with medium/strong appeal



#### 5. Surfactant-related building blocks

Robust, **long-term market demand**, but lower innovation potential compared to other segments

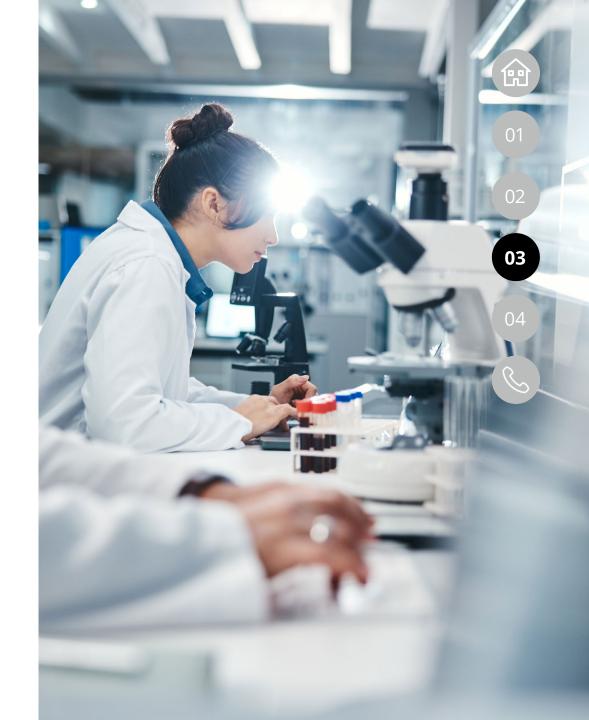
- Surfactants in detergents & cleaners
- Specialty surfactants building blocks (e.g., branched alcohols)
- Surfactants for cosmetics, beauty and care
- Anionic surfactants for industrial applications
- Nonionic surfactants for industrial applications



#### 6. Advanced intermediates

Broadly diversified markets and **potential for regional leadership**, though also requires investment effort and operational excellence

- C4 chemistry butadiene, isobutene and others
- Oxo chemicals
- Benzyl derivatives
- Agrochemicals and pharmaceuticals building blocks
- Amine derivatives





## To sum it up

Six key take-aways from a critical, but positive outlook for the European chemical industry

- 1. The European chemical industry stands to gain from the broader changes on the social and political landscape.
- 2. Customers prioritizing regional supply chains in an effort to ensure reliable, consistent supply of critical inputs and reduce their dependency on imports will also positively impact the European chemical industry.
- 3. The industry has three key strengths:
  - Proven and efficient production infrastructure
  - Strong innovation potential based on in-house R&D as well as collaboration within a network of innovation and research partners
  - An outstanding, highly skilled workforce

- 4. With six strong, attractive segments, Europe's chemical industry has a strong foundation for continued profitable growth and future success.
- 5. The European chemical industry is, however, facing major structural change some of which is long overdue as evidenced by the planned closure of several naphtha steam crackers impacting also polyolefins and other downstream businesses.
- 6. With this in mind, the industry must continue to build on its core strengths enhancing production efficiency, expanding its innovation potential and investing in its highly-trained workforce which will reinforce its leadership position and boost global competitiveness.

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