

# The EU Chemical Industry Transition Pathway to 2050

*Our industry supports the EU Green Deal with the ambition to be climate neutral by 2050*





# The Transition Pathway: An actionable roadmap to support the chemical industry's transition to 2050



Together with key stakeholders, the EU Commission developed a dedicated roadmap for the chemical industry to **transition to green and digital practices**, making it **resilient and attractive for investments**.



*“The successful implementation of this Pathway will define the future of our industry in Europe for the coming decades. We stand ready to work with the European Commission and Member State governments to help make this happen.”*

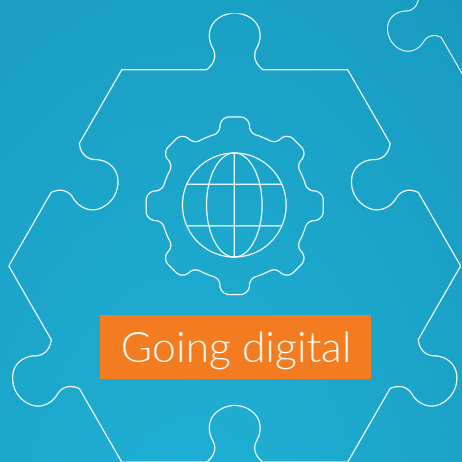
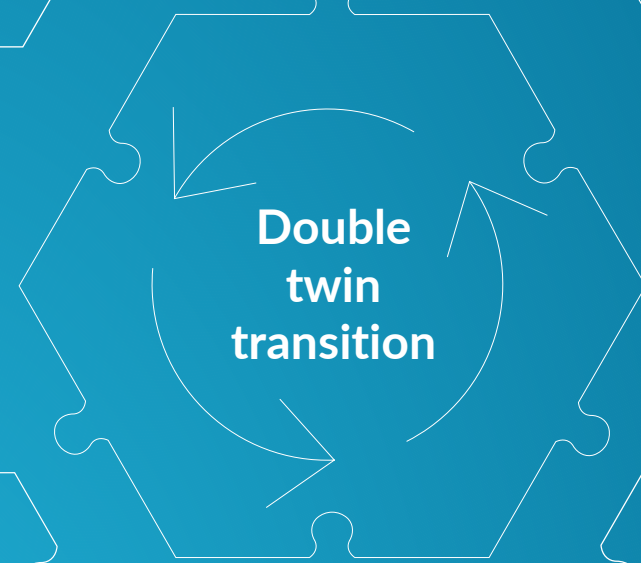
— Martin Brudermüller, Cefic President and CEO of BASF



In just 30 years,  
our industry will  
have to change  
not only **how** we  
produce but also  
**what** we produce

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*The transition Pathway aims  
to make our industry **more  
resilient** while also  
supporting the **green and  
digital transition.***





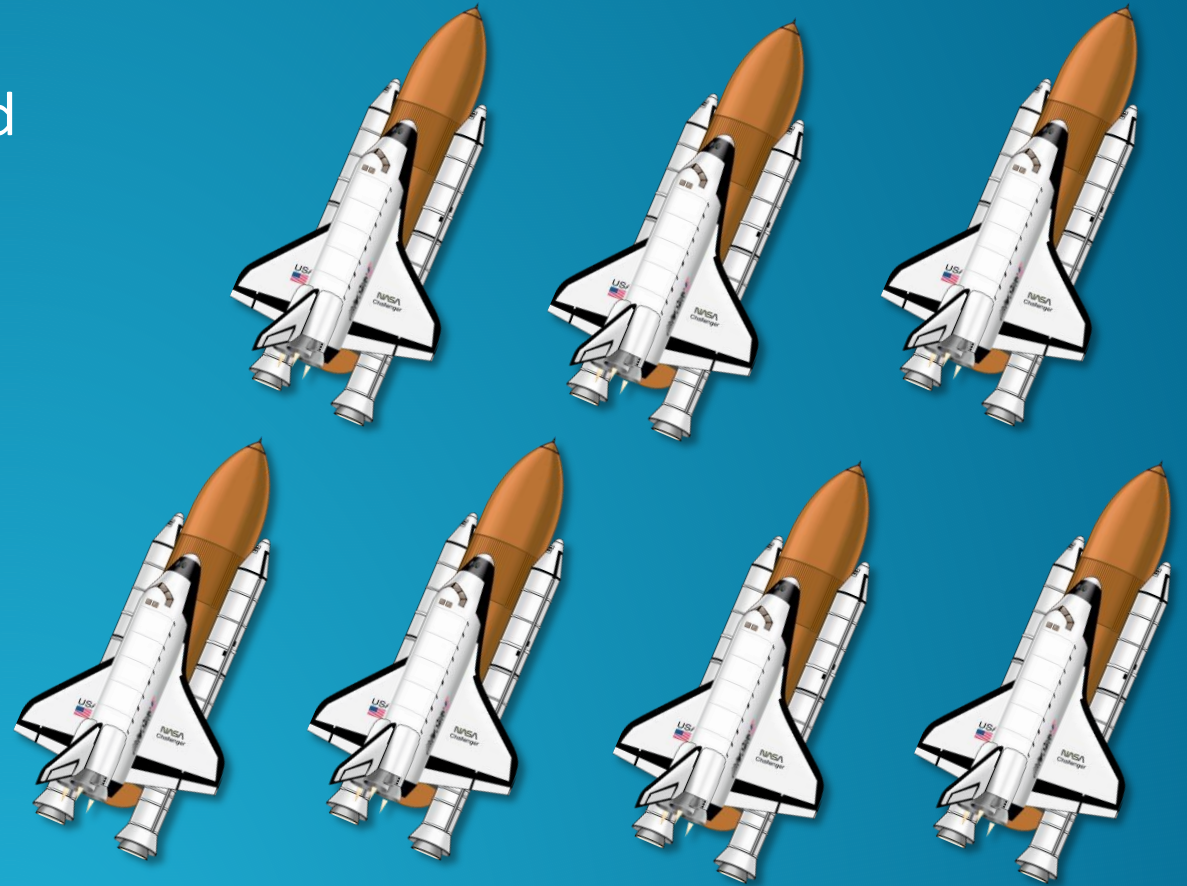
# Unprecedented investments are needed by industry

EU-wide investments for low-carbon and circular technologies are expected at

**€218-238 billion**

for our industry over the next 30 years.

*That's equivalent to developing and launching about 7 NASA space shuttles!*





# The Transition Pathway aims to put together all the pieces of the EU regulatory agenda



Almost 200 actions  
are required by  
EU institutions,  
Member States and  
industry





# Zooming in on infrastructure

## TP Topics focused on infrastructure

- **Topic 18:** Large-scale electricity and hydrogen infrastructure
- **Topic 19:** Development of new sustainable production facilities
- **Topic 20: Sustainable transport of raw materials and chemical products**
- **Topic 21:** Deployment of digital technologies
- **Topic 22:** Circularity: recycling and reuse infrastructure

## Topic 20 in details: actions on transport & logistic

Topic 20: Sustainable transport of raw materials and chemical products		
Actions	Actors	Timeframe
<b>20.1 Increase the availability and capacity of multi-modal terminals that are close to industrial clusters</b>		
• Support investment in rail and inland waterway transport through public-private partnerships	Industry	S
• Develop a framework for trusted, secure and resilient B2B transport and logistics for data sharing (DTLF)	EU/MS	S
• Set up sustainable and resilient value-chain logistics for the sustainable supply of alternative feedstock (e.g. following the 'Hubs4Circularity' concept (Horizon Europe) and the EU global gateway strategy)	Industry	M
• Support the development of a multi-modal single European transport area through the Cohesion Fund (TEN-T) <sup>81</sup>	EU/MS	M
<b>20.2 Improve use of rail transport</b>		
• Adopt in 2023 a legislative package on greening freight transport (REPowerEU)	EU/MS	S
• Improve reliability, rail punctuality, and rail-infrastructure coordination between different national railway systems	MS	S



# Key action areas for transport & logistics

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## 1. Infrastructure investments (public/private )

- Rail tracks
- Terminals
- Charging/fuelling stations
- Vehicles

## 2. Regulation : managing the transport system, supporting the twin transition

- TEN-T Regulation : mainly infrastructure
- Greening Freight Package
- eFTI Regulation

## 3. Digitalisation

- ecosystem (governance, functional/architectural principles)
- standards (DTLF – eFTI)





# Open call for transition initiatives

In July 2023, DG Grow opened a call to collect transition initiatives from all stakeholders

Open to all stakeholders

Initiatives supporting co-implementation of TP Actions

Transition initiatives

Initiatives submitted before 11/10 will be published on EC website soon

The call is still open: [SUBMIT YOUR INITIATIVE!](#) \*

Cefic has also submitted its initiatives, including one on its new tool “Cefic Transport Insights”



Study of the environmental and societal impact of the transport of the European Chemical Industry:  
How can we reduce our CO<sub>2</sub> emissions and externalities ?



\*[https://ec.europa.eu/eusurvey/runner/Call\\_for\\_transition\\_initiatives](https://ec.europa.eu/eusurvey/runner/Call_for_transition_initiatives)

# Cefic Transport Insights

## Transparency – impact – simulation

### The What Ifs of Modal Shift

#### Country

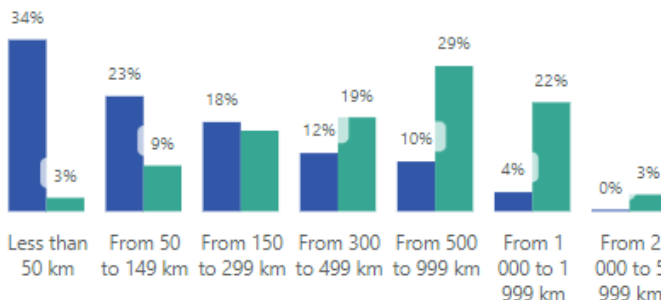
Multiple selections

2022

Chemicals

#### Transported goods

Mode Value	Million tonne-km	Thousand tonnes
Roads	122,665	529,551
Railways	23,462	83,317
Inland waterways	15,880	99,325
<b>Total</b>	<b>162,007</b>	<b>712,193</b>



In 2022, in Belgium, Bulgaria, Czech Republic, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Croatia, Italy, Latvia, Cyprus, Lithuania, Luxembourg, Hungary, Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden, the total tonnes transported over a distance of more than 500 km represented 14%. This corresponds to 54% of the

#### Modal shift scenario

from road to rail (%)

10

Modal shift value - In million tonne-km

65,382	10,427	0
Long distance	Road to Rail	Road to IWW

Volume in million tonne-km after scenario

112,238	33,889	15880
Road	Rail	Inland Waterways

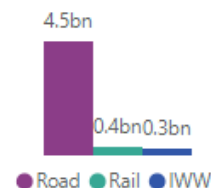
Modal shift value - In thousand tonnes

74,134	13,810	0
Long distance	Road to Rail	Road to IWW

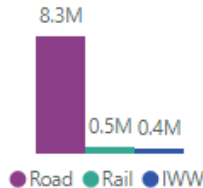
from road to IWW (%)

0

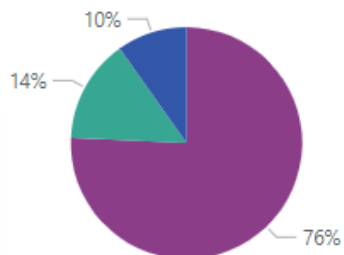
External cost



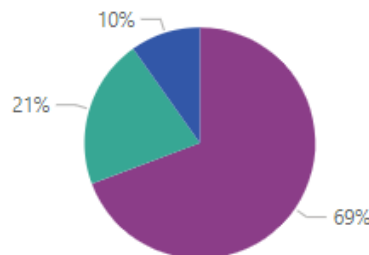
GHG emissions



Modal split for chemicals



Modal split after scenario

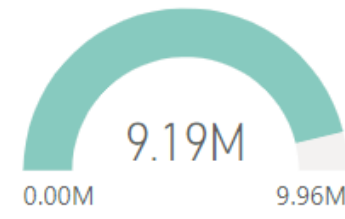


If 10% of the total road tonne-km are shifted, an external cost saving can be € 30/tonne, meaning € 607 per 20-tonne container.

On top, a saving of 1.083 kg CO2e/tonne shipped could be realized.



-419.20M



-771.39K

Disclaimer





# Thank you.



## About Cefic

Cefic, the European Chemical Industry Council, founded in 1972, is the voice of large, medium and small chemical companies across Europe, which provide 1.2 million jobs and account for 15% of world chemicals production. Cefic members form one of the most active networks of the business community, complemented by partnerships with industry associations representing various sectors in the value chain. A full list of our members is available on the Cefic website.

Cefic is an active member of the International Council of Chemical Associations (ICCA), which represents chemical manufacturers and producers all over the world and seeks to strengthen existing cooperation with global organisations such as UNEP and the OECD to improve chemicals management worldwide



# Back-Up Slides



## About Cefic

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# First came co-creation ...Next comes co-implementation

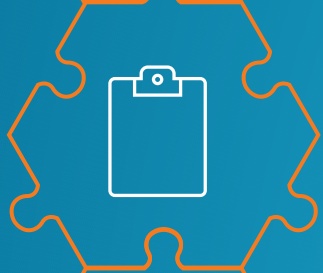
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**Annual progress** report / stakeholder meeting



Creation of **task forces** dedicated to the topics of high priority



Annual **survey** for stakeholders who have made commitments.



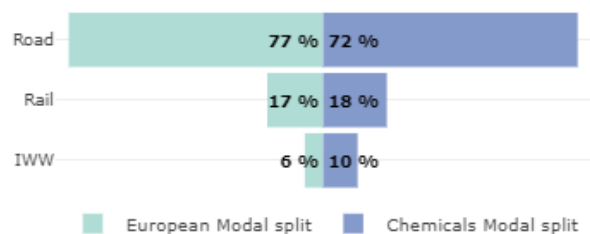
Translation into **national plans**



# EU Chemicals Modal Split

## Inland Freight Transport Modal Split: Examining Trends and Patterns Across Modes

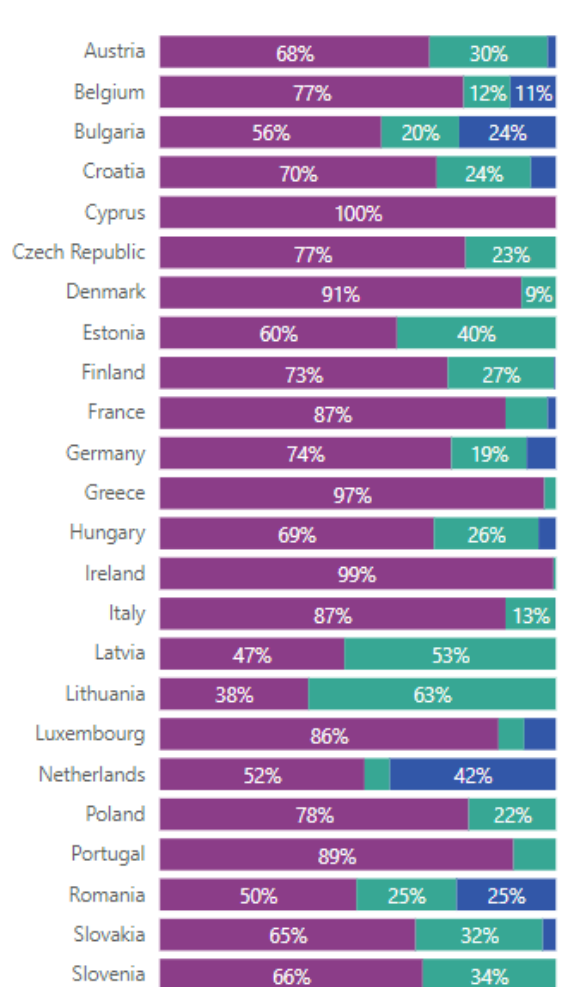
Modal split for EU27 - 2021



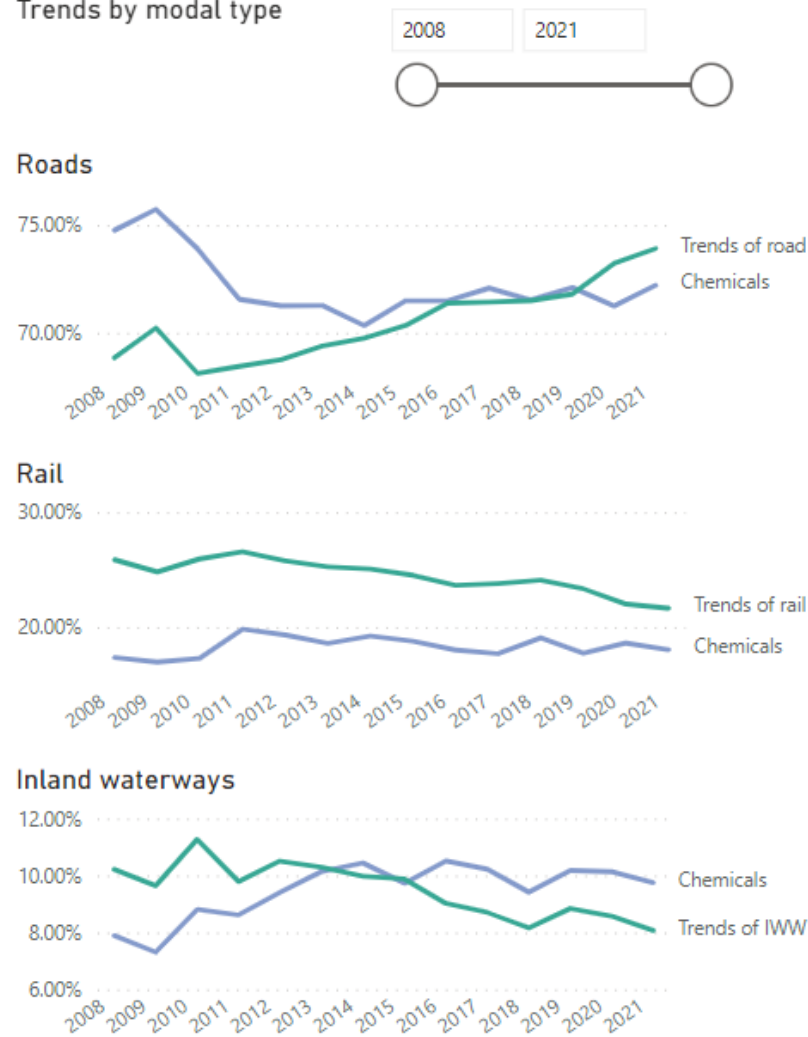
Modal split for EU27

Year	Inland waterways	Railways	Roads
2021	6%	17%	77%
2020	6%	17%	77%
2019	6%	18%	76%
2018	6%	19%	76%
2017	7%	18%	75%
2016	7%	19%	75%
2015	7%	19%	74%
2014	7%	19%	74%
2013	7%	19%	74%
2012	7%	19%	74%
2011	7%	19%	74%
2010	7%	18%	75%
2009	7%	17%	76%
2008	7%	19%	74%

National modal split



Trends by modal type





# EU Chemicals transport – external costs & GHG emissions

## Estimating External Costs and GHG Emissions

Disclaimer

2021 Chemicals



### Transported goods

Mode	Million tonne-km	Thousand tonnes
Inland waterways	17,645	103,733
Railways	32,648	114,146
Roads	130,699	562,327
<b>Total</b>	<b>180,992</b>	<b>780,206</b>

Total external cost

**6.03bn**

External cost per tonne

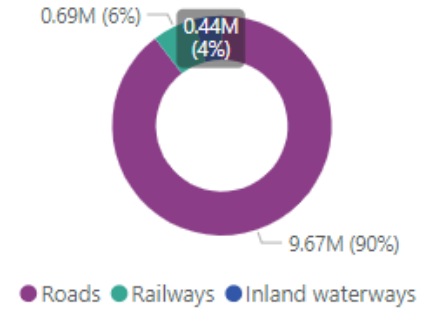
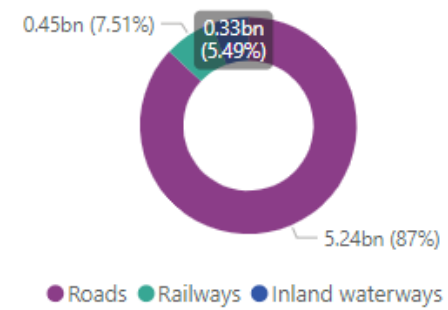
**€ 7.73**

Total GHG emissions (in tonnes)

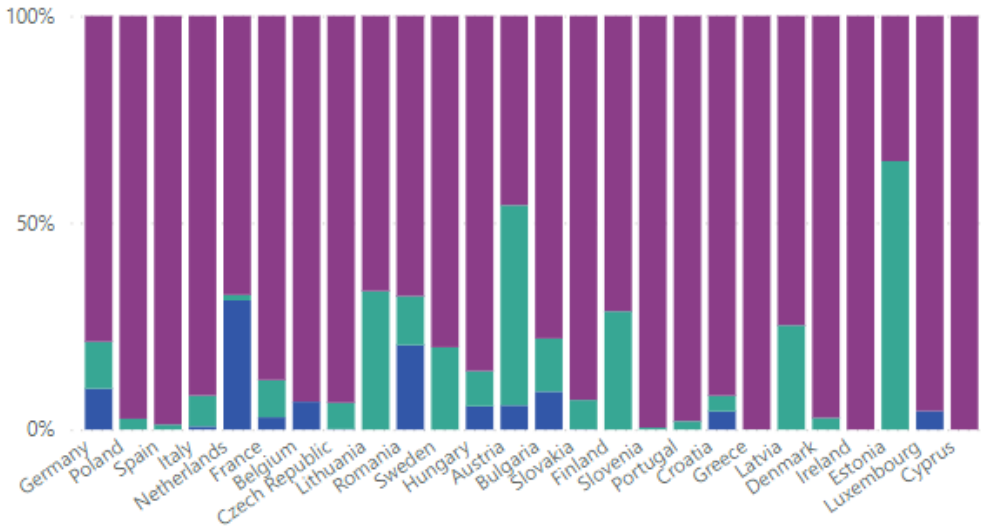
**10.79M**

GHG emissions per tonnes

**13.84 kg**



### External Cost by Country



### Trends on GHG emissions (in tonnes)

