

CHEMISTRY THAT MATTERS™



# SUSTAINABILITY TRANSFORMING THE CHEMICAL SECTOR

PRESENTATION TO ECTA ANNUAL MEETING

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# SABIC AT A GLANCE



1976

Company established



31,000

Employees around the world



50

Countries of operations



9,948

Global patents and pending applications



Top 2

Chemical Brand Value\*

4.72

US\$ bn

Estimated Brand Value\*

83.46

US\$ bn

Total assets

4.41

US\$ bn

Net income

52.92

US\$ bn

Annual revenue



≈ 150

New products each year



65

World-class plants worldwide

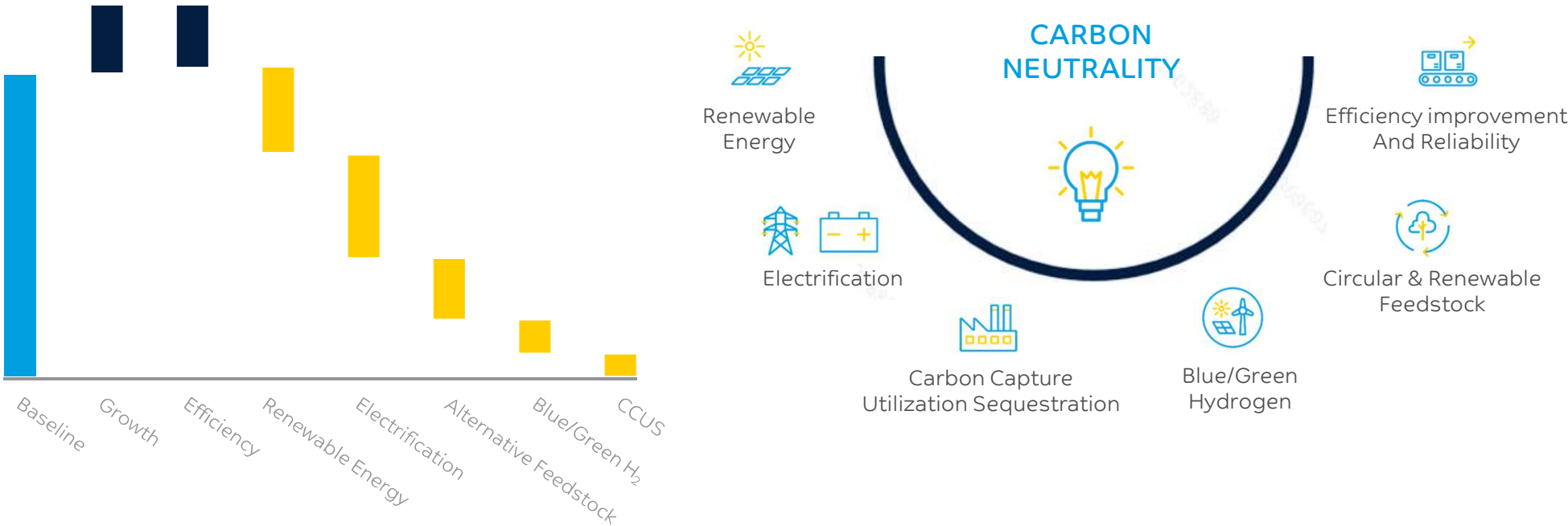
\*Brand Finance, 2022

# 4 SUSTAINABILITY PILLARS CONNECTED TO SABIC MATERIALITY

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# CONSIDERATIONS FOR REDUCING SCOPE 1 AND 2

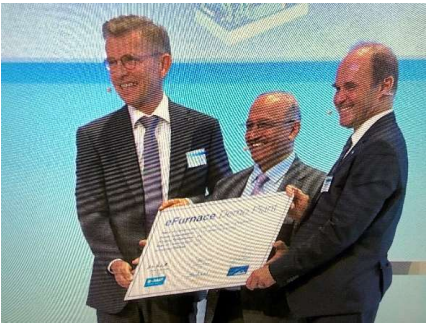
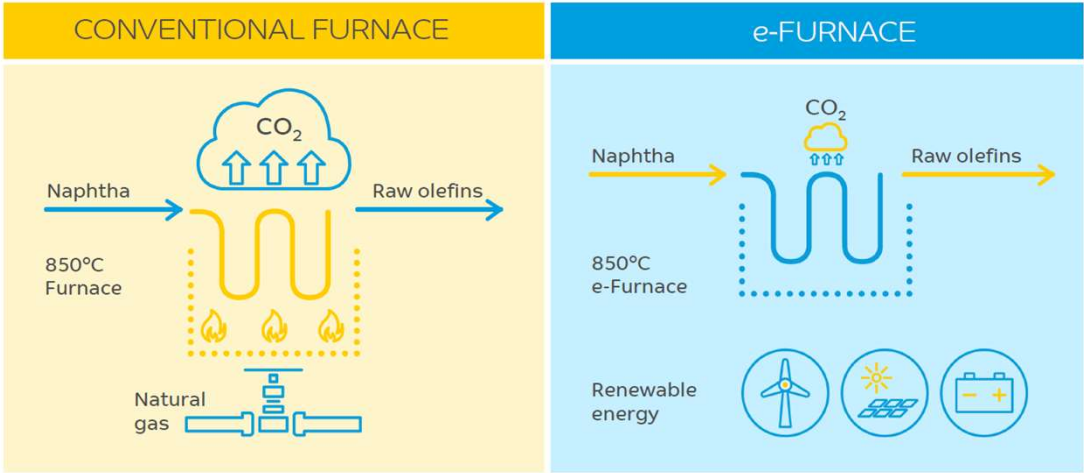


- Short term roadmap options are TRL 8/9 technologies to be implemented in the current decade.
- Medium term TRL 5-7 demo scale technologies expected to be implemented full scale as from early next decade.
- Long term TRL 2-4 technologies still to be proven, implementation no earlier than late next decade.

# ONGOING PROJECTS FOR REDUCING CARBON FOOTPRINT OF SABIC ASSETS

## ELECTRIFICATION

- From current steam-driven **compressors and pumps to electric ones** that will reduce GHG emissions.
- In 2021, we signed a joint agreement with BASF and Linde to develop and demonstrate solutions for **electrically heated steam cracker furnaces**. By using electricity from renewable sources, the fundamentally new technology has the potential to reduce CO<sub>2</sub> emissions by as much as 90%.



Groundbreaking event 1 September 2022  
Ludwigshafen and expected start-up end 2023



# SABIC'S TRUCIRCLE™ PROGRAM – CASE STUDIES



## CLOSING THE LOOP AND CREATING A CIRCULAR ECONOMY FOR PLASTICS

# SABIC SUSTAINABLE CHEMISTRY PROGRAM – ADDING A NEW DIMENSION



Develop chemicals and technologies to enhance the re-use of products

## Circular Chemistry

- Design for recyclability
- Mechanically recycled polymer
- Certified circular polymer
- Certified bio-renewable polymer



Develop portfolio of chemicals with favorable sustainability features

## Sustainable Solutions

- Increase resource efficiency
- Reduce CO2 emissions
- Improve energy efficiency




Portfolio management and innovations based on chemicals safety

## Safer Chemistry

- Phase-out substances of concern
- Hazard reduction solutions for existing industry challenges

**Sustainable Chemistry is built on the foundation of Sound Chemicals Management**  
(as currently practiced through Product Stewardship principles and processes)

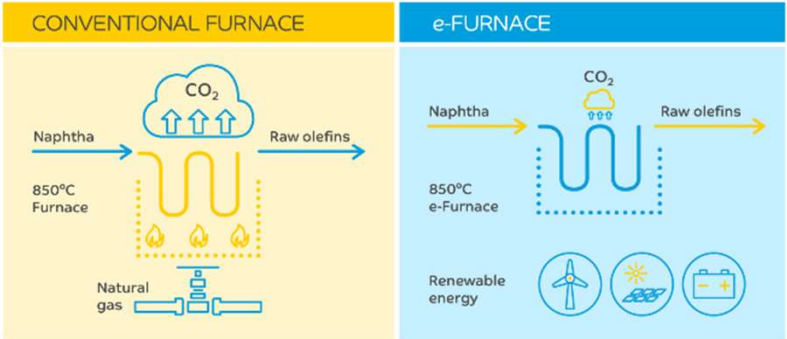
 SABIC program, organization and targets in place

 SABIC ambition, roadmap and targets under development

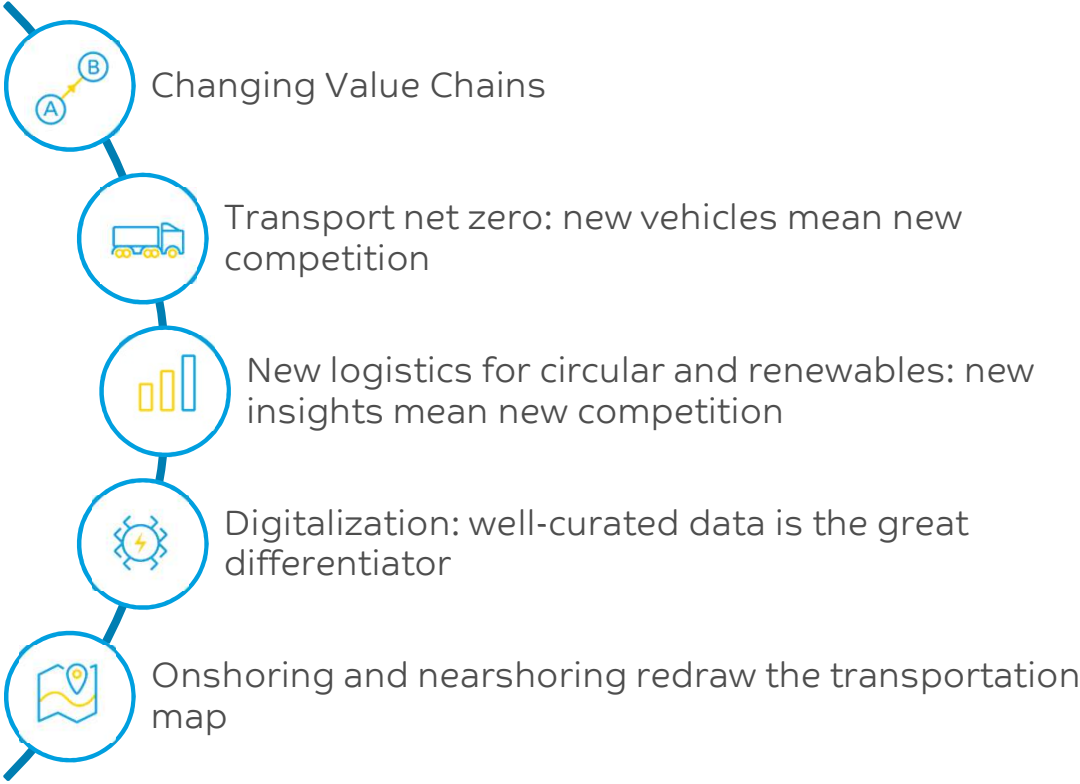
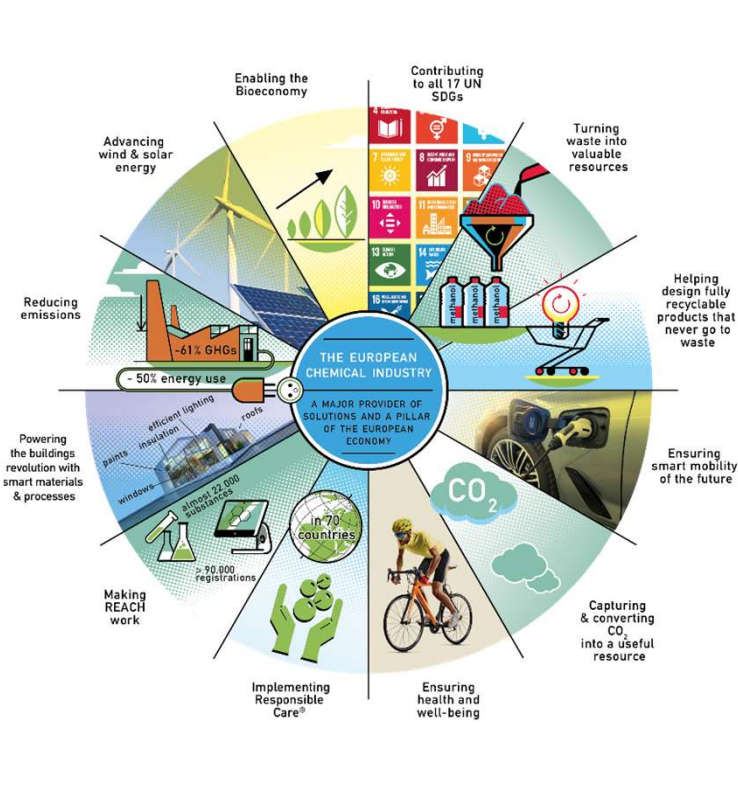


# EUROPE BEING THE TRANSFORMATION ENABLER

WITH FOCUS ON ELECTRIFICATION FOR TRANSFORMATION DRIVEN BY CLIMATE CHANGE AND SABIC TRUCIRCLE INITIATIVE FOR A CIRCULAR ECONOMY, SABIC IN EUROPE WILL ENABLE THE TRANSFORMATION AND BE THE FIRST ADOPTER IN SEVERAL OF THESE AREAS



# CHEMICALS SUPPLY MANY STRATEGIC VALUE CHAINS

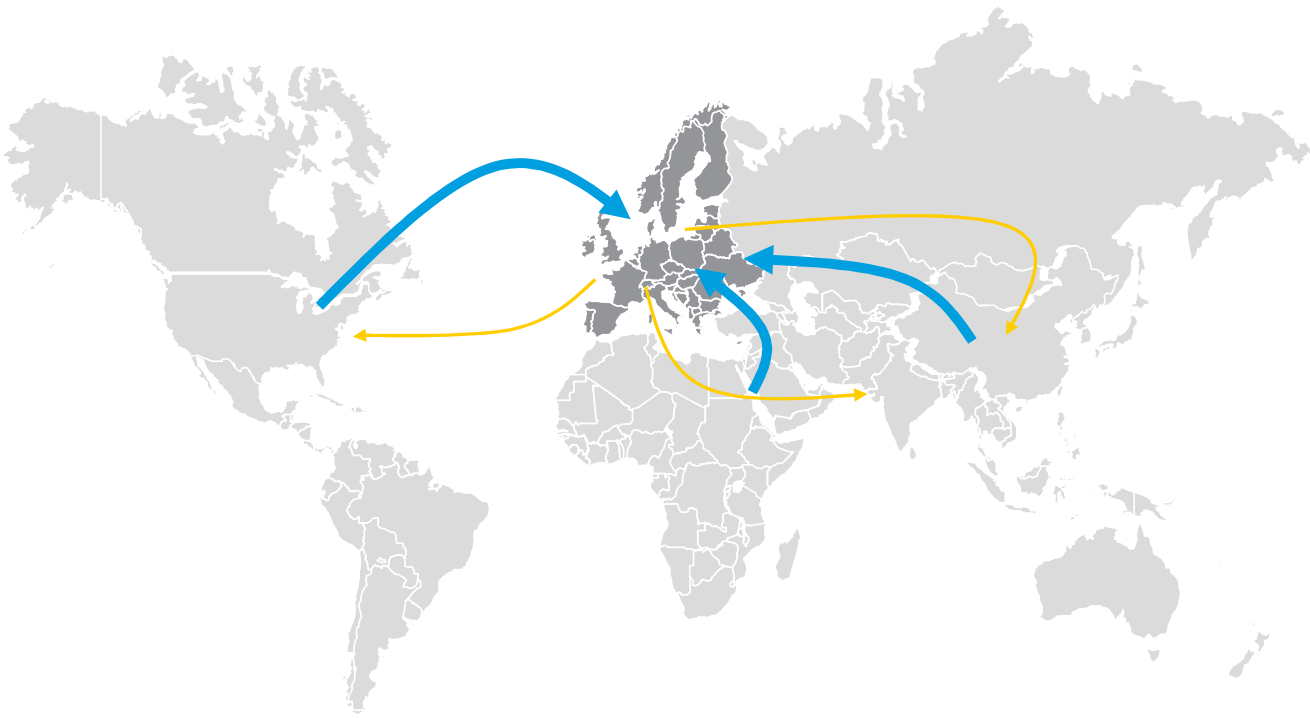


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# EXPECTED IMPACTS FOR CHEMICAL SUPPLY CHAINS IN EUROPE

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# EUROPE: FROM NET EXPORTER TO NET IMPORTER



### Considerations

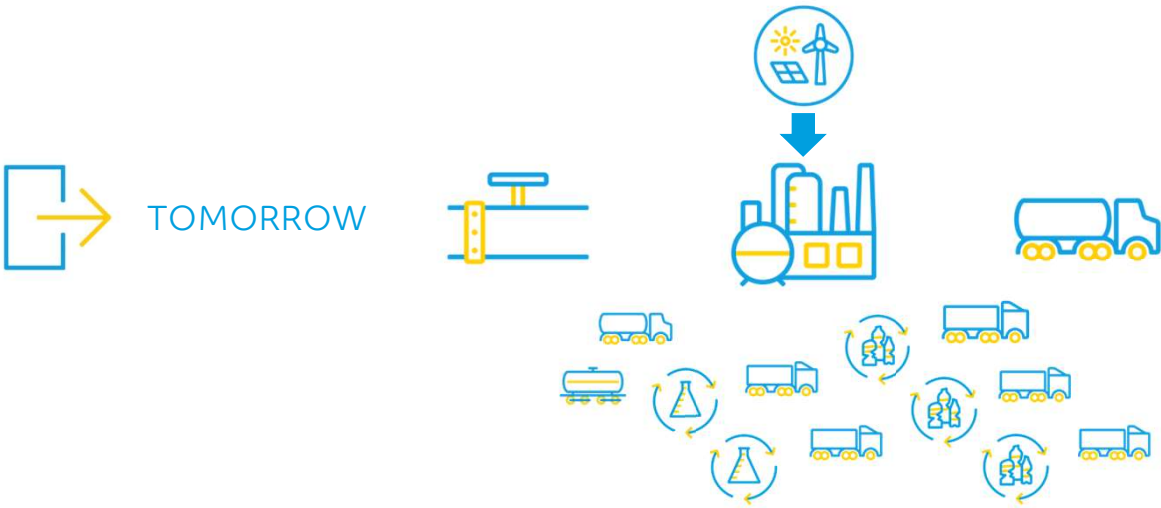
- Energy / carbon intensive industry in Europe under huge pressure
- Low-carbon (fossil) imports will increase
- End-to-end supply chain solutions from export region to European customer base will prevail
- European chemical assets will be circular and green
- Transportation flows will change

→ Past      → Future

# CIRCULARITY WILL CREATE CHALLENGES FOR INBOUND SUPPLY CHAINS



- Inbound via pipeline or vessel
- Cracker and polymer plant
- SC's are typically outbound focused



- Collection decentral from populated area's
- Sorting, treatment
- Treatment facilities linked to crackers

Transport movements will triple and need to be green as well

# SC EMISSIONS WILL BECOME MORE TRANSPARENT

## SABIC corporate Science Based Target (SBT)

Scope	2020 SABIC emission	2030 SABIC reduction target	2020 SC emission	Short term	> 2025
<b>Scope 1</b> Emissions from owned sources 	22%	-45%	86% Ocean	<ul style="list-style-type: none"> <li>Payload &amp; Packaging</li> <li>Eco-vessels</li> <li>Alternative fuels development (MeOH)</li> </ul>	<ul style="list-style-type: none"> <li>Vessel renewal programs</li> <li>Clean fuel introduction (ocean/land)</li> </ul>
<b>Scope 2</b> Indirect emissions associated with power generation 	10%	-12%			
<b>Scope 3</b> Indirect emissions company's value chain 	2,5 % 68%	-12%	12% Road	<ul style="list-style-type: none"> <li>E-truck experimenting (China eading!)</li> <li>Rail/intermodal push</li> </ul>	
			2% Intermodal		



sustainability facts	
<b>carbon emissions (CO2e)</b>	<b>24.50g</b>
per use 125 uses / bottle 1 use = 4-6 spritzes	
<b>pre manufacturing</b>	<b>23.0g</b>
<b>production</b>	<b>0.2mg</b>
<b>distribution</b>	<b>1.1g</b>
<b>end of life</b>	<b>0.3g</b>
<b>production</b>	
<b>ethical labor</b>	<b>100%</b>
<b>geographic</b>	<b>made in arizona</b>
<b>packaging</b>	
<b>bottle</b>	
<b>material</b>	<b>flint glass</b>
<b>recyclability</b>	<b>100%</b>
<b>sprayer</b>	
<b>primary material</b>	<b>virgin PP plastic</b>
<b>recyclability</b>	<b>0%</b>
<b>box</b>	
<b>material</b>	<b>FSC paper with soy ink and water-based coating</b>
<b>recyclability</b>	<b>100%</b>
<b>how to recycle</b>	
<b>peel off label, recycle bottle, &amp; discard sprayer</b>	

Source: Cookind

**WHAT GET'S MEASURED, WILL GET ATTENTION:  
REPORTING AND TRANSPARENCY IS THE FIRST STEP TOWARDS IMPROVEMENT**

# OPERATION CLEANSWEEP WILL BE CRITICAL FOR PLASTICS SUPPLY CHAINS

No doubt – marine litter is a serious concern ...



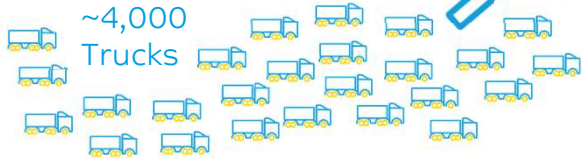
... and public opinion questions the efforts of the industry so far...



... leading to legislation and measures



➔ ~50% OF PELLET LOSS APPEARS IN THE SUPPLY CHAIN



Our industry is enhancing the Operation CleanSweep (OCS) initiative which was launched 10 years ago, ....



- Enhanced requirements
- 3<sup>rd</sup> party audit and certification
- 400 sites to be certified in the next 3 years

... SABIC will drive OCS with supply chain partners via the SQAS framework

- Nov. '22: OCS Supervisory accepted SQAS as an alternative assessment system to the OCS certification
  - March '23: Start of SQAS assessments with the new system
- => The OCS Public Register will show OCS certified companies



THANK YOU

