



INEOS STYROLUTION

Driving Success. Together.

Styrenics. Made for Recycling!

Sven Riechers
INEOS Styrolution Switzerland S.A.

INEOS Styrolution at a glance

 **3,500**
EMPLOYEES

 **10**
COUNTRIES

20 
PRODUCTION SITES

 **6** R&D
CENTERS

 **24** sales
offices

Nº1
GLOBAL
LEADER
in styrenics

85+
YEARS
of experience
in styrenics

founded in
2011

APPROX. **1,000**
PATENTS

4,000+
CUSTOMERS

1,500+ PRODUCTS



2,000+ APPLICATIONS ACROSS SEVEN INDUSTRIES



AUTOMOTIVE



ELECTRONICS



HOUSEHOLD



CONSTRUCTION



HEALTHCARE



PACKAGING

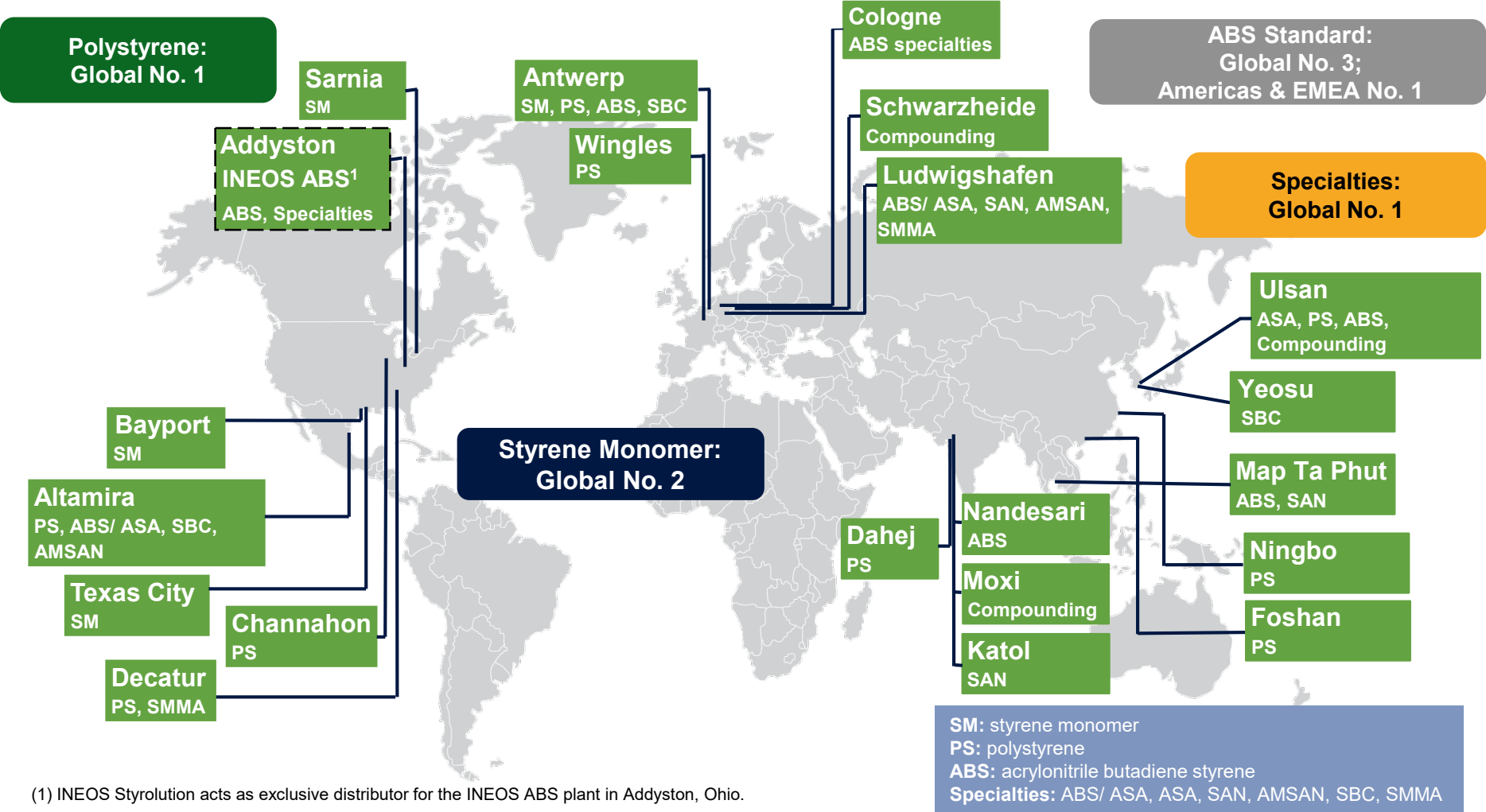


TOYS, SPORTS
& LEISURE

5.4 BILLION
EUROS IN REVENUE
IN 2018



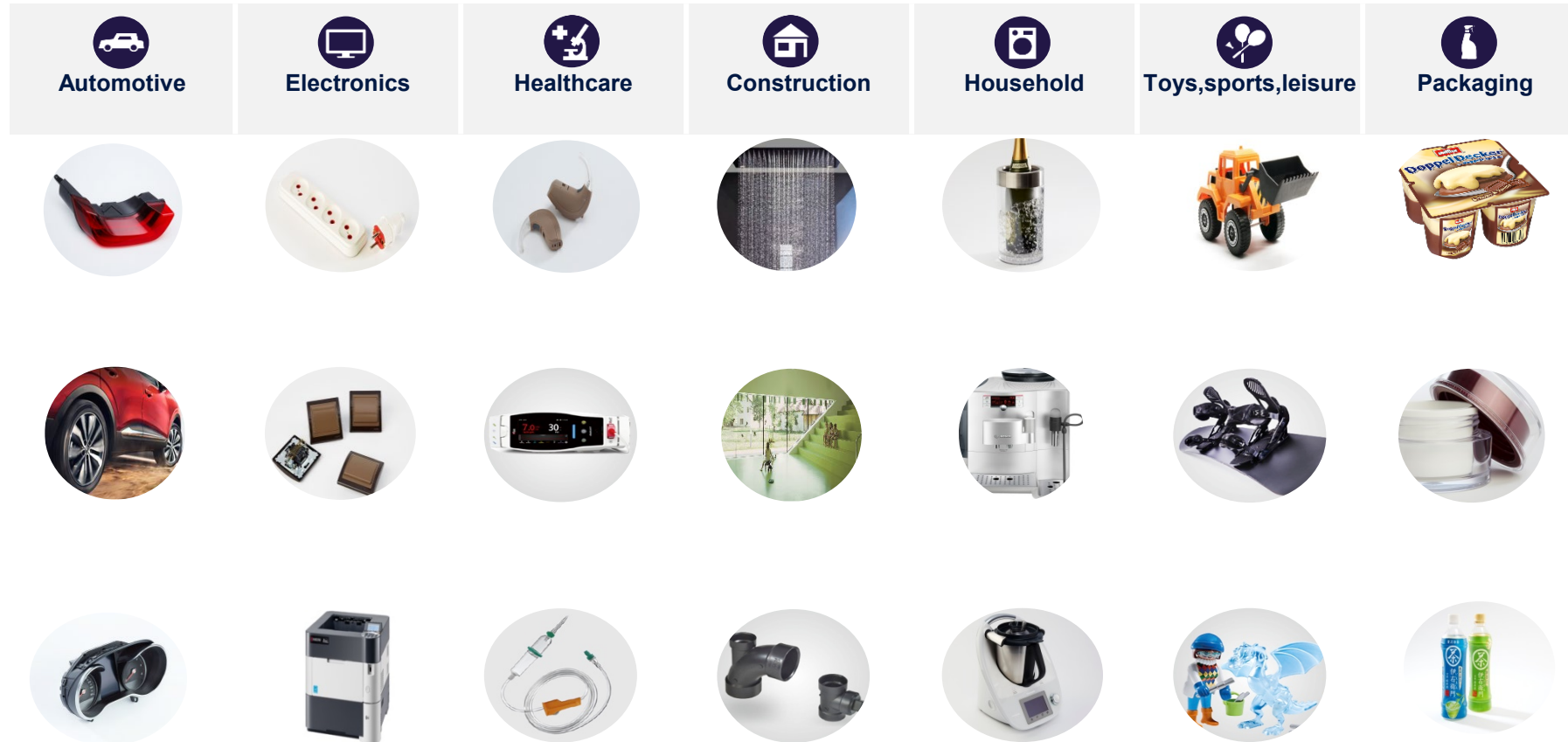
Leading styrenics producer with global reach and proximity to customers



INEOS Styrolution continuously strengthens its leading positions in key markets

Styrenics provide a competitive edge for a wide range of customers

Right solution for a broad range of applications across key industries



Customer industry diversity allows for greater business stability

We are actively contributing to a circular economy – as an industry, a group and a company

Plastics/ styrenics industry	INEOS Group	INEOS Styrolution
<ul style="list-style-type: none">• Plastics 2030 Voluntary Commitment• Styrenics Circular Solutions 	<ul style="list-style-type: none">• Best practice and experience exchange• Explore joint opportunities and projects	<ul style="list-style-type: none">• Support the shift to a circular economy• Develop the best solutions in recycling of styrenics
Find and define joint solutions with high leverage as an industry	Leverage on group capabilities of a major player in chemicals	Offer our customers leading-edge sustainable choices

We at INEOS have given ourselves a highly ambitious challenge

By 2025, INEOS will:

- **Use, on average, 30% recycled content in products destined for polystyrene packaging in Europe.**
- Offer a range of polyolefin products for packaging applications in Europe containing 50% or more recycled content.
- Deliver 900kt/a vinyl recycling by our leadership of the VinylPlus programme.
- Incorporate at least 325kt/a of recycled material into products.
- Ensure 100% of polymer products can be recycled.

INEOS
THE WORD FOR CHEMICALS

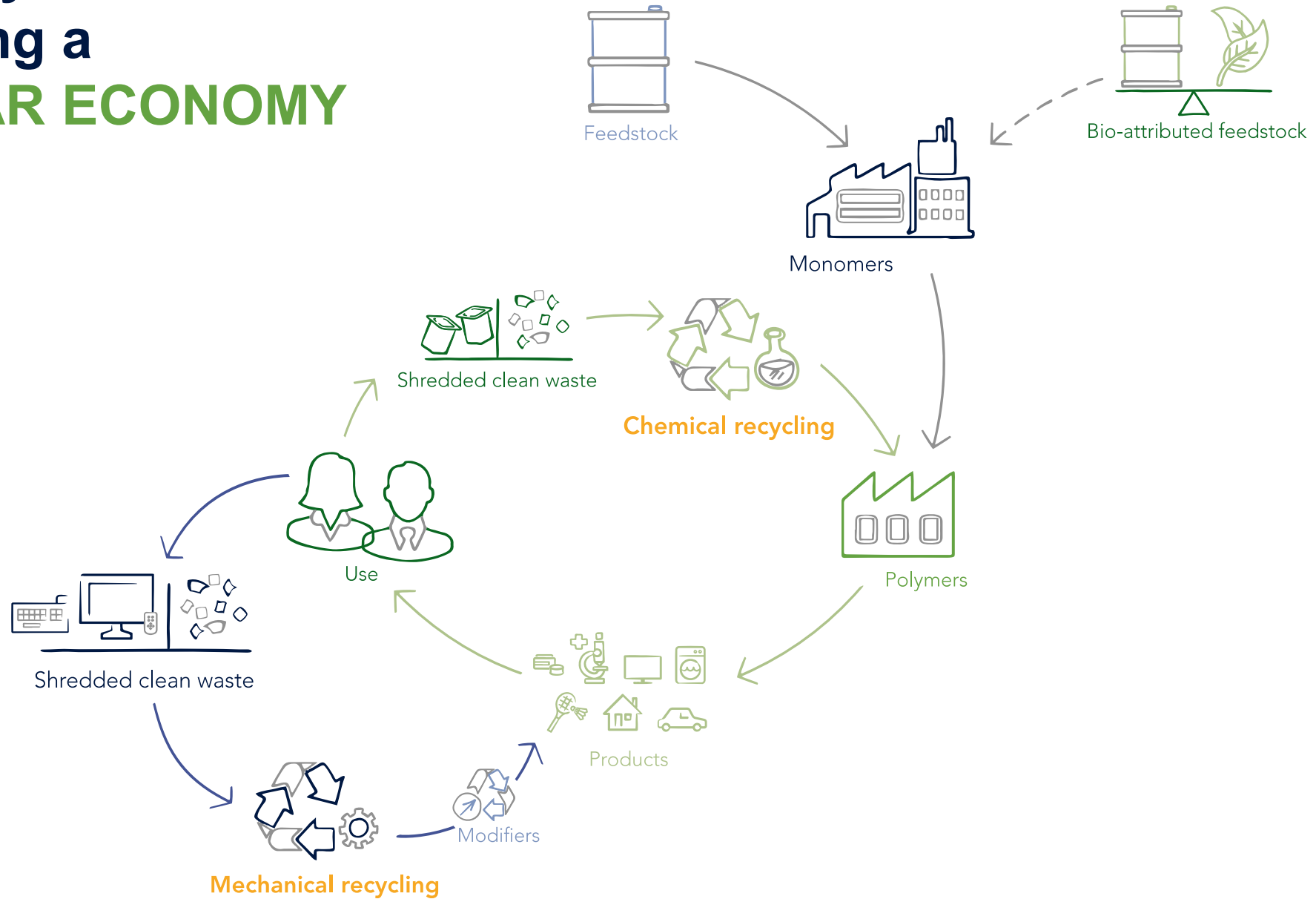


INEOS
STYROLUTION



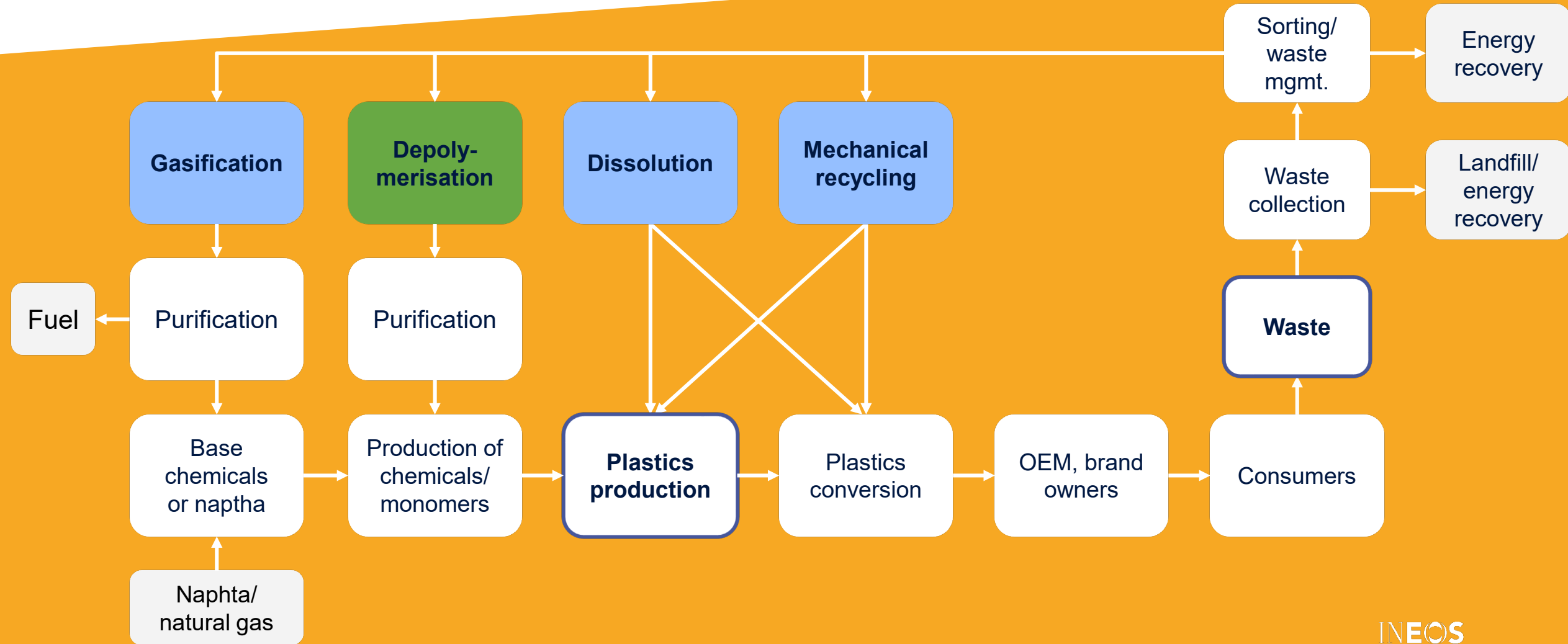
We close **the loop for you!**

INEOS Styrolution is enabling a **CIRCULAR ECONOMY**

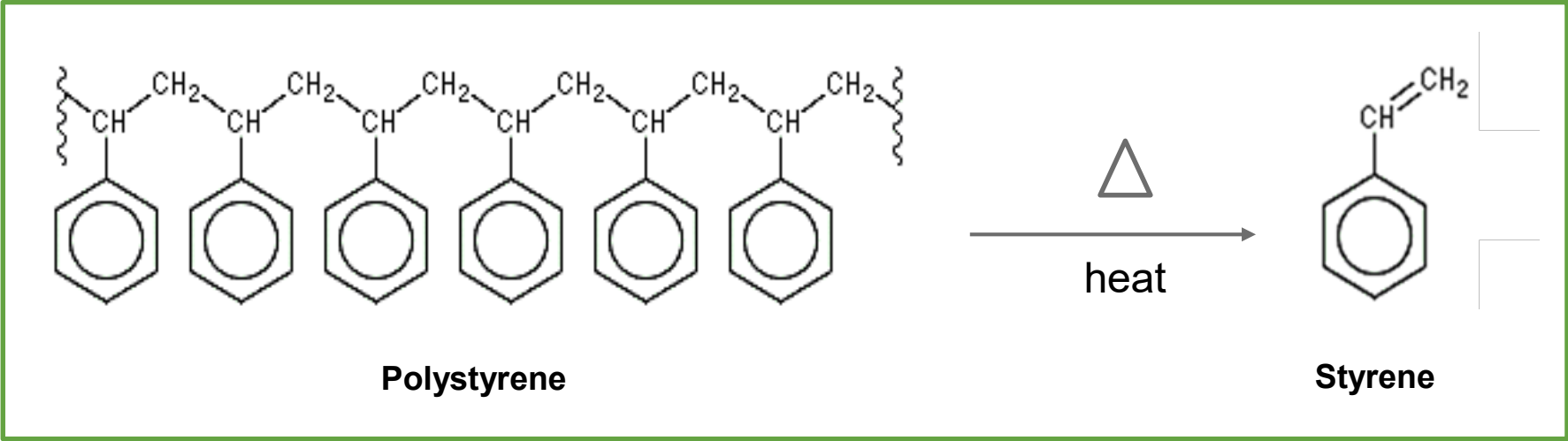


New plastics economy:

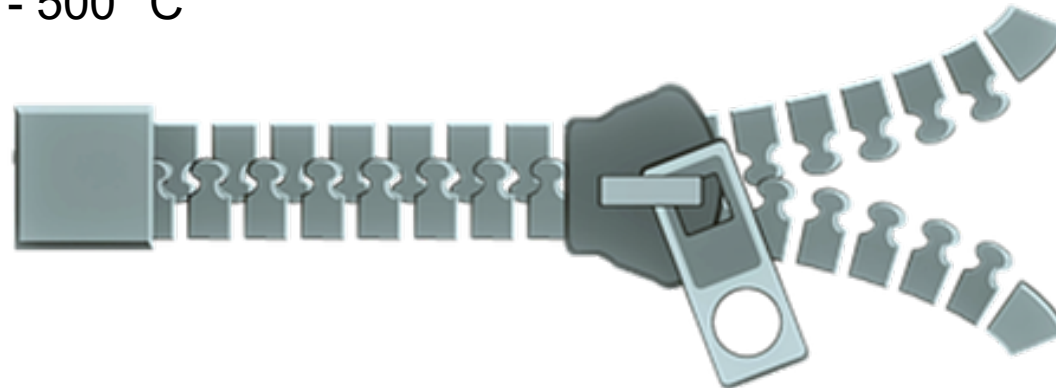
Options for a circular economy



Depolymerisation to styrene uses the unique properties of polystyrene



- Inherent advantage of polystyrene is the decomposition into monomers (depolymerisation) > thermal cracking (“zip mechanism”) from 280°C onwards
- Depolymerisation is possible in various reactor types at temperatures of typically 350 - 500 °C



**TAKING THE “SINGLE”
OUT OF SINGLE USE**



INEOS Styrolution

The road to chemical recycling 1/2

Resolve: INEOS Styrolution receives public funding from the German Federal Ministry of Education and Research for a research project to recycle polystyrene post-consumer waste

INEOS Styrolution: Breakthrough in chemical recycling of polystyrene: first production of virgin PS from only depolymerised material

INEOS Styrolution collaborates with **Unternehmensgruppe Theo Müller** to develop chemical recycling solution for polystyrene

SEP
2017

Agilyx Corporation and INEOS Styrolution sign joint development agreement for polystyrene recycling in the USA

SEP
2017

NOV
2017

Pyrowave and INEOS Styrolution announce strategic partnership to recycle North American post-consumer polystyrene

APR
2019

INEOS Styrolution and GreenMantra sign JDA to advance polystyrene chemical recycling

MAY
2019

JUL
2019

INEOS Styrolution

The road to chemical recycling 2/2

SCS members Trinseo and INEOS Styrolution plan commercial scale polystyrene chemical recycling plant with Agilyx in Europe

INEOS Styrolution launches new ECO family of sustainable products

INEOS Styrolution receives prestigious ICIS Innovation Award for chemical recycling of polystyrene

JUL
2019

INEOS Styrolution collaborates with Indaver aiming at a chemical recycling for polystyrene

JUL
2019

OCT
2019

INEOS Styrolution advances closer to offering recycled polystyrene at commercial scale (K Show - first yoghurt cups from chemically recycled PS)

OCT
2019

OCT
2019

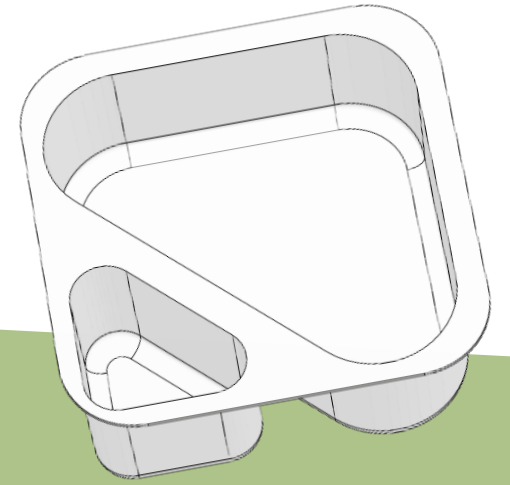
INEOS Styrolution and Sirap agree on joint project aiming at depolymerisation solution for polystyrene

DEC
2019

Depolymerisation process – From yoghurt cup to yoghurt cup



Proof of concept: Styrenics are made for recycling!



In April 2019,
we achieved a breakthrough
in chemical recycling by
producing
100% recycled polystyrene
at lab-scale

Same product
properties as
polystyrene
produced
from new styrene
monomers

In September 2019,
Unternehmensgruppe
Theo Müller
develops first yoghurt
cups from chemically
recycled polystyrene.

**We plan to produce
recycled polystyrene
at commercial scale
in 2021**

**Concept proven on lab scale.
Now, we'll work with our partners on scaling it up.**



INEOS STYROLUTION



For more details, visit styrolution-eco.com