

Changing the nature of chemistry

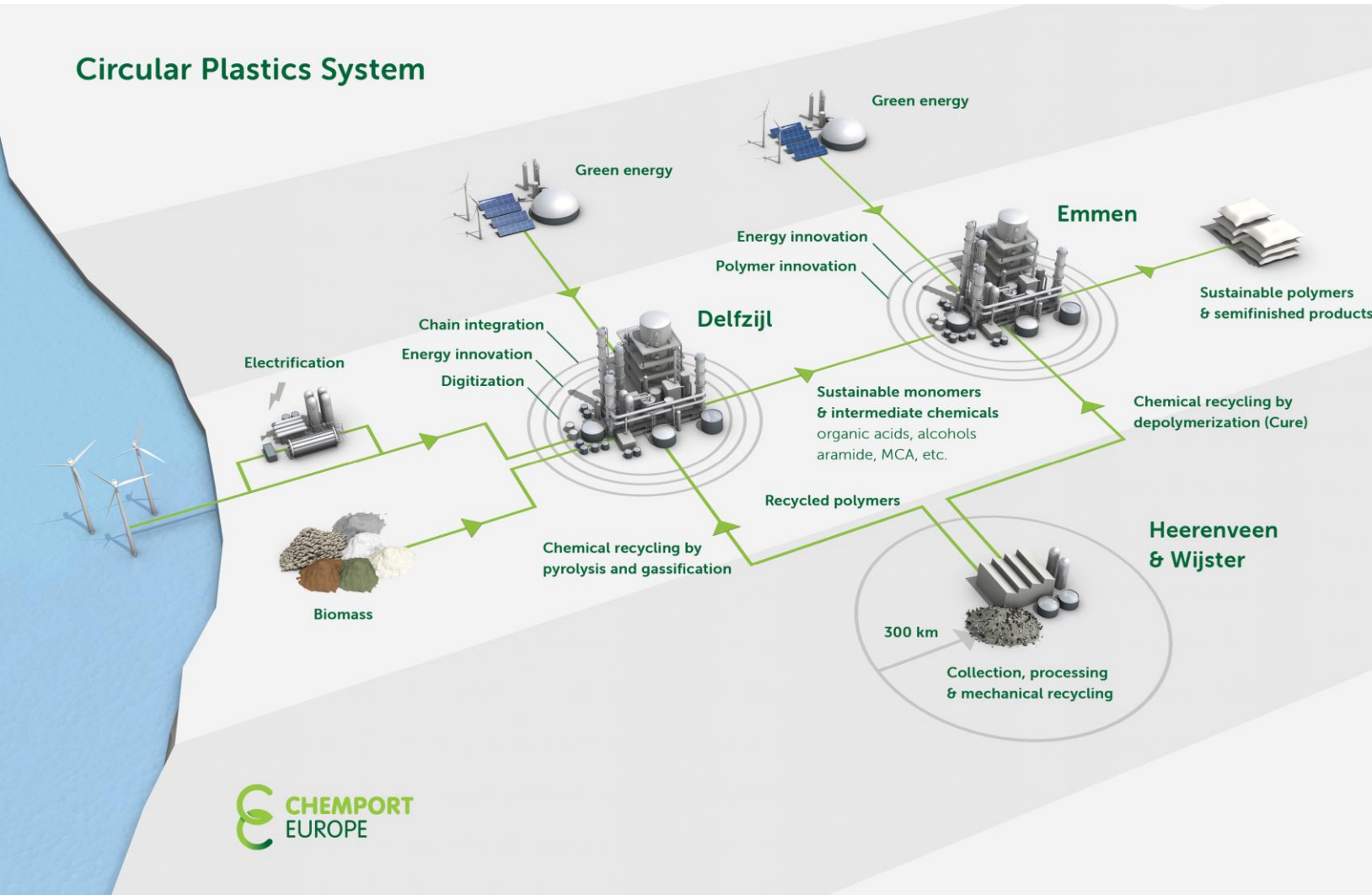
We make the Circular Plastics System Work!

Circular plastics is one of the focus areas at Chemport Europe

Chemport is the name of the chemical production and development ecosystem, located in the northern part of the Netherlands



Circular Plastics System



Circular polymers are a key element in the comprehensive Chemport ecosystem

Together we actively work on



CONVERTING RECYCLED
PLASTIC INTO QUALITY
FEEDSTOCK



MAKING PRODUCTS FROM
QUALITY FEEDSTOCK



RECOVERING AND
RECYCLING ALL KINDS
OF PLASTICS



REDUCE PLASTIC WASTE
AND POLLUTION

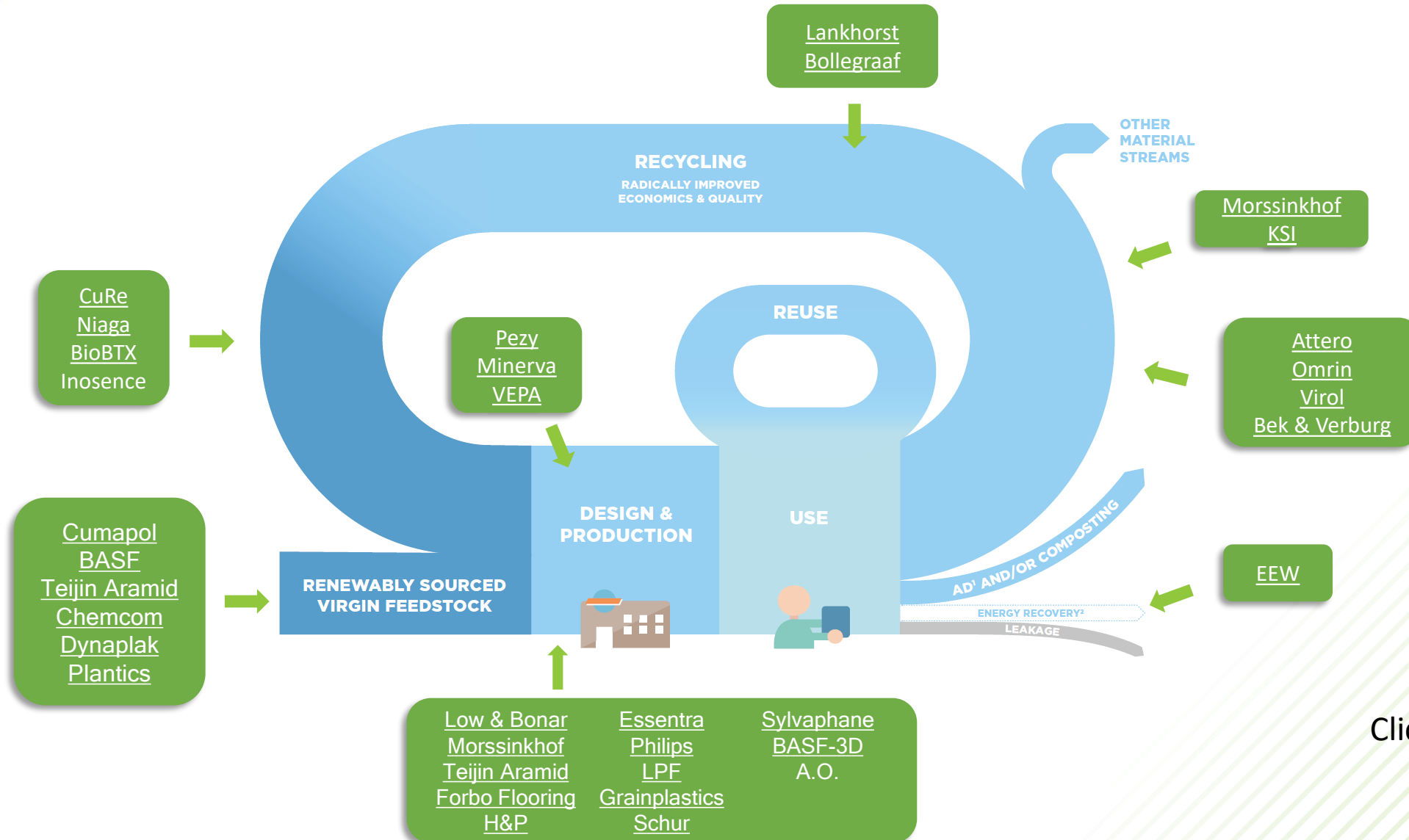
All bases are covered at an industrial scale. Together with key partners along the value chain such as:

- Equipment manufacturers
- Industrial service providers
- Scientific partners
- Governmental organizations



- ✓ Highly advanced **Collection & Mechanical Recycling** system of post-consumer waste (>75kT of different products)
- ✓ Integrated **Polymer Production** cluster
 - Production and subsequent processing of a wide range of plastics; (r)PET, PA, PBT, TPE, HDPE, ABS, PS, PLA, PHA, PBAT
 - One of the largest man-made fibre clusters in Europa
 - Largest combined processing capacity of rPET in Europe
 - Largest producer of Aramid in the world
- ✓ European frontrunner in **Chemical Recycling**
- ✓ World Class **Technology Providers**
- ✓ 2nd **Start-up region** of the Netherlands
- ✓ Close **cooperation** within the value chain



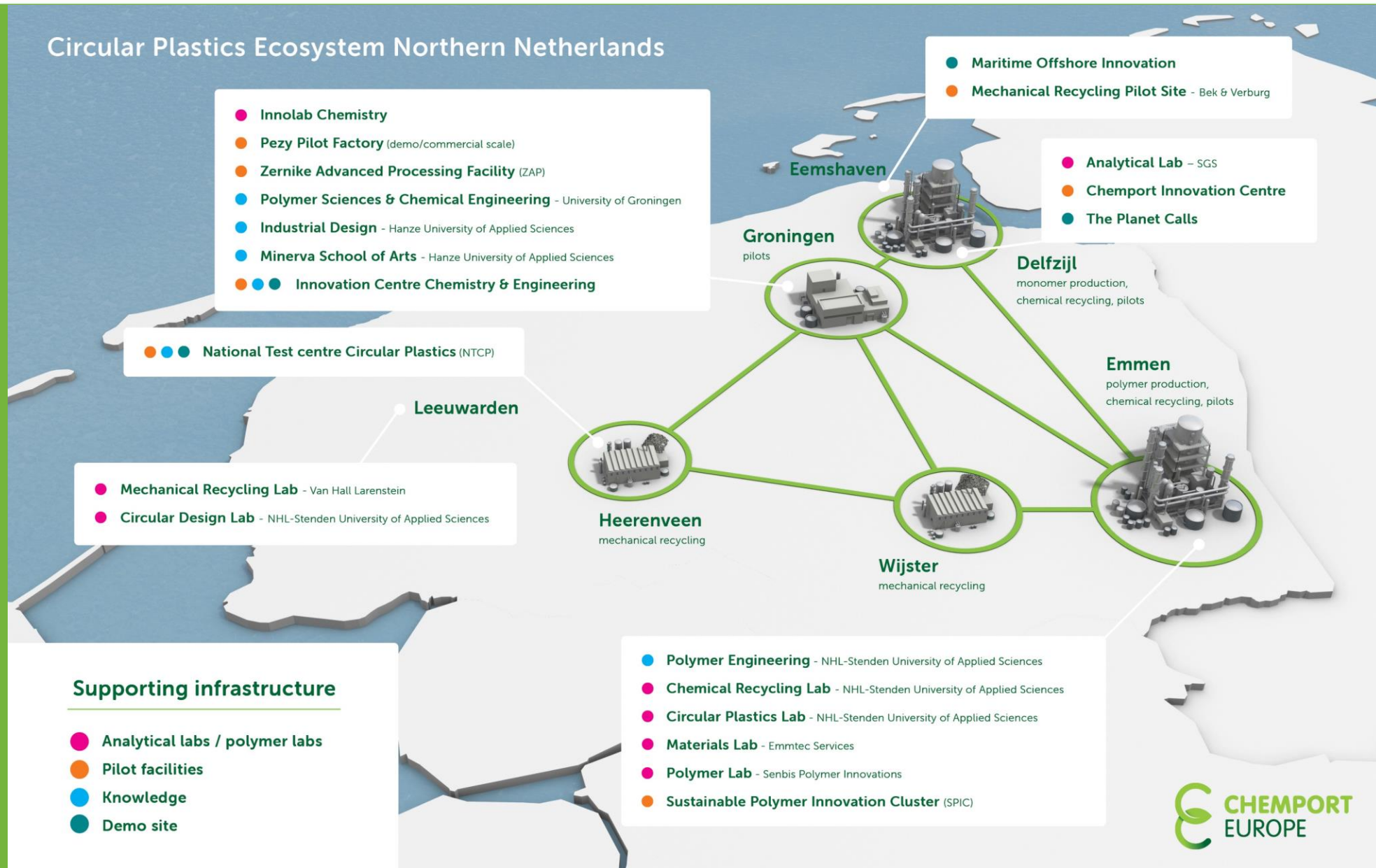


Click for more info!

[Company](#)

Complimented
by an extensive
supporting
infrastructure

Circular Plastics Ecosystem Northern Netherlands





Test and optimize your new circular business model and/or supply-chain



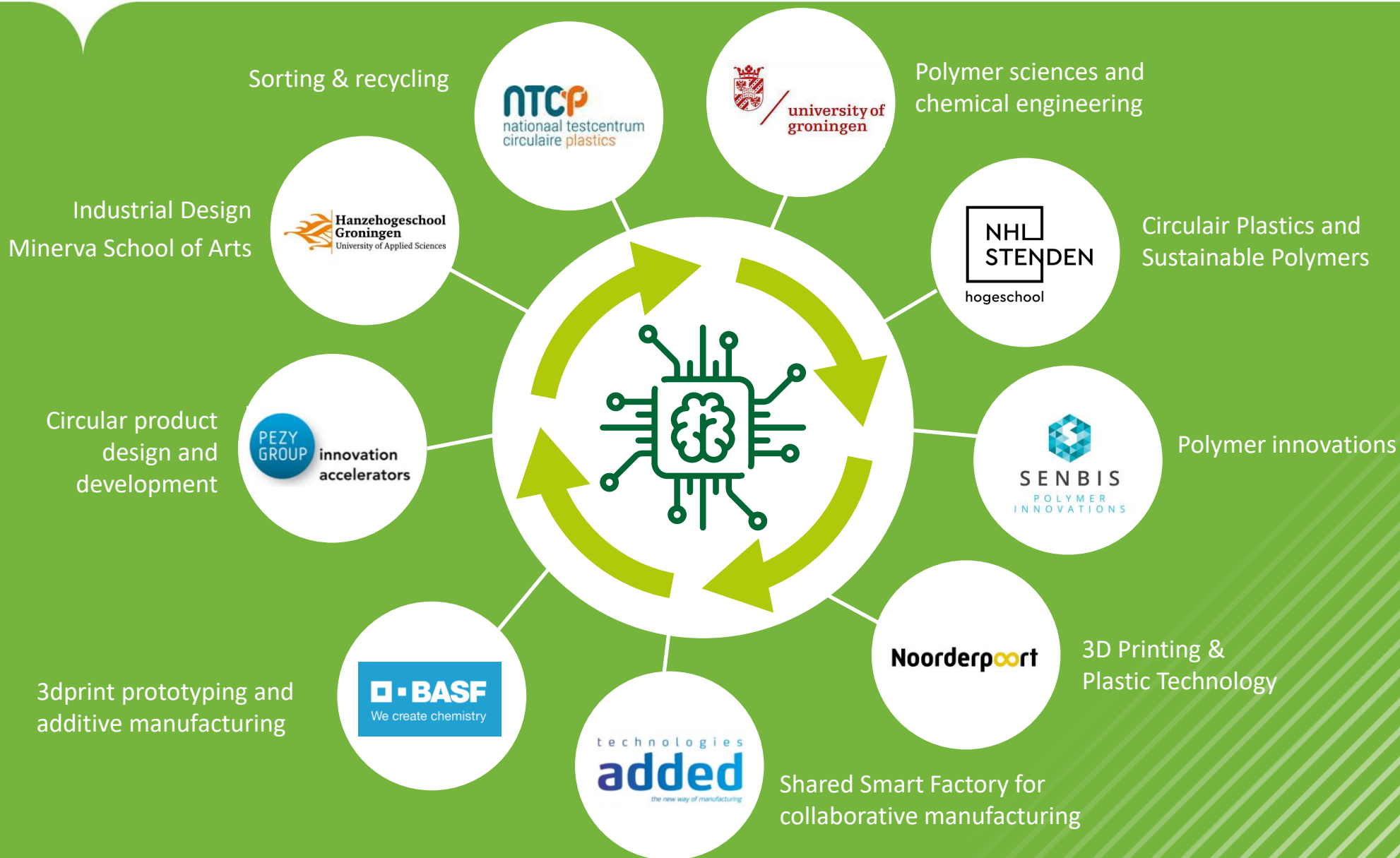
Test the market for circular products at an industrial scale before going to full production. Start regional scale fast(er) to national and European level



Plug into an existing large-scale ecosystem

Joint focus;

Companies, government, knowledge institutes



All you need to go green



**PARTNERS AVAILABLE ALONG
THE CHAIN**



JOINT FOCUS



POWERED BY GREEN ENERGY



**EUROPEAN FUNDING AND
EXPOSURE**



GOVERNMENTAL SUPPORT



KNOWLEDGE AND WORKFORCE

Join us to...
make the **Circular**
Plastic system work!



All part of Chemport Europe

For more information



Willemien Veele
Willemien.veele@circulairfriesland.frl
+316 – 47 97 04 26



Errit Bekkering
Bekkering@nom.nl
+316 – 25 00 83 70



Heleen van Wijk
h.vanwijk@ groningen-seaports.com
+316 – 31 65 19 86



A glimpse of innovations in the Chemport ecosystem

Vacuum cleaner made from post-consumer packaging waste

Grote doorbraak bereikt in recycling kunststof verpakkingen



PP from separated residual waste was recycled into a high-quality granulate. Achieved thanks to a collaboration between Philips, Morssinkhof, NHL / Stenden, Groningen University, and Omrin.

This unique breakthrough produces such high quality and high purity raw-material granulate, that it can be re-used on a large scale and to produce high-quality 'new' plastic for consumer products in any color.

This unique recycling plant has been designed and build by [Bollegraaf Recycling Solutions](#).

Circular designed and produced climate sensors



Functional range of high-tech
products based on
recycled polymers



Pezy Group helps companies to break free from the traditional 'take-make-waste' design process. Products are 'designed for recycling' or 'designed from recycling'.



Railway sleepers from recycled polymers



General Manager Sjouke Tjalsma, Technical Manager Aran van Belkom and Commercial Manager Stefan Hofman at the production facility in Sneek, the Netherlands.

Lankhorst Engineered Products, manufacturer of KLP® Hybrid Polymer Sleepers, is the sole supplier of polymer sleepers for KiwiRail in New Zealand. The main reasons for KiwiRail to choose KLP® Hybrid Polymer Sleepers are the high quality combined with the long life-time of the product. The polymer sleepers will be applied in main track and in turn outs.

KiwiRail 

Lankhorst *Recycling Products*

100% circular carpets through chemical recycling of polyester



*Designed for recycling
&
Designed from recycling*




FLOORING SYSTEMS



VAN DE SANT
a Circular Innovation Company 




PlasticWhale.org

Scooter made from bioplastic composite



3D printed boat made from post-consumer waste



Boat made from PET bottles





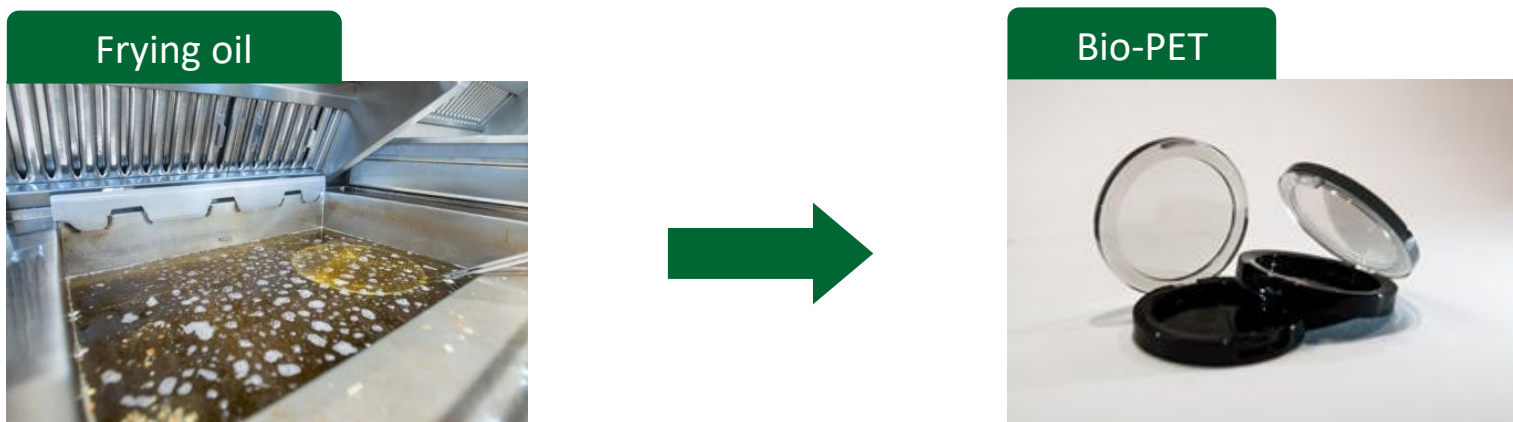
NTCP
nationaal testcentrum
circulaire plastics



BOLLEGRAAF
| RECYCLING
| SOLUTIONS



World's First 100% Bio-PET from non-food resources



The example above is a great showcase of the unique ecosystem collaboration in our region. This development is supported by the local and international government (EU) due to it's innovative character.



BOLLEGRAAF

RECYCLING
SOLUTIONS

Major breakthrough achieved in recycling plastic packaging.



Used polypropylene (PP), obtained from separated municipal waste, recycled into a high-quality raw plastic material.

As this high quality PP is color sorted into color groups virtually no virgin master batches or other additives are required to create new products.

This breakthrough makes it possible to manufacture recycled polypropylene products that meet the highest quality requirements, in any color.

Bollegraaf / Van Dyk Technology & Material Test Center.

Focussed on improving the process of achieving purity of recyclable grades. The Test Center allows our customers to experiment with new equipment and conceive of how to reach and improve their operating goals.



National Test centre Circular Polymers

Unique combination of a pilotfacility and knowledge hub

- R&D
- New technology piloting
- Cooperation with major international brands



Bio-aramid production through high thermal recycling of waste

**TEIJIN** **BioBTX****BioBTX and Teijin are looking at sustainable feedstock for super fiber**

The Japanese company, Teijin Aramid, and the Dutch BioBTX are working on a synthetic fiber made entirely of sustainable materials. The initiative that is about to start is financially supported by the provinces of Drenthe and Groningen and by Chemport Europe.

Innovative biobased & biodegradable plastics



Compostable & biodegradable alternatives for the agricultural and marine sector



Biodegradable infill



Biobased medical devices



Development of PLA yarn

Aliancys
Area
Attero
Avantium
AVR
BASF
Bek & Verburg
BioBTX
Bollegraaf
ChemCom
Cumapol
CuRe Technology
Delamine
DOW
DSM
DVC
Elzinga & van der
Krieke

Enerpi
EPS Nederland
Essentra
EuroProvyl
EV Biotech
EEW
Flexoplast
Foamplant
Forbo Novilon
FrieslandCampina
H&P Moulding
Hempflax
Icopal
Lankhorst
LIMM
Low&Bonar
LPF

Lubrizol
Lubo Systems
NNZ
Nova Riet
N+P Group
MF Emmen B.V.
Morssinkhof Plastics
Oerlemansplastics
OMRIN
Paques
Pezy Group
Polytech
Philips
Photanol
Plixxent
Polem
Probo

Prodin
Schur Flexibles
Senbis Polymer
Innovations
Sidijk
Soprema
Suez
Sylvaphane
Teijin Aramid
Torrgas
TRH Recycling
Van Afval
Van de Sant
VEPA
Virol
Vita Plastics
VDL Wientjes

