



Accelerator session

Inspiring best practices from a circular hub in the Northern Netherlands

PLASTICS | TEXTILE | CONSTRUCTION | WASTE MANAGEMENT



Bart Volkers

Moderator





Our bottom-up approach to a Circular Economy

Bart Volkers – April 18, 2024

Circulair Groningen

Association of private companies,
knowledge institutes and public
authorities to realise the circular
economy in Groningen.

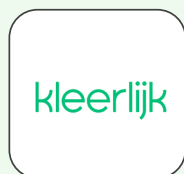
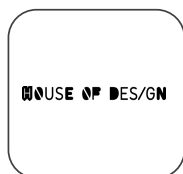


How it all started

1. Association Circular Friesland
2. Northern Netherlands collaboration
3. Kick start Circular Groningen by private sector



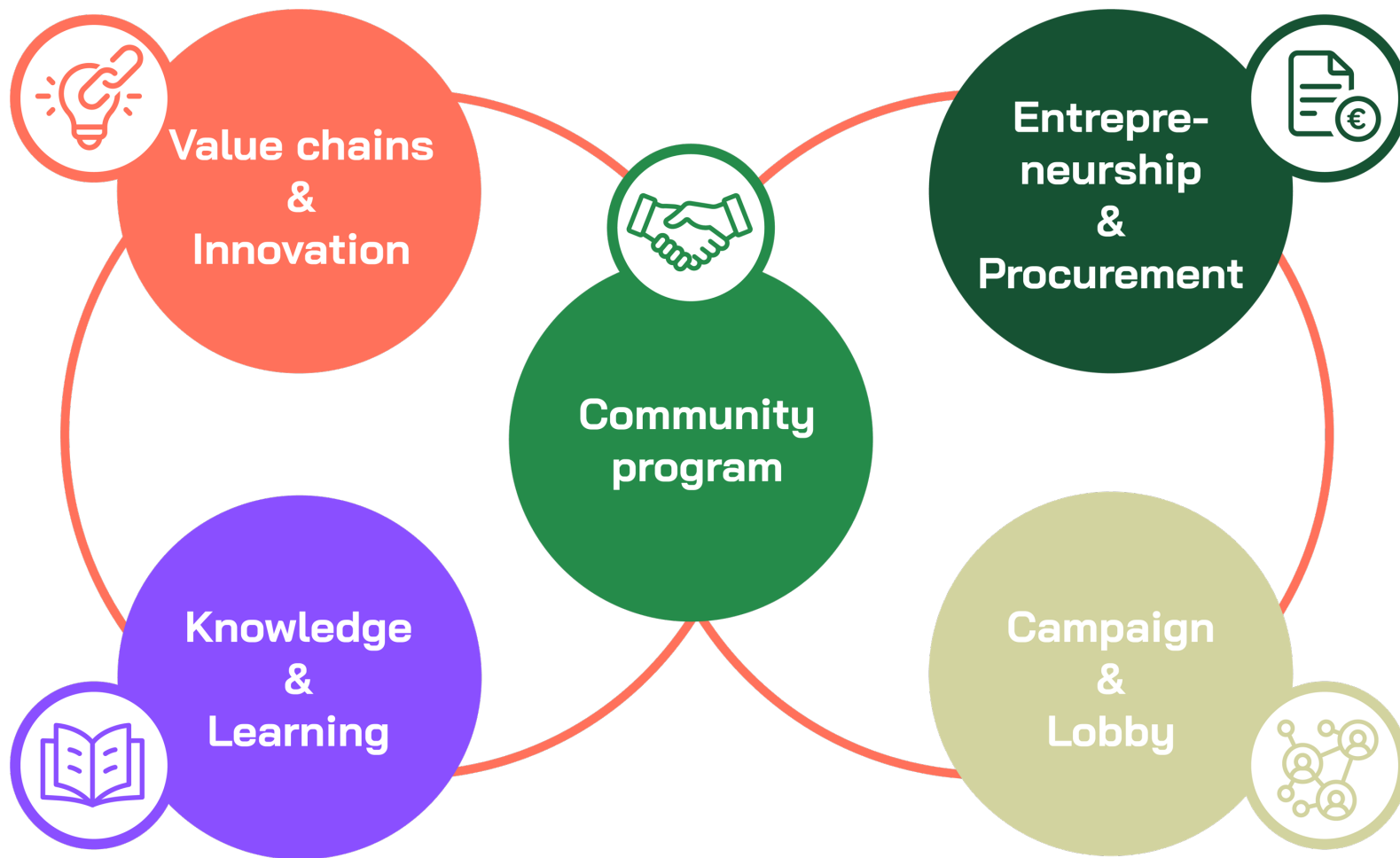
The private-public partnership model to build a circular ecosystem works





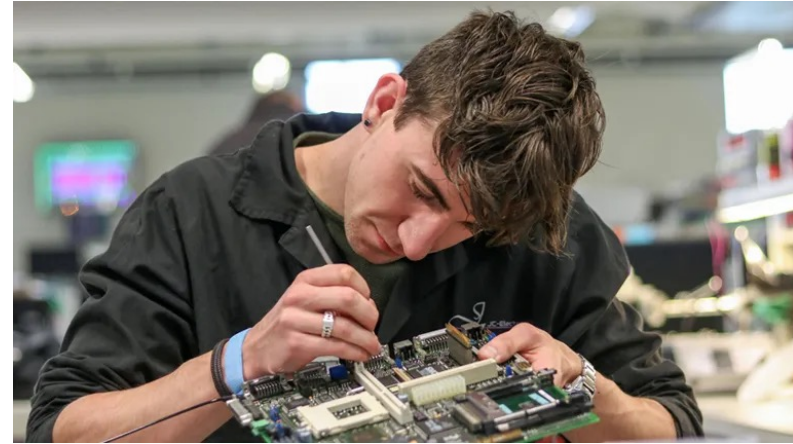
Accelerate, invest and realize

a circular economy in Groningen and the Northern Netherlands





Value chains & Innovation





Knowledge
&
Learning





Community program





Entrepreneurship
&
Procurement





Campaign & Lobby



WORLD CIRCULAR ECONOMY FORUM 2024

Accelerator session

MEET THE NORTHERN NETHERLANDS

Inspiring best practices from a circular hub:
PLASTICS | TEXTILE | CONSTRUCTION | WASTE MANAGEMENT

Exploring potential partnerships for European projects





**Let's collaborate
for a future-proof
economy in Europe.**



PROGRAMME

Opening and official welcome

Building a regional circular hub for CE

Bart Volkers - Director of Circular Groningen

Friso Douwstra - Deputy Province of Friesland

Deep-dive presentations

Textile

Carolina Vogel - Municipality of Groningen

Construction; biobased materials and buildings in regional perspective

Nick Boersma - Circulair Friesland

Circular Plastics;

Sven Jurgens - Greenwise Circular Plastics

Waste Management and the role of AI

Martine Assié - Bollegraaf

Speeddate session

Parallel speed-date session on plastics, construction, textile, waste management



MEET OUR SPEAKERS



Friso Douwstra

Deputy province of
Friesland



Carolina Vogel

Municipality of Groningen



Nick Boersma

Circular Friesland



Sven Jurgens

Greenwise Circular
Plastics



Martine Assié

Bollegraaf Waste
Management Solutions



Friso Douwstra

Deputy province of Friesland for CE on
behalf of Northern Netherlands

provinsje fryslân
provincie fryslân 



Carolina Vogel

Project Leader Urban Management



Cross cutting governance support Circular Resource Hubs

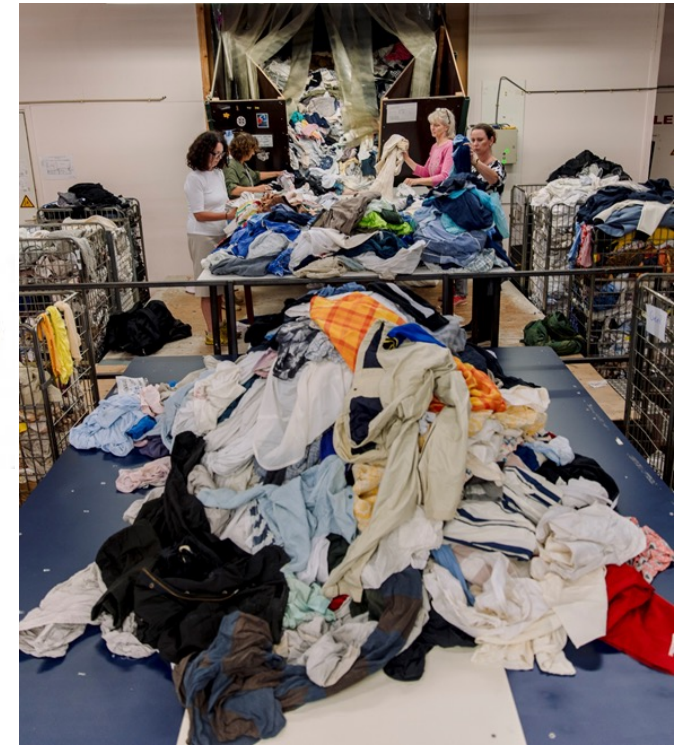
Business



Citizens



Education



Local Authorities



values

- ❖ Groningen is the place for positive growth
GRO Quality - GRO Green
- ❖ We work on an approach that is sustainable,
creates value for everyone within the Municipality
but is also economically feasible.
- ❖ Together we build the new system:
business, science, citizens, education and other local
societal facilities





Ambition:
waste free
municipality



2030

Start:
Close the local
textiles loop

Context

❖ Our perspective:
Consider waste as
valuable resources



❖ Aim:
High quality reuse of
resources



❖ Shift: from traditional waste
collection to resource
management



Activities

1. Overall stakeholder engagement: business and citizens

- ✓ Make circular best practices visible, show the new perspective
- ✓ Development of (neighbourhood-oriented) services, events and campaigns
- ✓ Facilitate the development of new businessmodels

2. Orchestration of new education (vocational schools and academia)

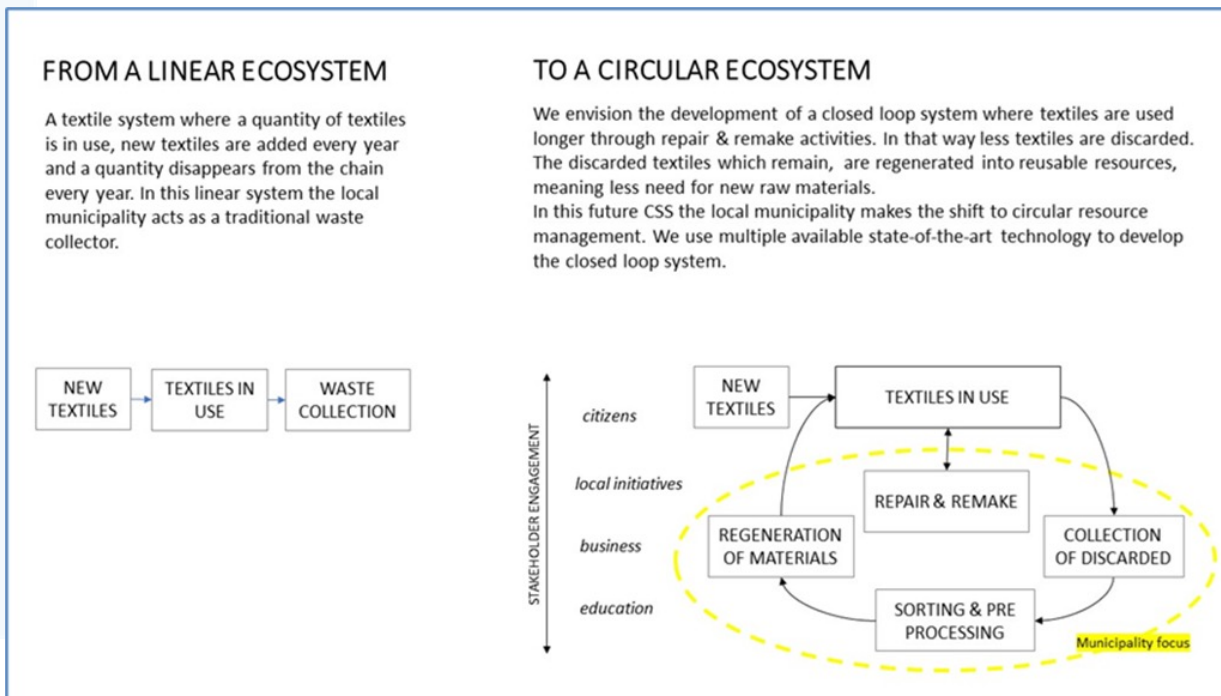
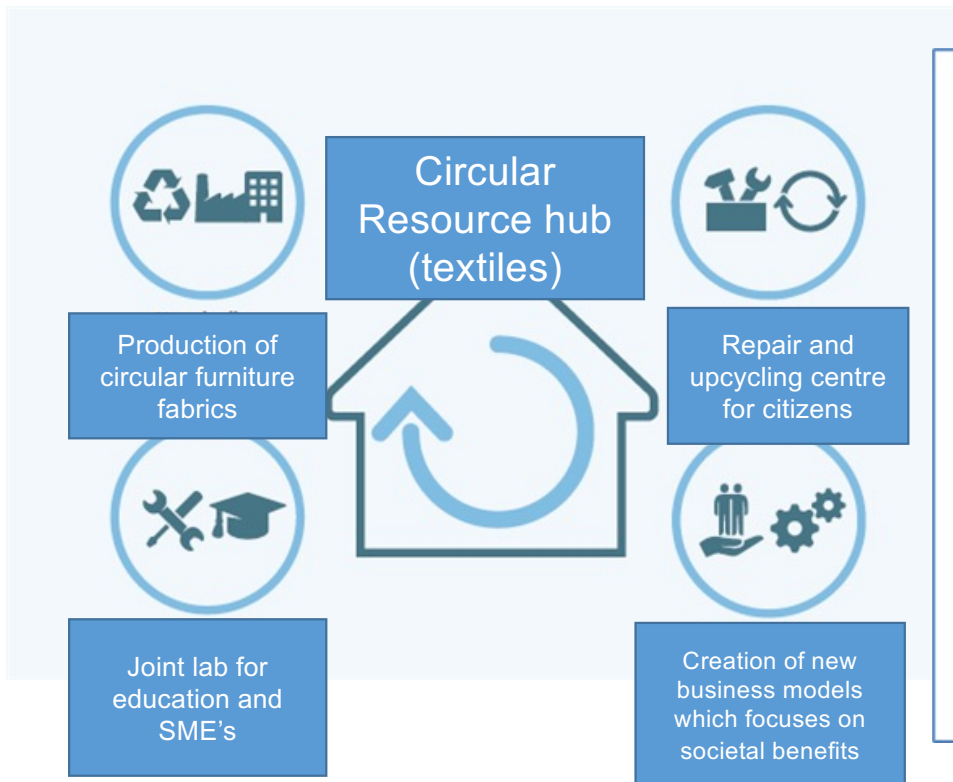
- ✓ Development of a curriculum which focuses on:
 - ✓Circular product design
 - ✓Development of biobased products
 - ✓Circular business models
 - ✓ Knowledge exchange between vocational schools and academia

3. Realisation of local value chains

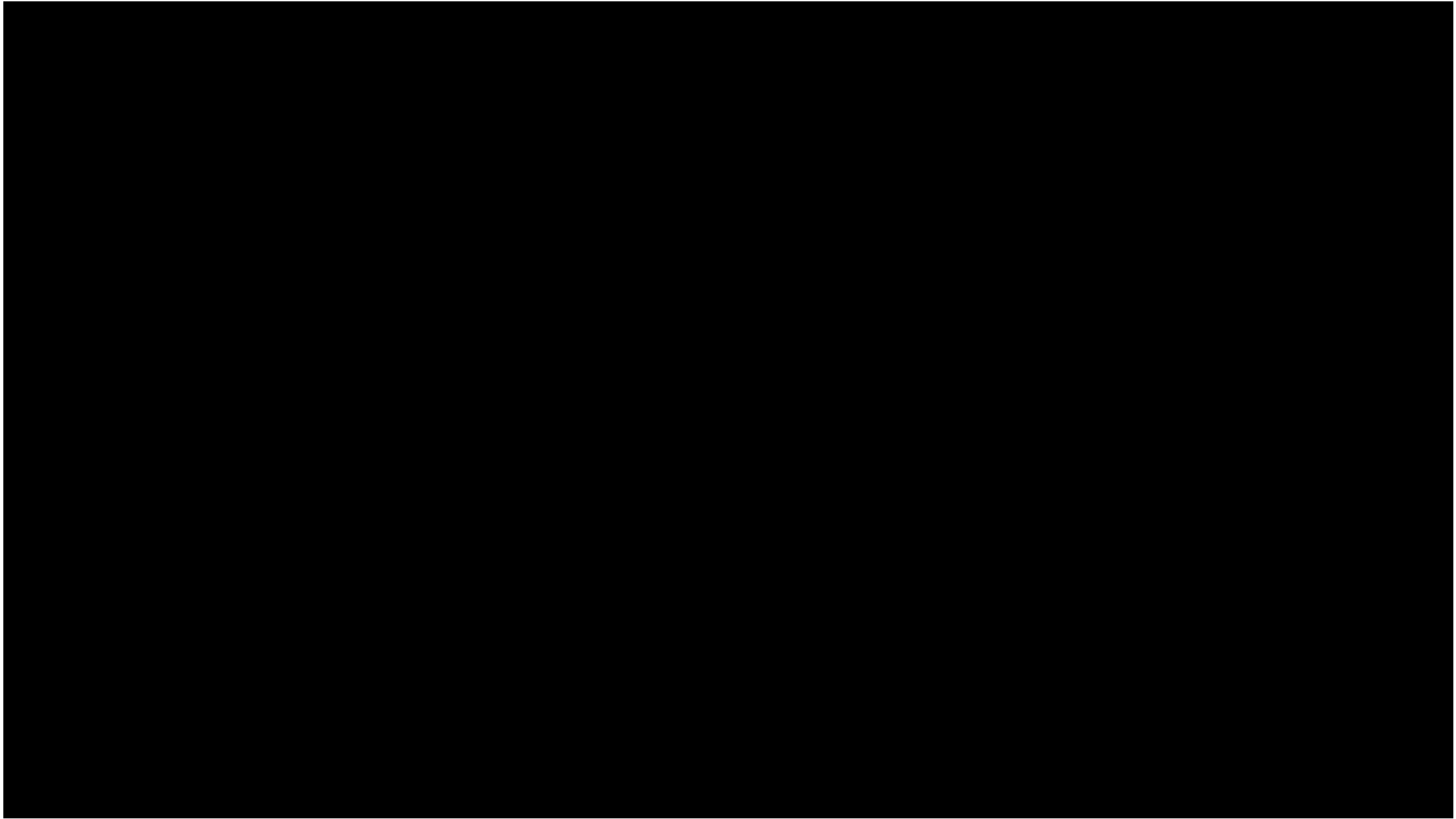
- ✓ Mapping problematic waste flows
- ✓ Development of circular products
- ✓ Set up a small value chain



Our circular systemic solution:



⇒ **Replicable solution for municipalities NL/EU**





Sorting & pre- recycling process



Join our energy!

We are looking for:

- **Solutions:** How to stimulate the transition to a circular economy to the maximum?
- **Knowledge & skills:** for building a local textiles system that:
 - Ensures positive environmental impact,
 - Creates positive jobs for people with a distance to the labour market
 - Businessmodels which are economic viable/sustainable.

Carolina Vogel

Municipality of Groningen

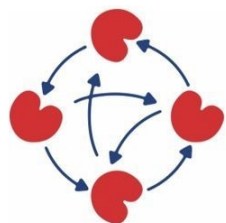
Carolina.vogel@groningen.nl

+31 6 29479214



Nick Boersma

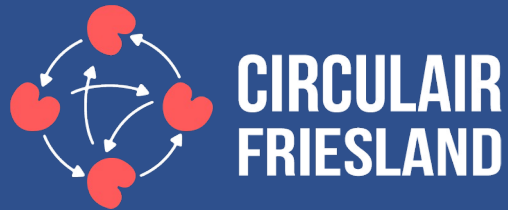
Programme manager



**CIRCULAIR
FRIESLAND**



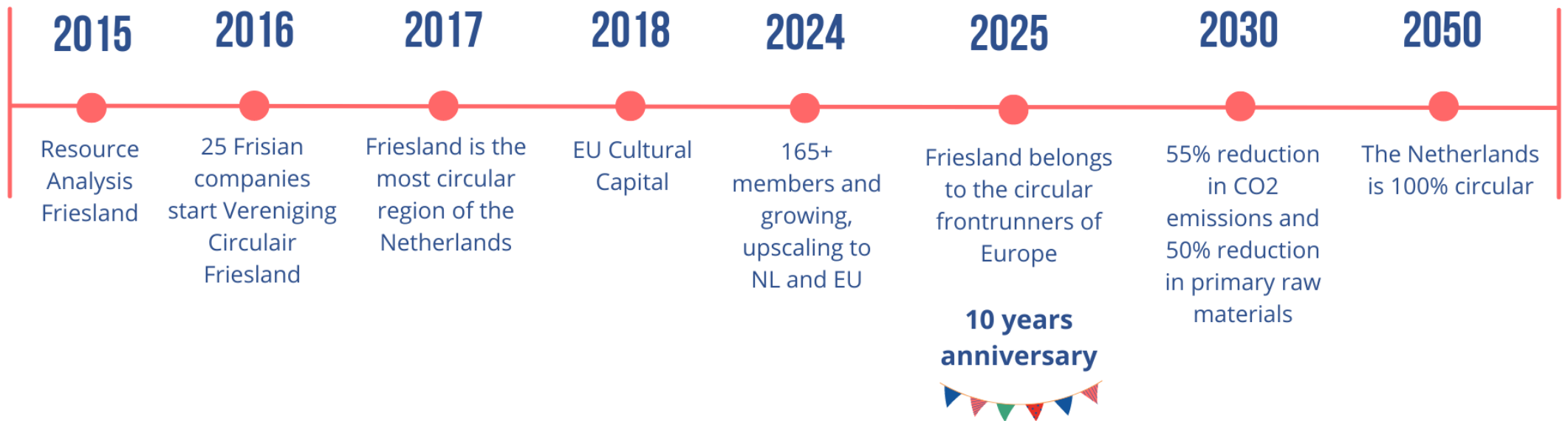
PROGRAM FRYSLÂN BUILDS CIRCULAR 2023-2026



WCEF – ACCELERATOR SESSION

18TH OF APRIL 2024

CIRCULAIR FRIESLAND ASSOCIATION





OVER 165 MEMBERS

FRISIAN BUSINESSES

ALL FRISIAN GOVERNMENTAL BODIES

ALL LEVELS OF EDUCATION

STRONG WORKING RELATIONSHIP WITH OTHER

REGIONAL AND NATIONAL NETWORKS

1 Materials and resources

2 Sustainable energy

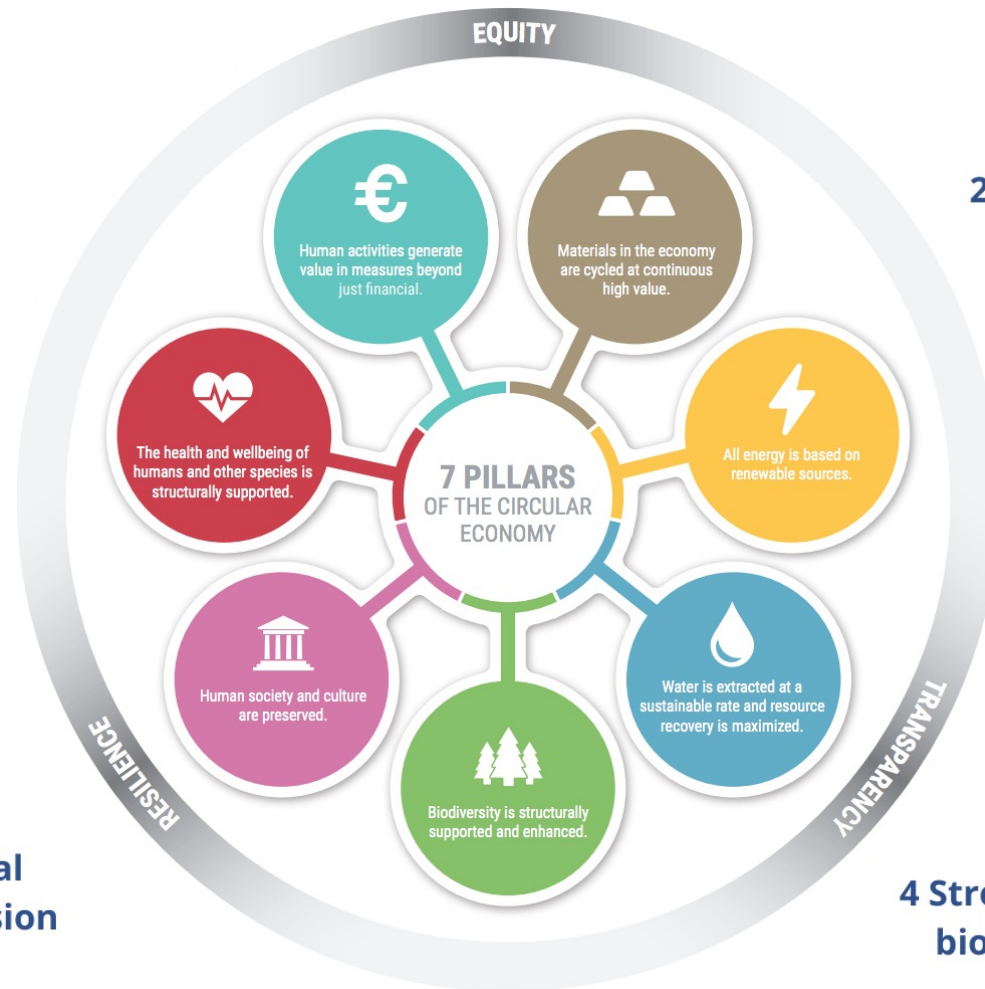
3 Positive impact on water

4 Strengthening biodiversity

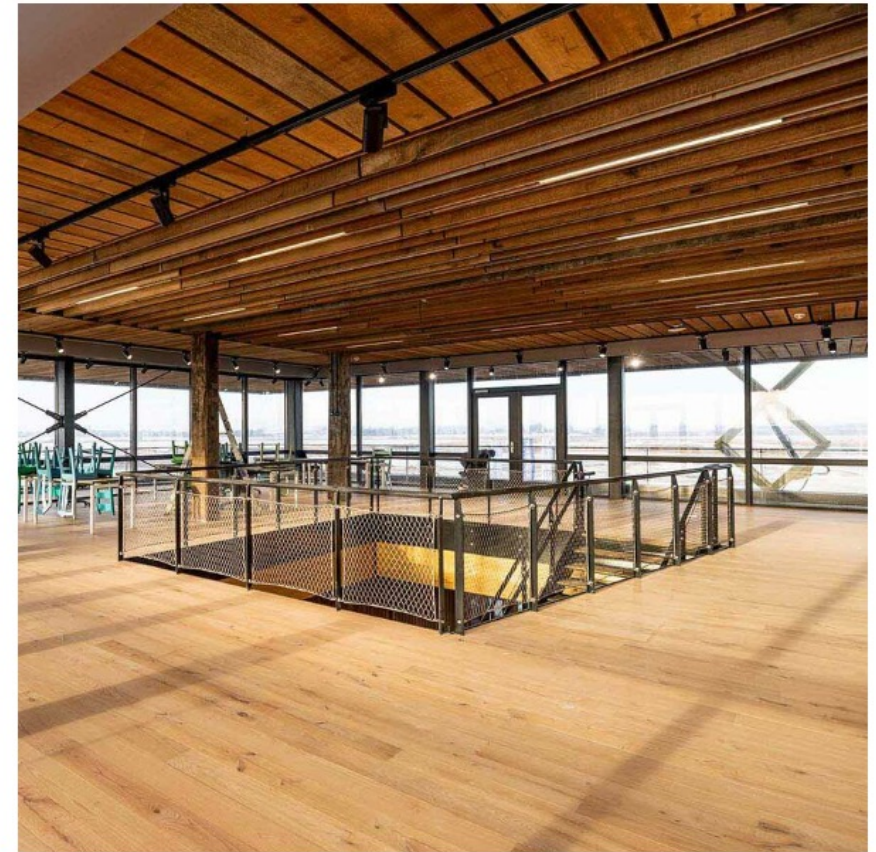
5 Strengthening cultural diversity and social inclusion

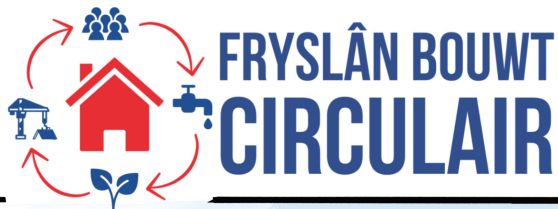
6 Strengthening health and well-being

7 Maximal added value



CIRCULAR CONSTRUCTION IS “THE NEW NORMAL”





CLIENTS

DETERMINING DEMAND



ACTIVATES

- GOVERNMENTS
- HOUSING COOPERATIVES
- DEVELOPERS
- HOMEOWNERS



>40 construction projects in the Frisian region

ACTIVATES CHAINS

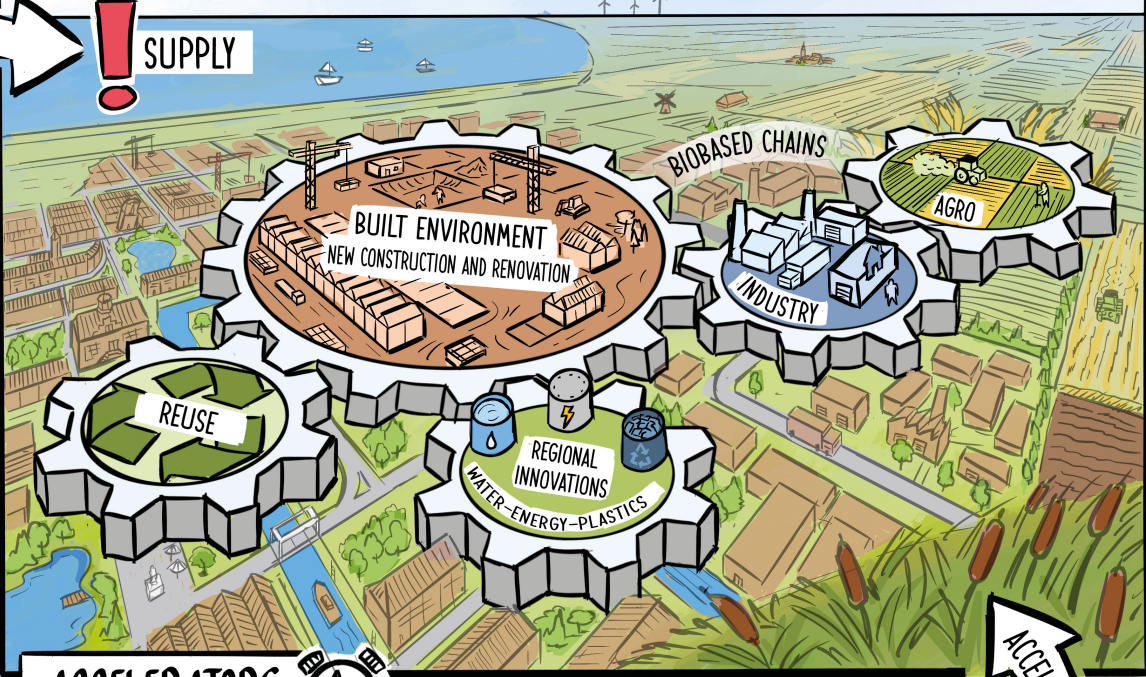


TRAINING



KNOWLEDGE PLATFORM

CHAIN DEVELOPMENT



SUPPLY

ACCELERATORS

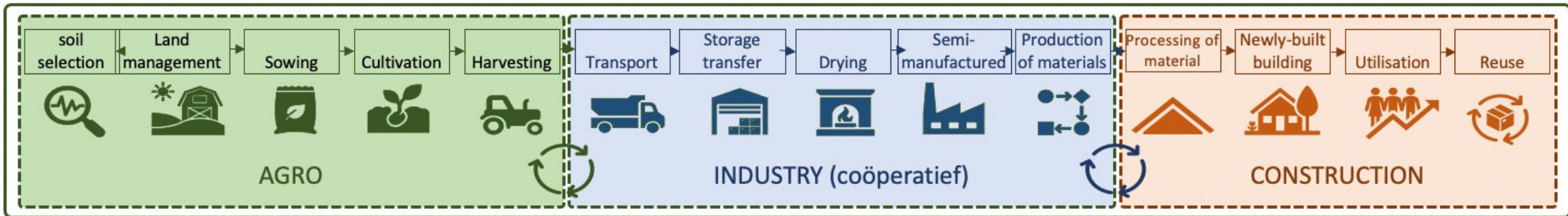
THE NEW NORMAL

LAWS AND REGULATIONS

BUILDING THE FUTURE

ACCELERATES

BUILDING BIOBASED AND URBAN MINING VALUE CHAINS



Supply
crops/urban mining



Processing

Demand
biobased/re-used

Target National Approach Biobased Construction



BBOBB

PROJECT PREPARATION AND REALIZATION

HEMP CULTIVATION

CULTIVATION
RAW MATERIALS IN
FRIESLAND

700HA IN 2024



BIOBASED BUILD MATERIAL

PROCESSING OF THE
BUILDING MATERIALS
IN FRIESLAND



heyjmans

GREENINCLUSIVE
Natural products



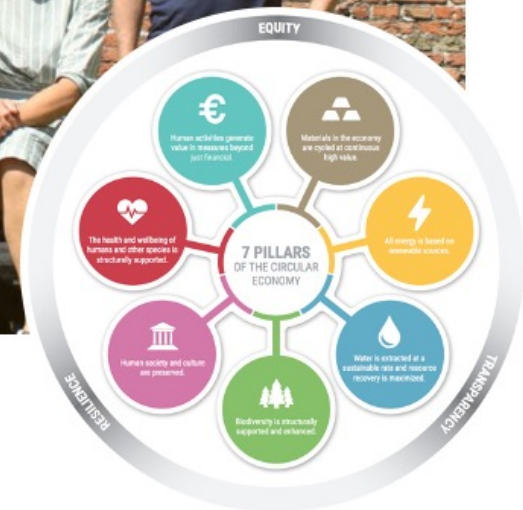
WATERCAMPUS FRIESLAND

	Liter/persoon, per dag
Douche (36,1%)	46,2
Toilet (23,6%)	30,2
Wasmachine (13,2%)	16,9
Handen wassen (7,2%)	9,2
Wastafel (6,8%)	8,7
Bad (4,1%)	5,3
Overig (2,8%)	3,6
Afwasmachine (2,3%)	2,9
Consumptie (2,0%)	2,6
Handafwas (0,8%)	1,0
Buiten (0,7%)	0,9
Handwas (0,5%)	0,6
	<hr/> 128,1



CRAFT+: FRISIAN CIRCULAR DESIGN

CRAFT+
ARCHITECTENCOLLECTIEF VOOR
CIRCULAIRE REGENERatieve ARCHITECTUUR

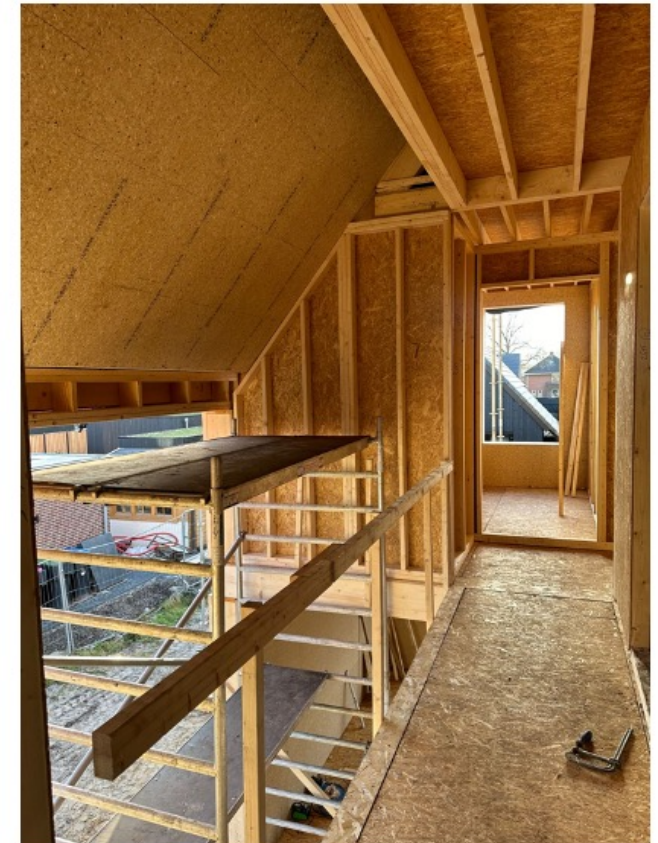


EXAMPLE: DEVELOPMENT NIEUWEHORNE

BIOBASED WONEN IN FRYSLÂN



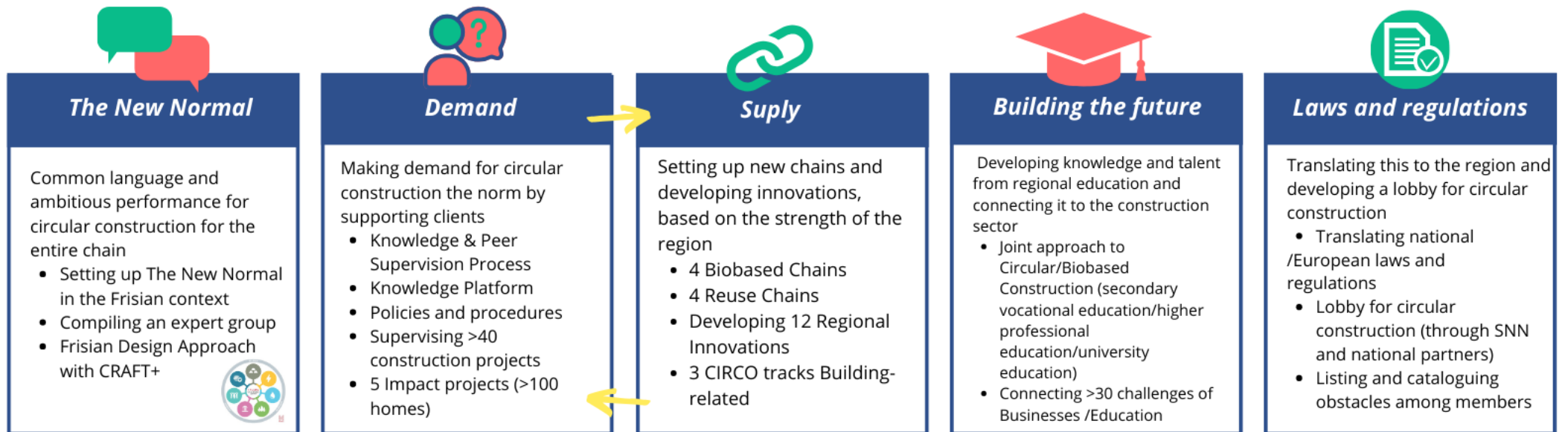
- PV-panelen**
Energiewinning op duurzame wijze
- Sedumdak**
Waterhuishouding en verkoeling
- Opvangen van regenwater**
duurzaam omgaan met water
- Hydraloop**
Hergebruik van water
- Wilde tuin**
Bevordering van biodiversiteit
- Grindkoffer**
Voor afvoeren van regenwater
- Hergebruikt beton**
Voor de fundering
- Houten kozijnen, triple glas**
Biobased en isolerend
- Houten constructie en gevel**
Hernieuwbaar en CO2 neutraal
- Vloerverwarming**
Met duurzaam verwarmd water
- Hempwool**
Vezelherrep isolatie van Friese bodem



PROGRAM FRYSLÂN BUILDS CIRCULAR

Goal of the programme

Making circular and biobased construction the norm in the province of Fryslân for all new construction, demolition and renovation projects



How do we do this?

- Learning from each other
- Initiating collaboration
- Learning from each other
- Initiating collaboration
- Events and tours
- Development of communication tools



ONE OF THE MOST CIRCULAR REGIONS OF EUROPE IN 2025



Are you inspired and want to connect? Come and visit us in 2025!

This is going to be a year with:

- Many (inter)national events
- Meet other ambitious regions
- Connect with best practices
- Share knowledge and experience
- Cultural inspiration from a circular region

All with the ambition to accelerate to a circular economy!

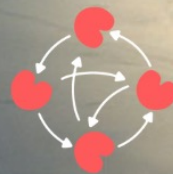
From Friesland to Europa(pa)!

www.circulairfriesland.frl

QUESTION FOR THIS SESSION

- Are you Friesland's future consortium partner in a Horizon Europe application?
- We are looking for other ambitious regions all across Europe that want to build new circular value chains for construction!
- Topics: biobased, urban mining and water technology.

THANK YOU!



CIRCULAIR
FRIESLAND

Sven Jurgens

Managing Partner





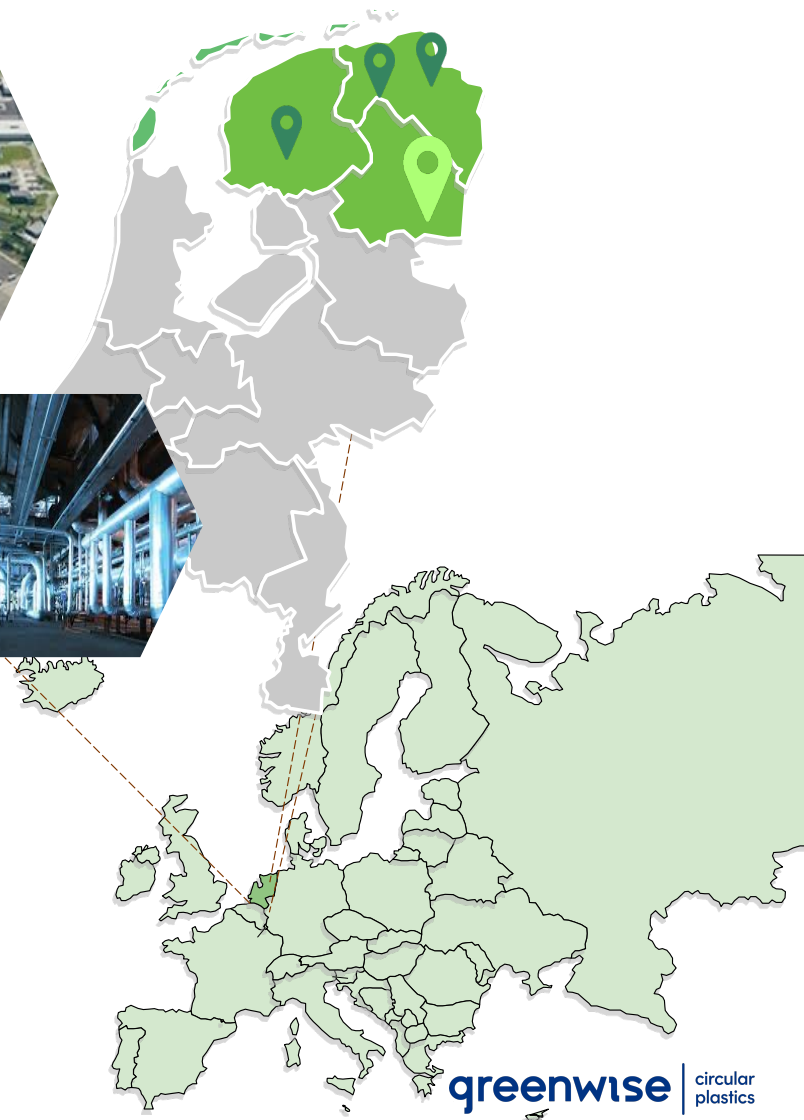
'Plastic recycling & circular economy in Northern Netherlands'

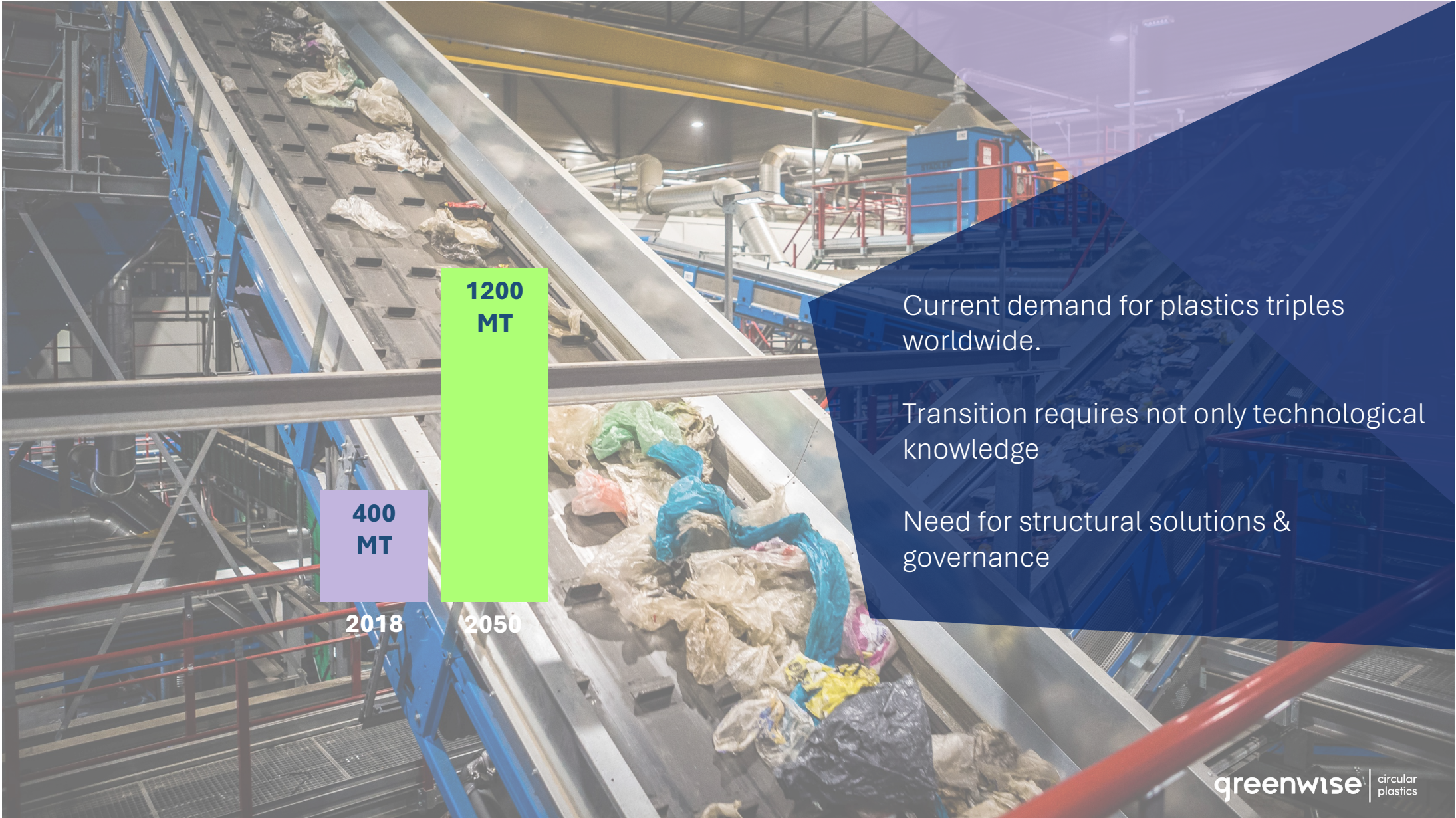
WELKOM - BIENVENUE - WELCOME

greenwise | circular
plastics

Northern Netherlands

- Region Northern-Netherlands
 - 1.8 million inhabitants
- One of five main chemical clusters in the Netherlands
 - Campus development with industry and knowledge institutes
- Front runner in the sustainable plastics industry





Current demand for plastics triples worldwide.

Transition requires not only technological knowledge

Need for structural solutions & governance

**400
MT**

2018

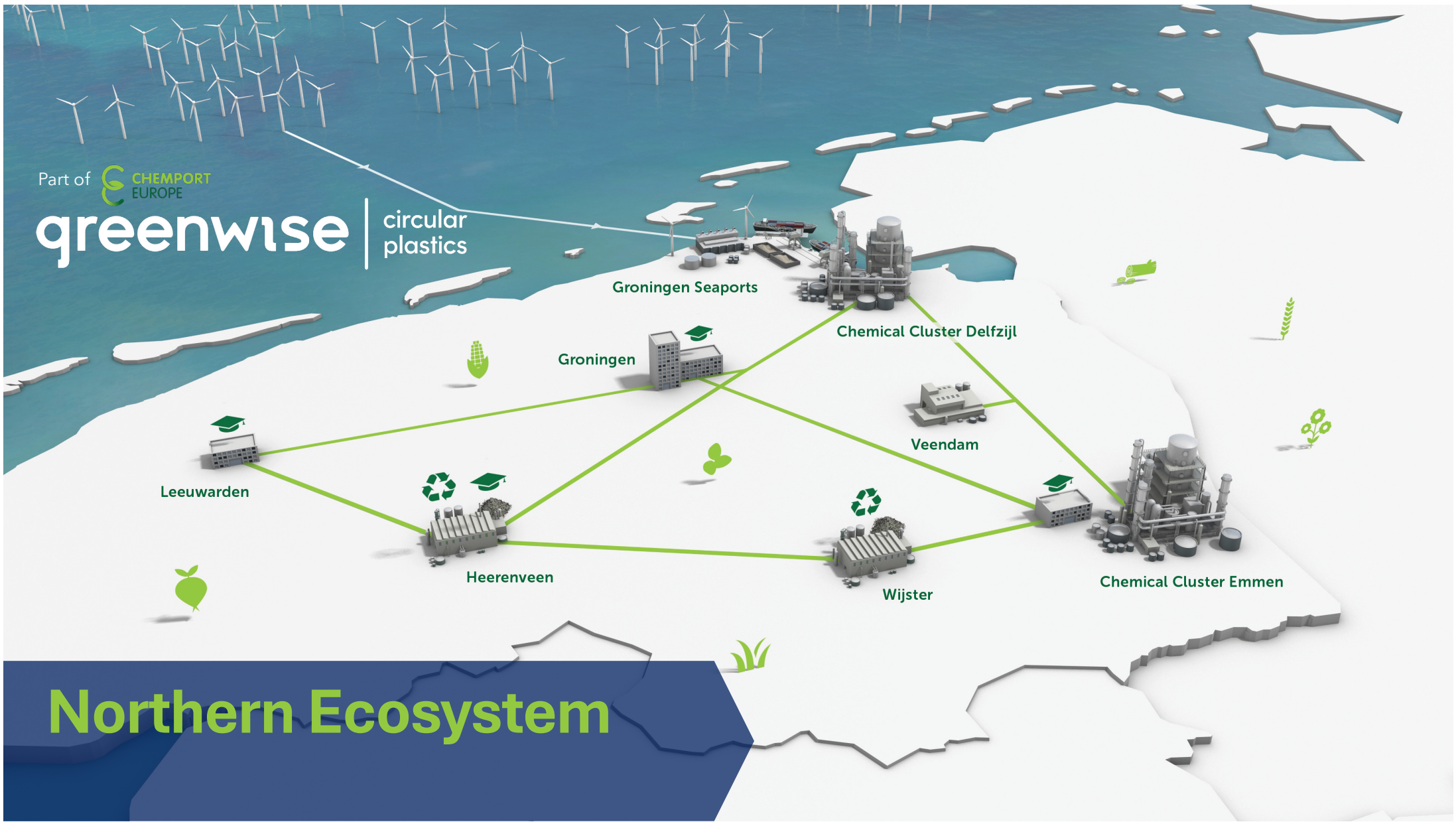
**1200
MT**

2050

Part of **CHEMPORT EUROPE**

greenwise

circular plastics



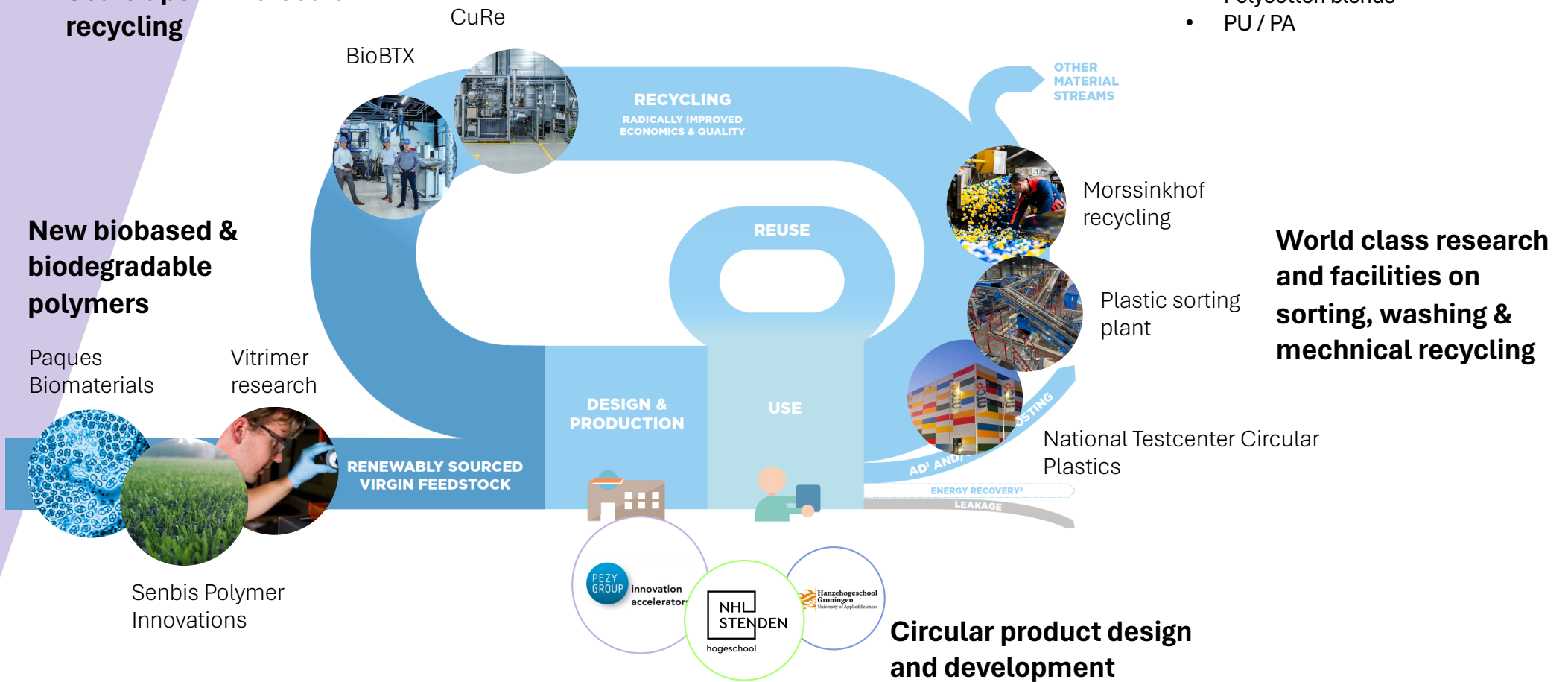
Northern Ecosystem

○ Circular Plastics value chain

Scale ups in molecular recycling

Research & innovation on difficult to recycle waste streams:

- Rubber
- PVC
- Polycotton blends
- PU / PA



World class research and facilities on sorting, washing & mechanical recycling

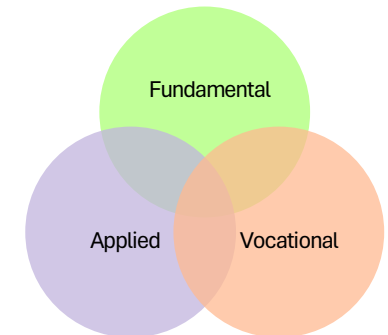
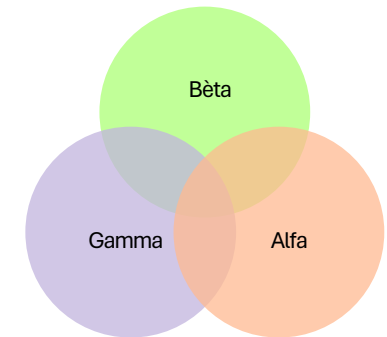
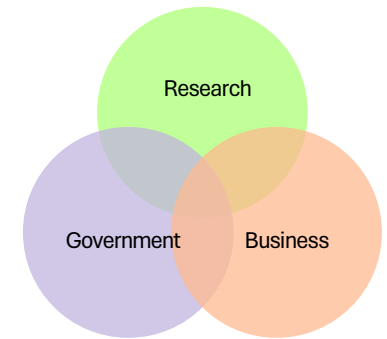
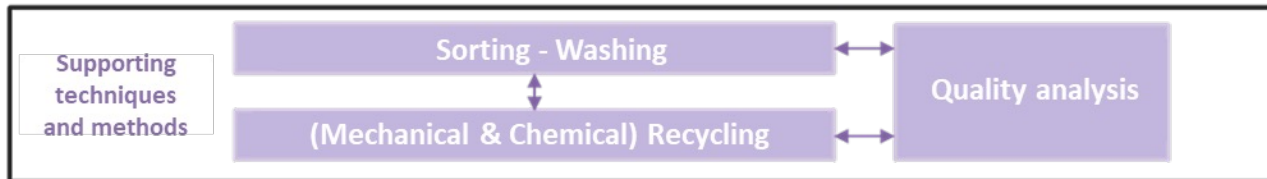
Circular product design and development

Integral approach

- bringing together business, research and education

	Poly-condensates	Poly-olefins	Composites	New Biopolymers	Design for circularity
Packaging	✓ 1	✓ 2			
Construction			✓ 4		
Textiles	✓ 3				
New markets				✓ 5	
Societal & Legal aspects					

Project portfolio





Challenge

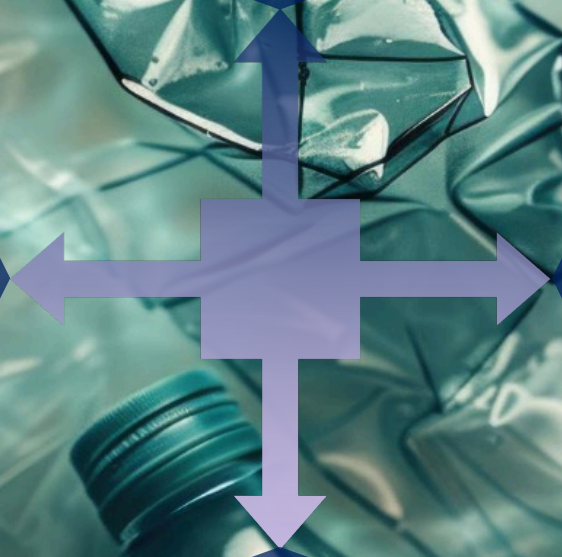


Waste = Resource
Secondary / used resources
New processes = not Optimized
Circular

Legislation as driver
EPR
CSRD
Ecodesign
PPWR, SUP

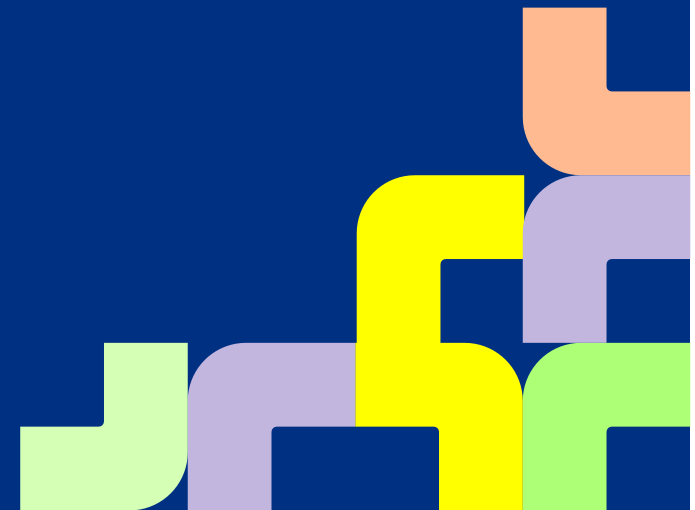
Legislation as barrier
Level playing field
Cross border transport
Waste status

Linear
Waste
Pristine quality
Optimized



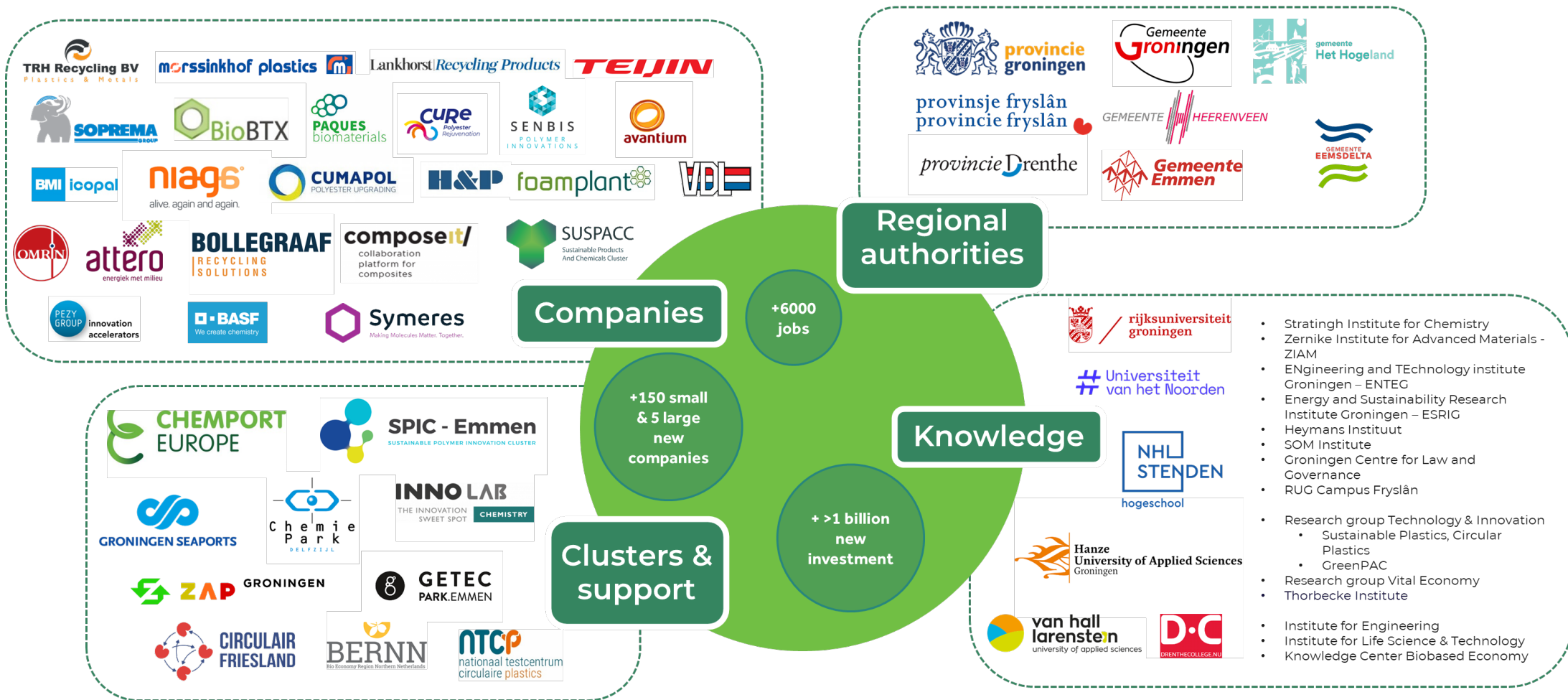
Questions

Sven Jurgens - strategic advisor Greenwise Circular Plastics
sven.jurgens@greenwisecampus.nl



Our ambition

The Circular Plastics Region of Europe in 2030



Focus 2023



greenwise



**circular
plastics**

Martine Assié

Product and Marketing Director



Plastic industry transition to the circular economy

How innovation and quality recycling
can transform the most challenging
and promising industry

Martine Assié
Product and Marketing Director
Bollegraaf Group

PhD in chemistry and MBA





Circular economy and plastics

Plastic is a versatile, inexpensive, and lightweight material

Durability, resource and energy efficiency, and recyclability of plastics facilitate the circularity of products and a climate neutral society



Without plastics the current problems would deteriorate

3.6 x

Use of materials increase

2.2 x

Use of energy increase

2.7 x

Greenhouse gas emissions increase

2022

32.3 million tonnes plastic waste collected

27% Recycling rate

50% Energy recovery

23% Landfill

8.7 million tonnes recycled plastic produced

Circular plastics content in new products was **13.5%** in Europe

[The Circular Economy for Plastics – A European Analysis 2024 • Plastics Europe](#)



The European Green Deal

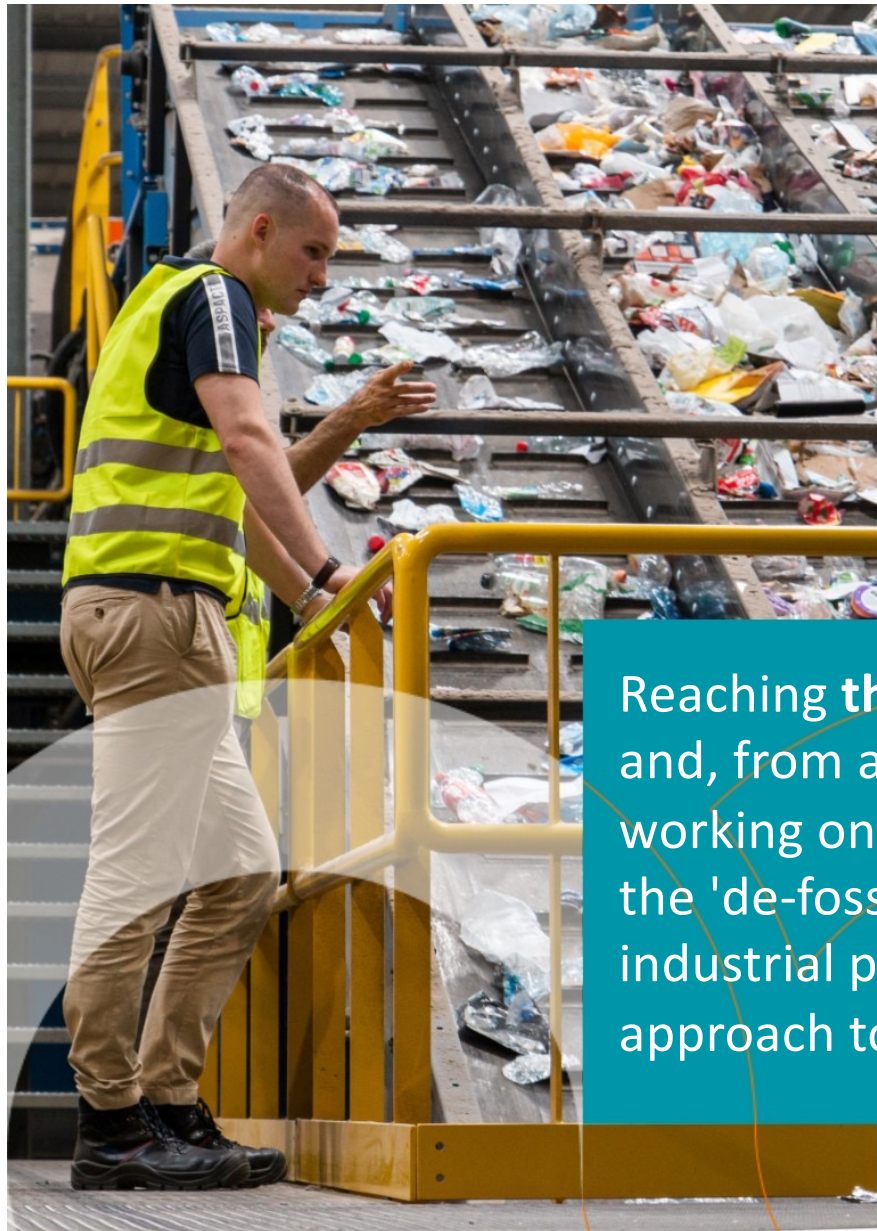
a package of policy initiatives to help the EU with the green transition, with the ultimate goal of climate neutrality by 2050.

EC directive: e.g. SUP

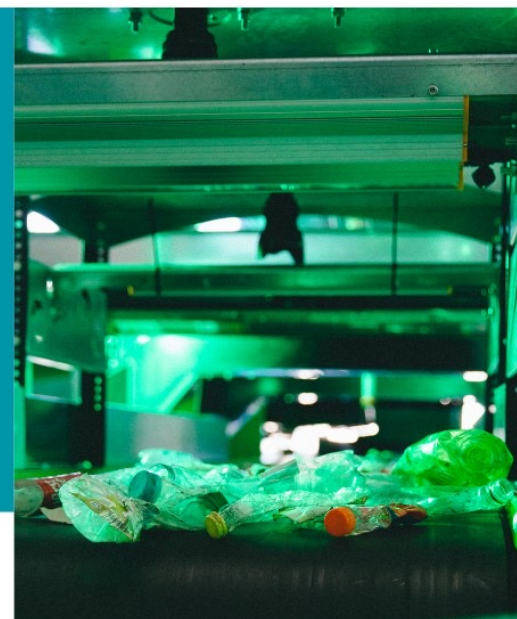
a **77%** separate collection target for plastic bottles by **2025** – increasing to **90% by 2029**

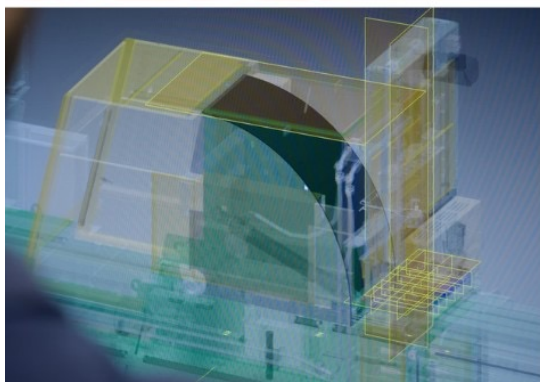
incorporating **25% of recycled plastic** in PET beverage bottles from **2025**, and **30% in all plastic** beverage bottles from **2030**





Reaching **the true circularity** of materials and, from a plastic waste perspective, working on the 'de-fossilization' of consumer and industrial products require a holistic approach to the materials value chain.





Bollegraaf Group

is a global player with more than 60 years of waste sorting experience in Europe and 40 years in the US and Canada.

Full-service solution provider from A to Z

- Turnkey recycling systems, with full support from project management up to after sales
- Every market leader in the recycling industry as a customer
- State-of-the-art factories
- Bollegraaf test center in the Netherlands
- Dedicated R&D and engineering
- Custom automation / monitoring

“

Did you know that
80% of the household
waste in New York is
processed by the
machines of
Bollegraaf Group?

”



**WE
MAKE
RECYCLING
SMART,
EASY AND
EFFICIENT**

Bollegraaf Innovation

We create value from waste in a climate friendly way, while we improve safety and working conditions in recycling facilities. The circular economy is our core!



Strategic
partnership

AI-based waste intelligence towards fully
automated and intelligent sorting
facilities





Nicollin: digitalization of a sorting plant

Single stream plant delivered in 2021

Capacity of 46.000 tonnes/year
(12.5 tonnes/hour)

A cornerstone for the transition
toward a circular economy in Lyon

Designed to maximize recovery of
PET clear bottles, HDPE, PP, LDPE,
mixed plastics, paper, cardboard,
metals, and Tetra (PMD).

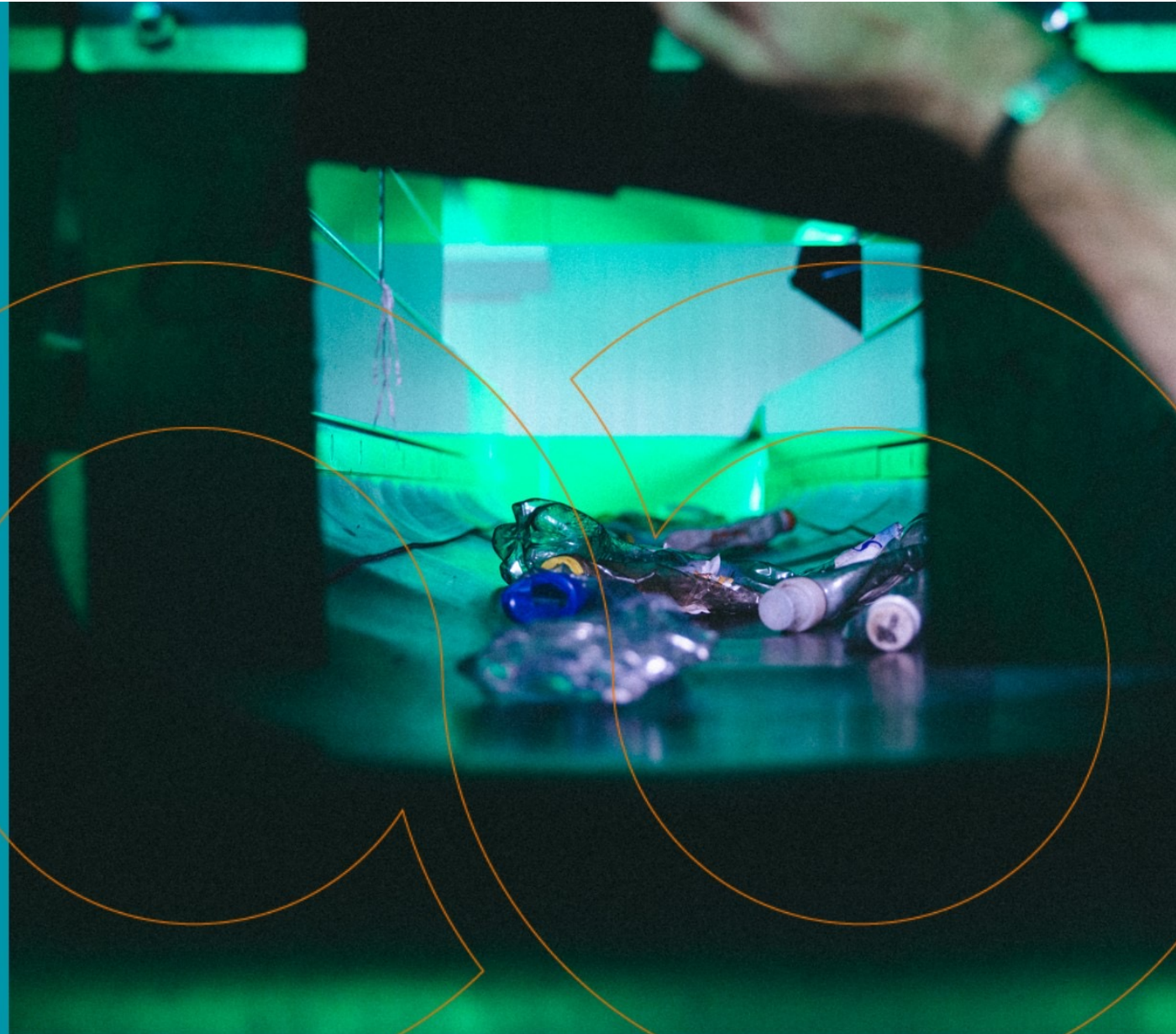


QUESTIONS

What is the biggest challenge for the circular plastics value chain in your perspective?

Who are the stakeholders and what should be their role and engagement?

What role should the government play in this process?





**CREATING A
WORLD OF
DIFFERENCE**

www.bollegraaf.com



Highlights & Closure



Speeddate sessions



Carolina Vogel

Municipality of Groningen



Nick Boersma

Circular Friesland



Sven Jurgens

Greenwise Circular
Plastics



Martine Assié

Bollegraaf Waste
Management Solutions





Accelerator session

Inspiring best practices from a circular hub in the Northern Netherlands

PLASTICS | TEXTILE | CONSTRUCTION | WASTE MANAGEMENT

