

WEBINAR SERIES

Start-ups and scale-ups

25 April 2024

9:00-9:45 CET | Online



Funded by the
European Union



Hubs4Circularity
COMMUNITY OF PRACTICE



Agenda

Moderation: Katja Wendler, DECHEMA e.V.

9:00 Introduction to the Hubs4Circularity Community of Practice and the White Paper recently developed with A.SPIRE

Dorota Pawlucka, Covestro Deutschland AG

9:05 Start-ups and scale-ups

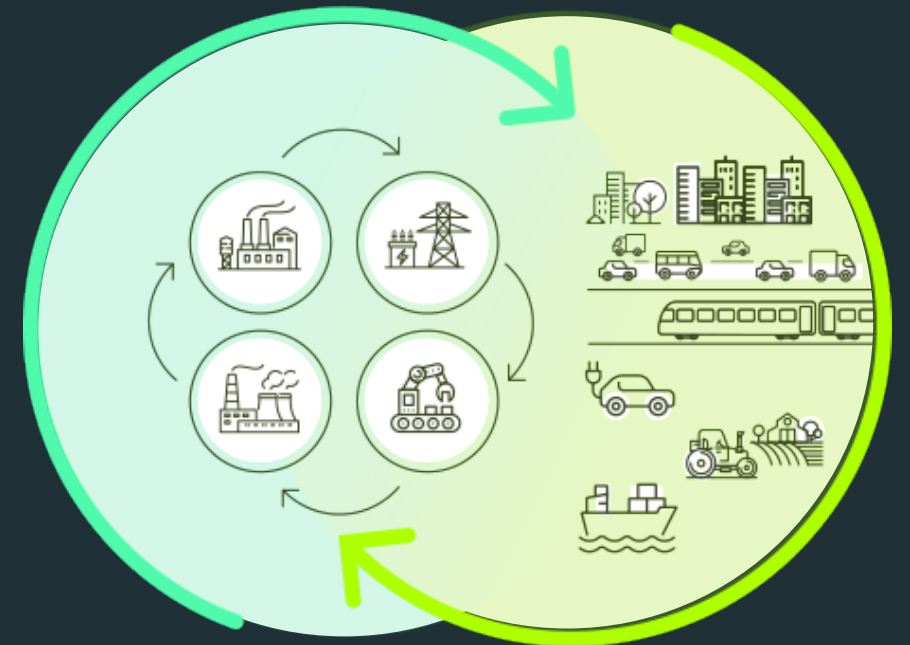
Christophe Pinck, EYDE Cluster

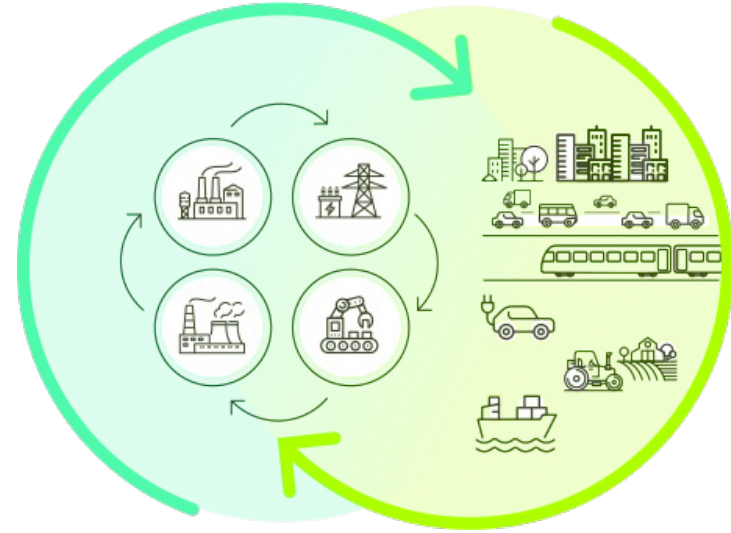
9:35 Discussion

with webinar participants

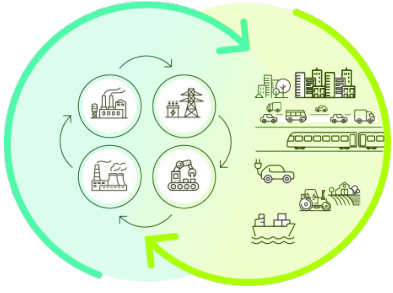
Moderation: Dorota Pawlucka, Covestro Deutschland AG

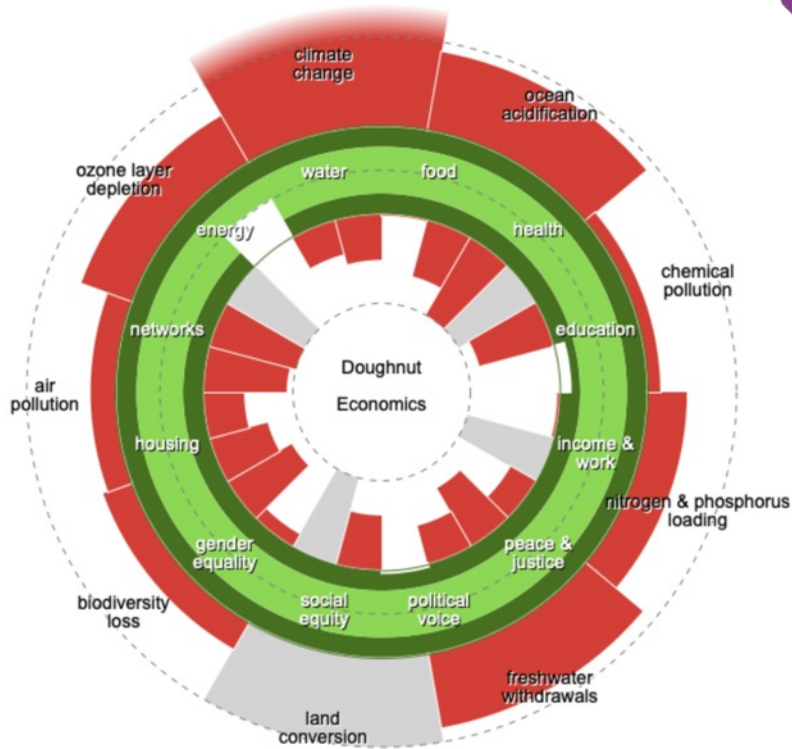
9:45 End of the webinar



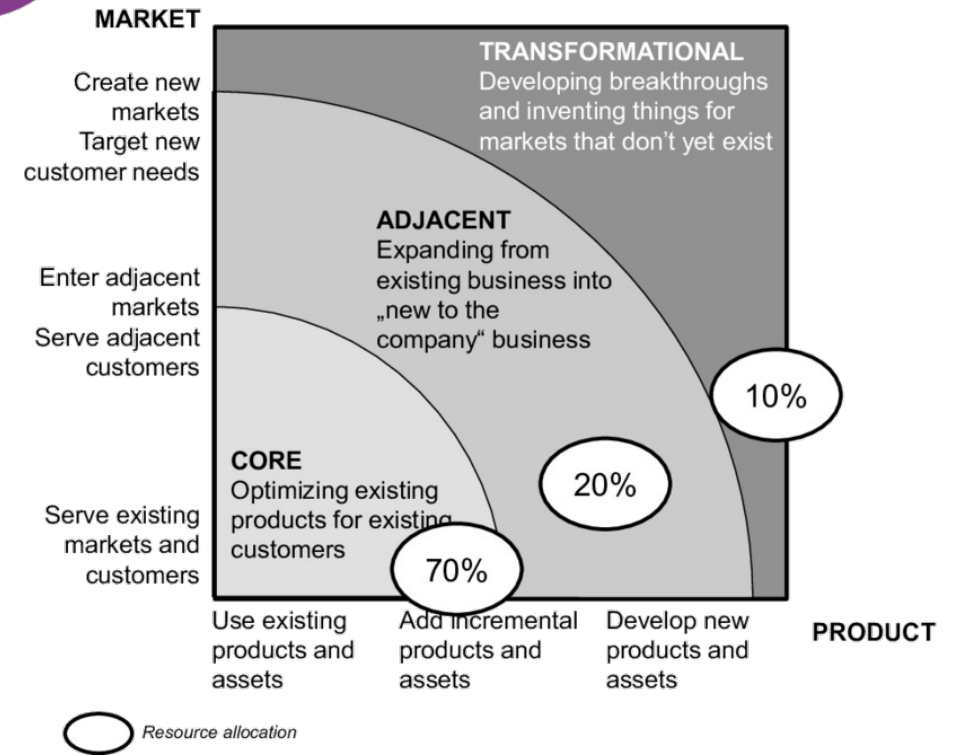


“Start-ups and scale-ups”



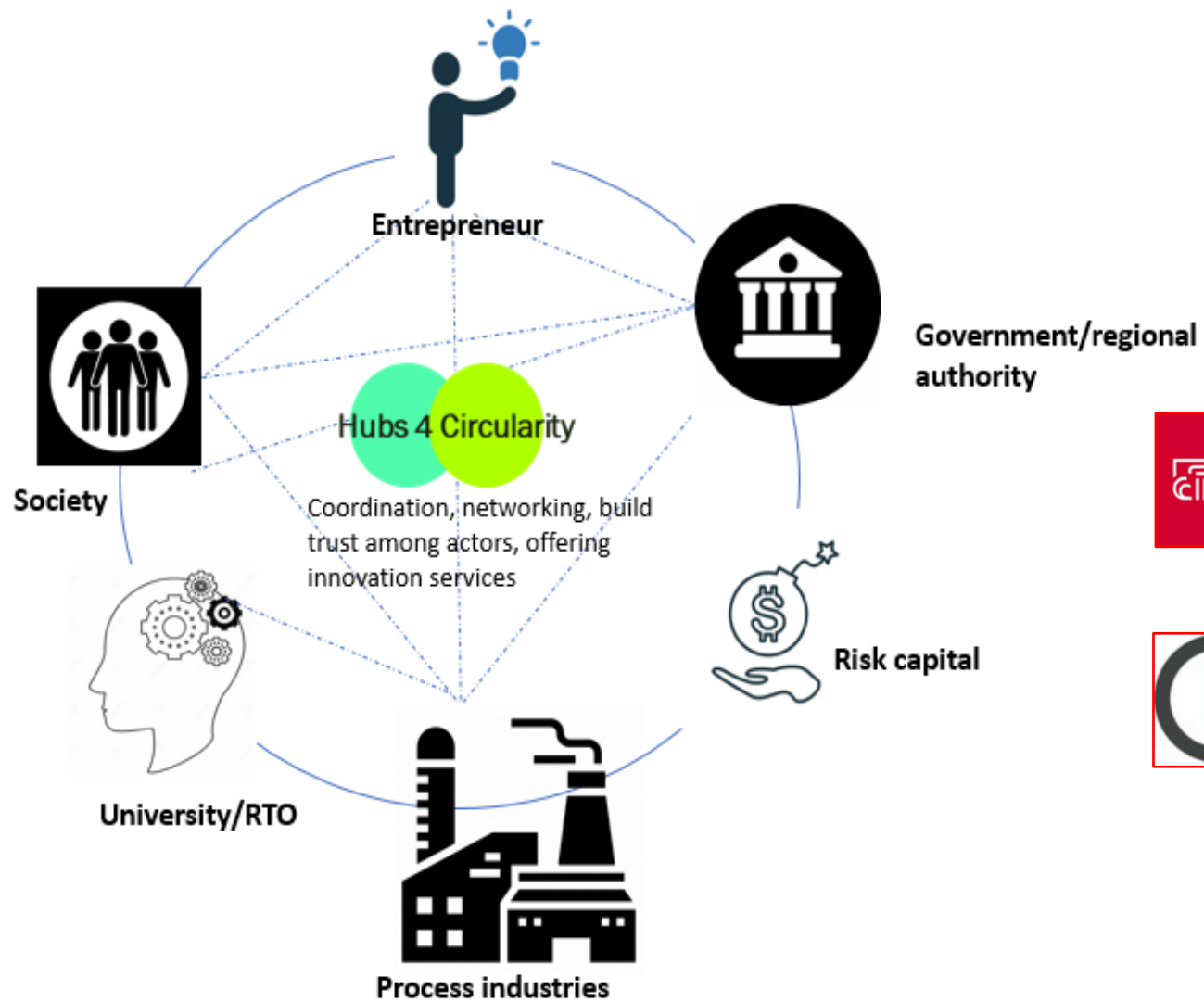
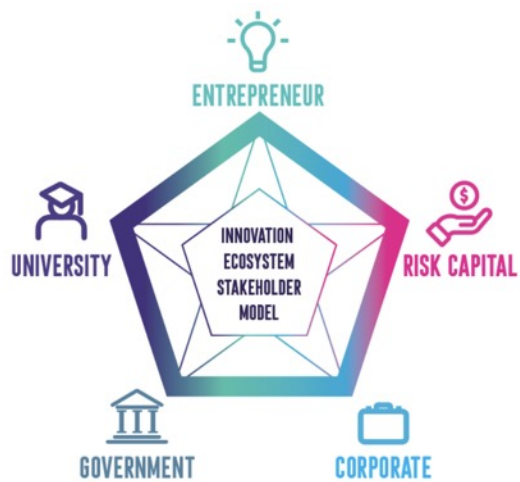


Complexity
Ambition
Pace
Originality
Effectiveness



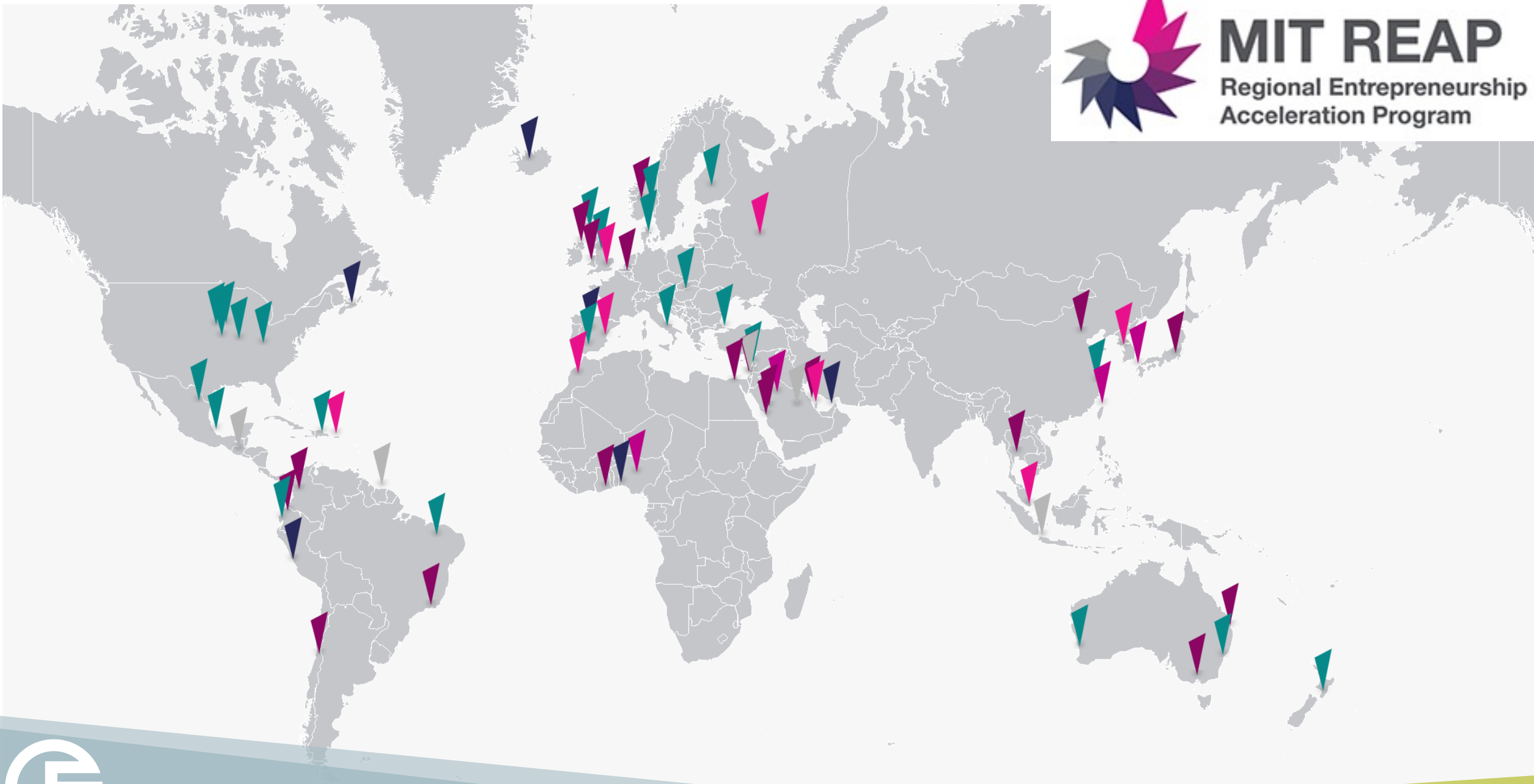
TENSIONS IN CORPORATE CREATIVITY - Scientific Figure on ResearchGate.
Available from: https://www.researchgate.net/figure/Innovation-Ambition-Matrix_fig4_313010955 [accessed 24 Apr, 2024]



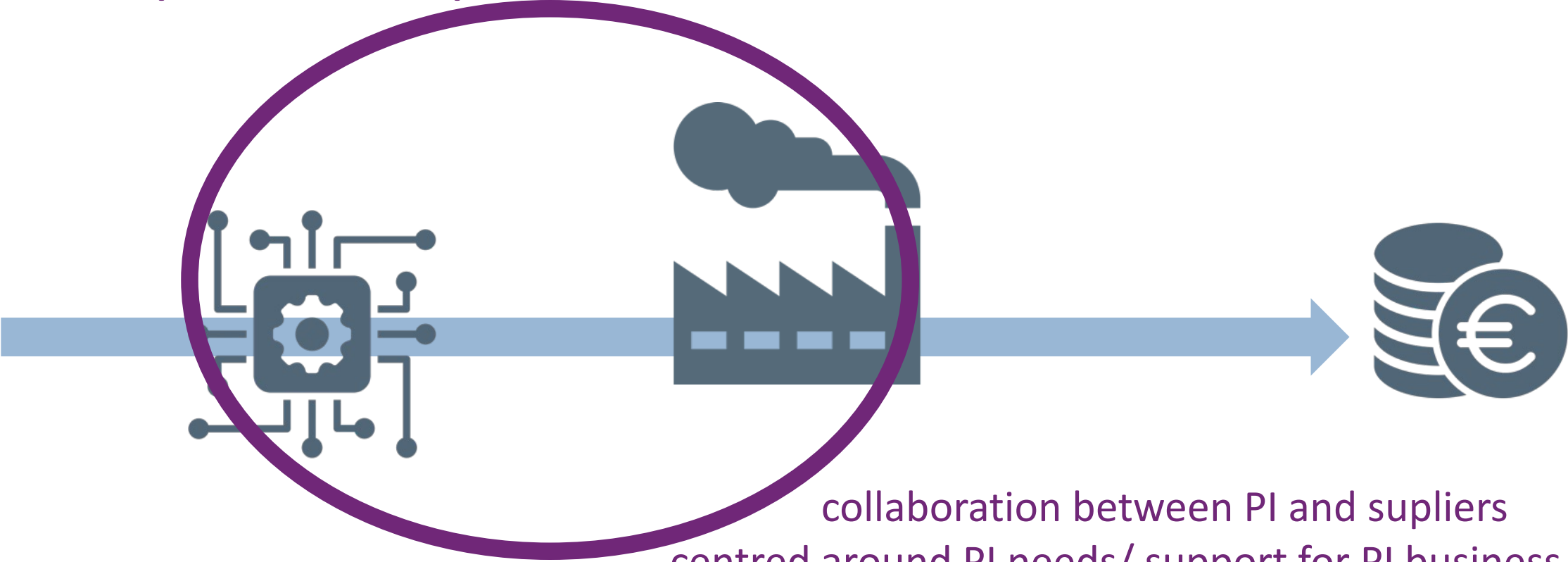




MIT REAP
Regional Entrepreneurship
Acceleration Program

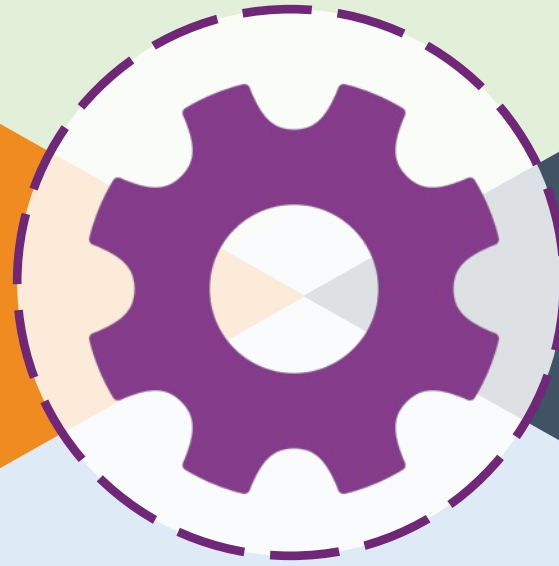


entrepreneurship in clusters



mentor

scale-ups



industry

facilitator



facilitator

- Project leaders and motivators
- Recruiters of mentors, scale-ups and participating corporations
- Solid experience in project management
- Industrial background and entrepreneurial experience, documented good results
- Good communication and teaching skills



mentor

- Role: Guide the Scale-ups through the project
- Highly experienced industrial (serial) entrepreneur
 - or, an experienced matching professional
- Willing to share own experiences (good and bad) with less experienced entrepreneurs
- Social and teaching skills
- Committed to participate in min 4 meetings in the project period
- Willing to sign NDA with the Scale-Up
- No payment



industry

- A globally oriented large company, or a company with a demand of a certain size
- A company willing to participate in a customer-supplier development cooperation, through
 - Show tolerance and be patient through the qualification process
 - Give realistic feedback on requirements for quality and performance
- The Corporation's most important function is to act as a professional customer
 - The Corporation agrees to participate in at least 4 meetings @ X h in the period
 - There is no obligation for purchase or contract signing



scale-ups

Support from the mentors (probably the most important factor)

Participation in three full day workshops

1. Immaterial rights,
2. Business modelling, business development, use of pilot plants
3. Corporate financing, public fundings and – support

In addition, the Process Facilitators have been available as advisors, and participated in initial meetings and workshops



process

The **power couples** run through a project with a duration of XX months

Initially, some goals are defined between Scale-up and Mentor,

- a) Long term and strategic goals (> 5 years)
- b) Technological and commercial goals (3 – 5 years)
- c) What should be achieved at end of the project (XX months)

A working plan is drafted jointly with the mentor

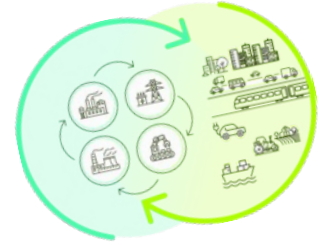
A mirroring development plant is discussed with the Corporation





Venture Capital
funding equity investment
control innovation sheet creation
cascading seed knowledge expansion enterprises ownership financing fund
word private partnership sale public structure money start exit risk
decisions companies capitalists managers job business cloud
products networks trade
style growth

Whitepaper



Support mechanisms to accelerate the H4C concept across Europe, and to realize its full potential towards achieving a circular and climate neutral economy



cascading funds

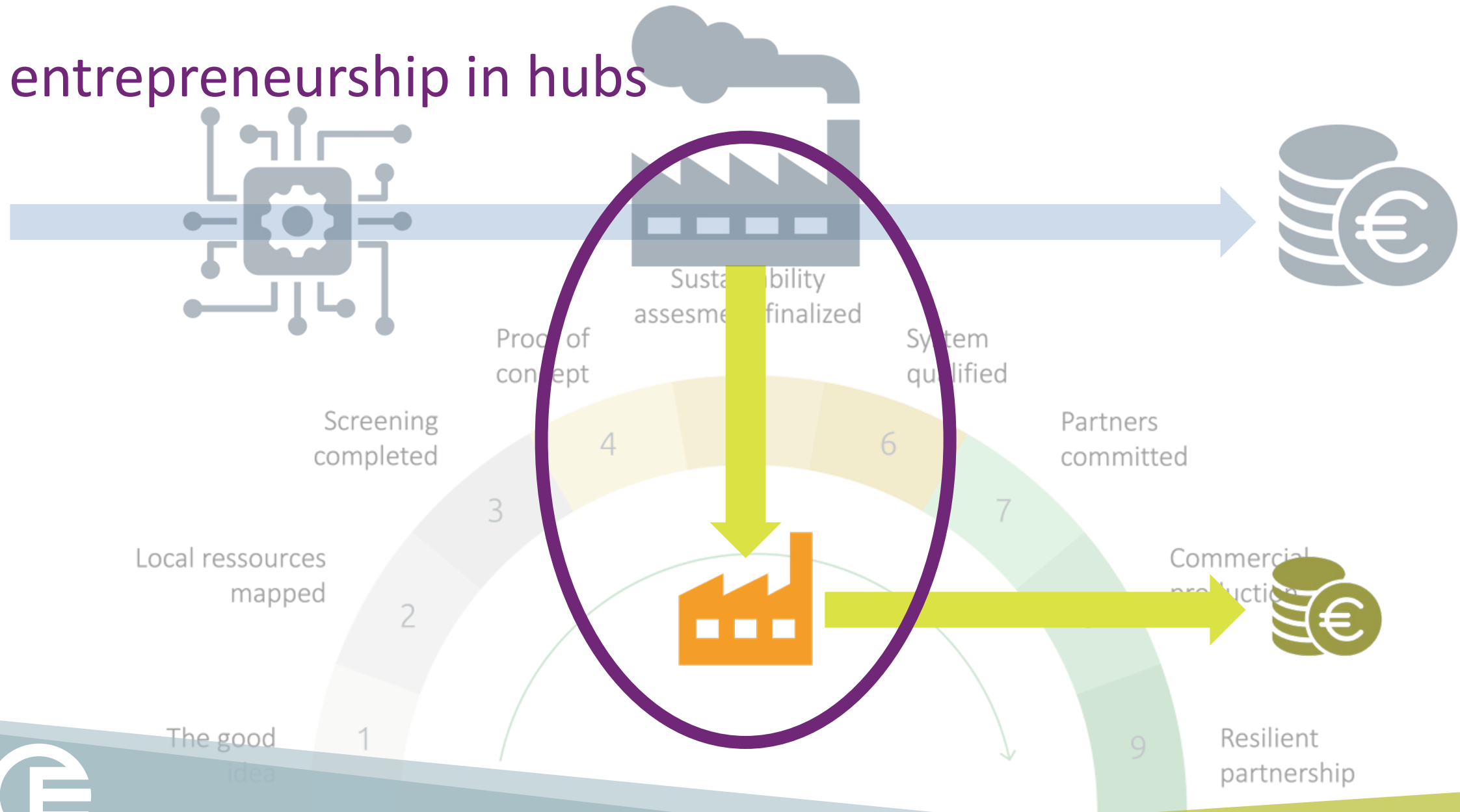


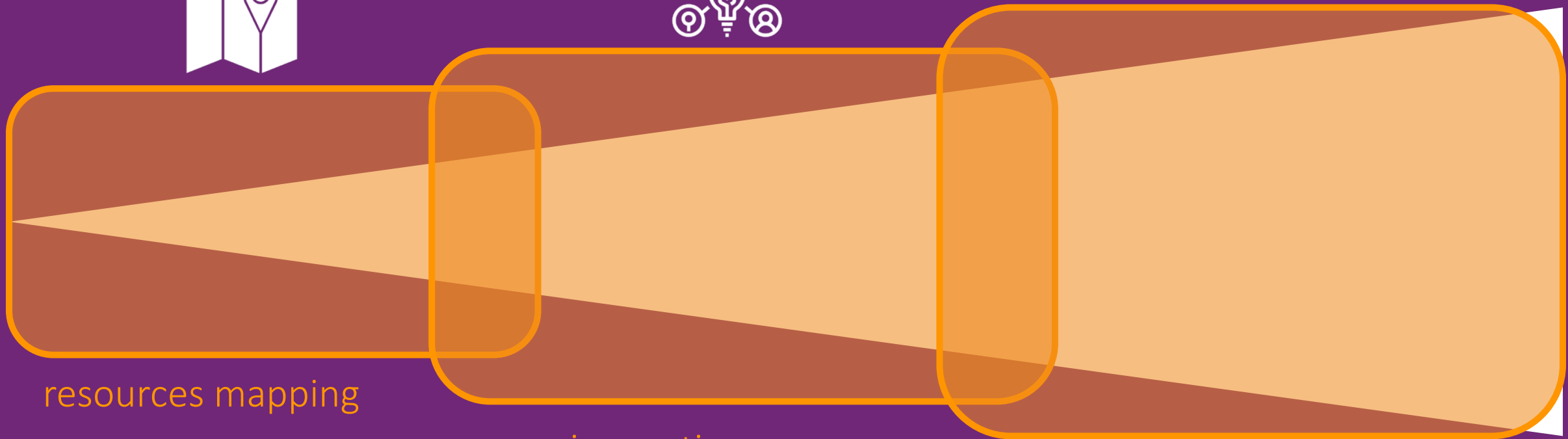
Whitepaper

Support mechanisms to accelerate the H4C concept across Europe, and to realize its full potential towards achieving a circular and climate neutral economy



entrepreneurship in hubs





resources mapping

open innovation

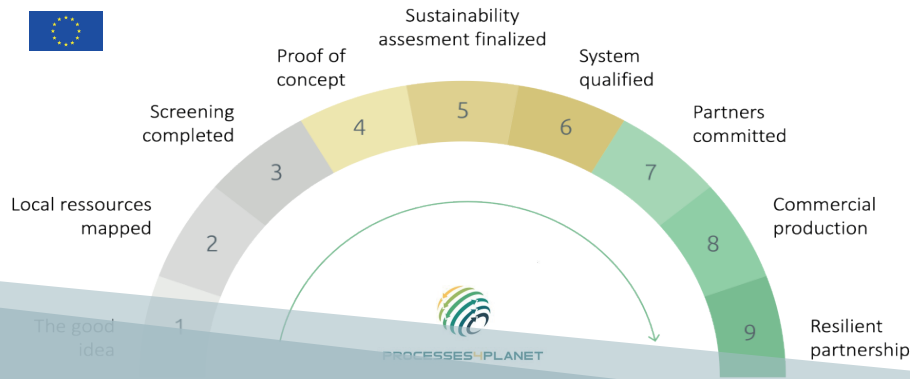
implementation



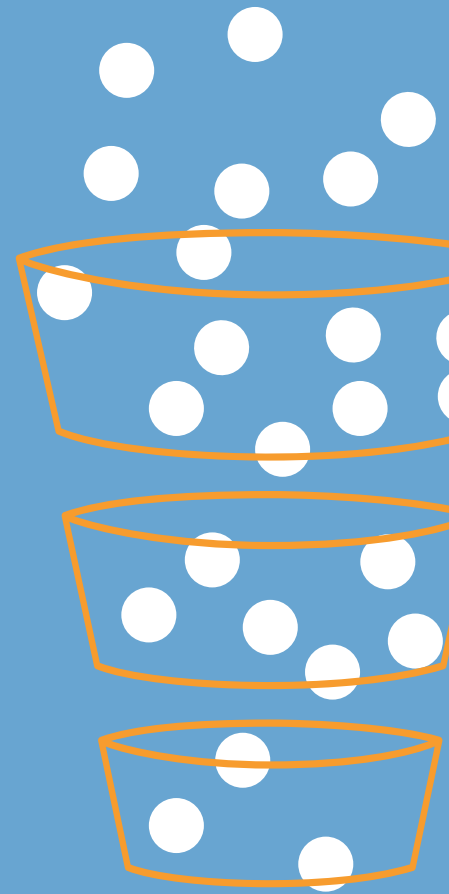
CIRC BUSINESS*



* CIRC- activities are aligned with international practices



IDEA





Utvalgfilter

Her kan du filtrere områdene i kartet ut ifra flere egen-kategorier. Velg fra lista eller klikk på et område i kartet for å få opp mer informasjon. Knappenålen opppe til høyre låser filteringsvinduet.

- Velg arealkategori**
Vis alle
- Type eierskap**
Vis alle
- Reguleringsstatus**
Vis alle
- Tilretteleggingsgrad**
Vis alle
- WA-status**
Vis alle
- Arealstørrelse**
1 - 3 280
- Befolkning innenfor 75 min**
4 100 - 289 700
- Avstand til sentralnett**

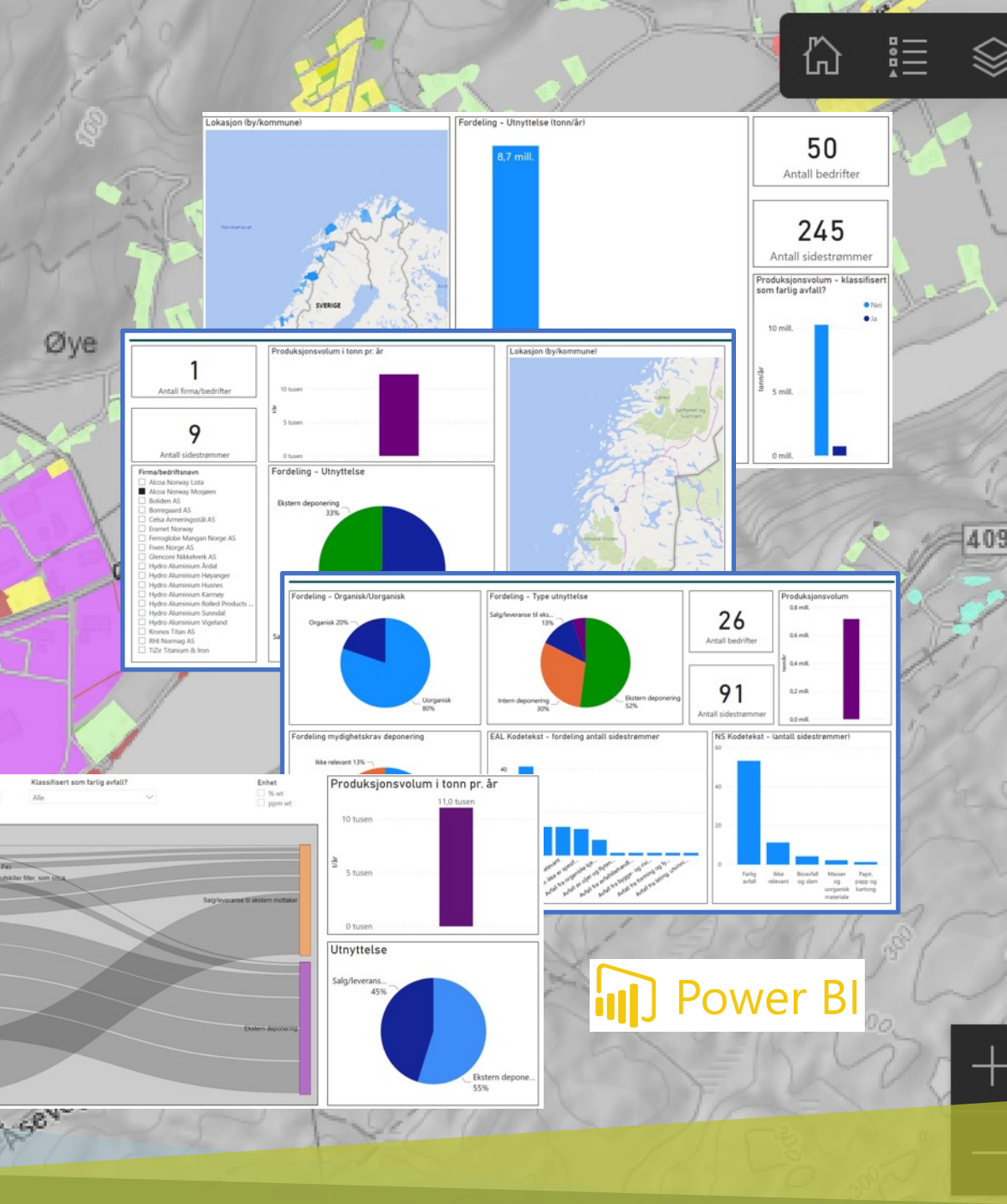
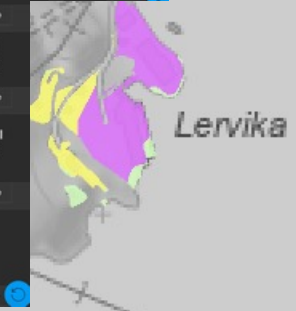
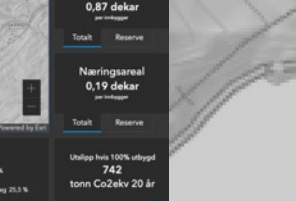
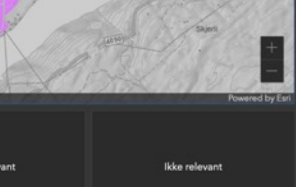
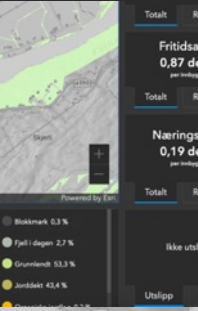
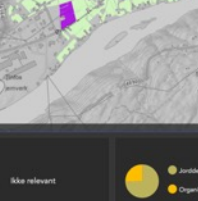
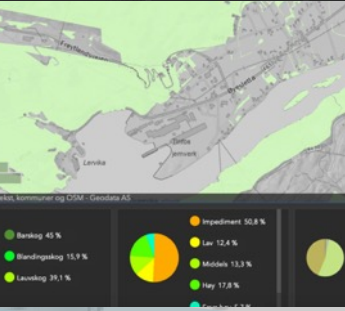
Områdeliste

- Eyje sentrum sør
- Eyje moen Midt
- Eyje moen Nord
- Eyje moen Ser
- Eyde energipark
- Eyde Material Park - Helle 1
- Eyde Material Park - Helle 2
- Eyde Material Park - Longum
- Eyde Material Park - Longumkrysset
- Feda brygge
- Fidalen industriområde

Områder vist
213



- Primær egnethet
- Industri (produksjon)
 - Flaksbælt næringsareal (blandet)
 - Sentrumfunksjoner
 - Handel
 - Lager/logistikk
 - Turisme/leiseli
 - Kontor
 - Offentlige tjenester/virksomheter
- Velg et område fra lista for å vise informasjon her
- Velg et område fra lista for å vise bilde her

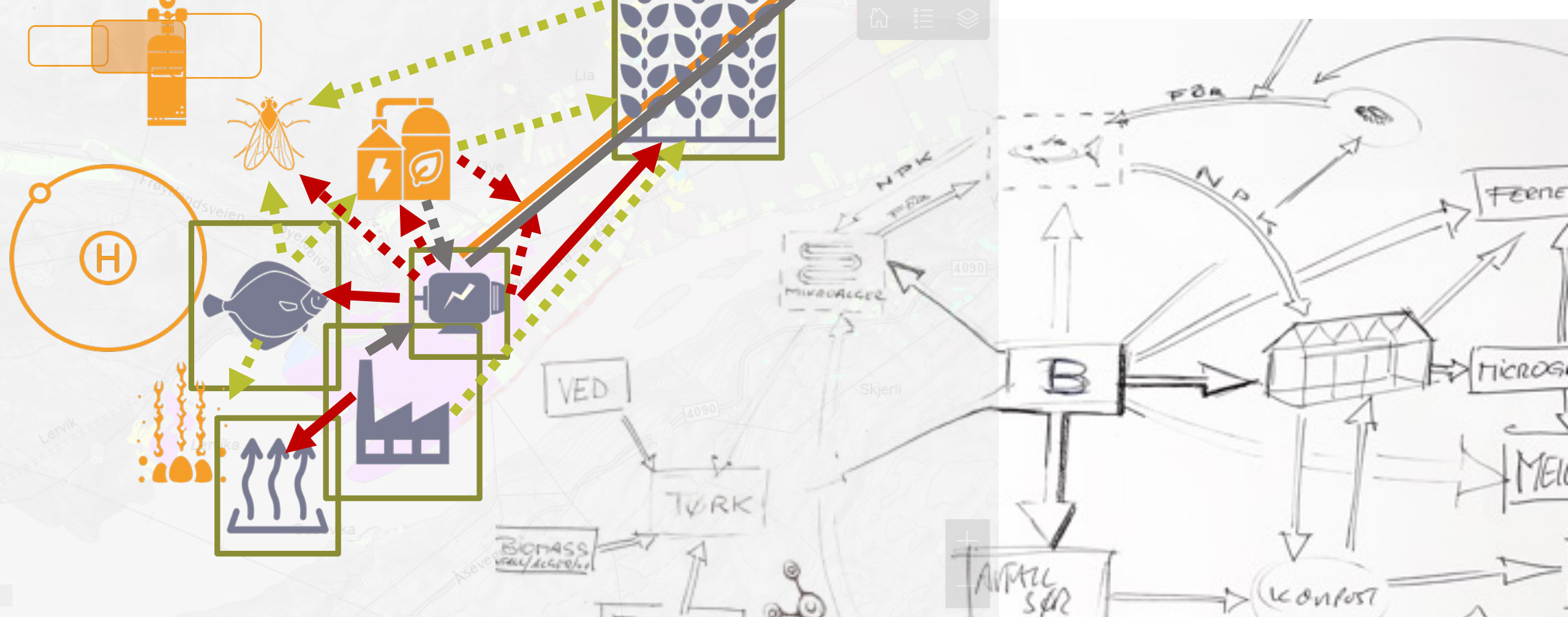


Power BI

NEEDS	ALCOA	ERAMET	MICROALGAE	FERMENTATION	GREEN H2	CCUS	BATTERY RECYCLING	BIOGASS	AQUAPONICS	AQUACULTURE (LB)	HYDROPONICS	GREENHOUSE	ENERGY PROD.	DRYING
RESPONSIBLE			CP	CP	GK		GK	GK	FS	FS	FS	FS		
Alcoa														
Eramet														
POWER														
grid access	x	x							x	x	x	x		
pricing	x	x								x				
renewable									x	x	x	x		
reliability									x	x	x	x		
ACCESSABILITY AND COSTS														
labour intensity														
competence needs									x	x				
proximity to resources/price														
fresh-/ saltwater access									x	x	x	x		
Area intensity									x	x	x	x		
OTHER KEY ISSUES														
harbour/ logistics									x	x				
knowledge institutions/ teknology development									xxx	xx	x	x		
financial support									x	x	x			
aces to EU market									x	x	x			
CIRCULAR RESOURCES														
low temperature heat (under 40C)			x					x	xxx	xx	x	x		x
Middel temperature heat (40-80C)				x						x	x	x		x
High temperature heat (over 80C)										x	xxx	xxx	x	x
CO (for combustion?)														
CO2			x			x			x					
Material sidestreams (ENK& LISTA?)														
NPK (natrium, forsfor og kalium)			x					xx						
Oksygen (fra Hydrogenproduksjon)									x	x				
Biorest from microalgae production?								x						
Water from fermentation/ Enzymproduksjon?			x					x						
Cold (from liquified hydrogen storage)														
Slud (from aquaculture (Stolt og Baring (NPK))								xx	x (ferskvann)					

	Battericelle produksjon	Grønt hydrogen	Blått hydrogen	Datanetre	Karbonfangst og lagring	Landbasert oppdrett
Egenskaper ved kraften						
Nettknytnng	■	■	■	■	■	■
Kraftpris og nettskiff	■	■	■	■	■	■
Fornybar kraft	■	■	■	■	■	■
Leveringsøikkerhet strøm	■	■	■	■	■	■
Tilgang på og kostnader ved innsatsfaktorer						
Arbeidskraftintensiv	■	■	■	■	■	■
Kompetanse hos tilgjengelig arbeidskraft	■	■	■	■	■	■
Lønnskostnader	■	■	■	■	■	■
Nærhet til råvarer/råvarepris	■	■	■	■	■	■
Ferskvanns- og/eller saltvannstilgang	■	■	■	■	■	■
Tilgang på store arealer	■	■	■	■	■	■
Andre vesentlige forhold						
Hamn eller annen transportinfrastruktur	■	■	■	■	■	■
Kunnskapsmiljøer og teknologutvikling	■	■	■	■	■	■
Statteordninger/annen tilrettelegging	■	■	■	■	■	■
Markedsadgang EU	■	■	■	■	■	■







70.000.000 NOK

Greenhouse heat requirements:

Table 2 - Calculated greenhouse heat requirements for three round tomato production systems: season, long season, and all year production.

Scenarios	Duration (months)	Heat demand (kWh m ⁻²)			Total (kWh m ⁻²)
		Heating	Humidity control	Lighting	
Season	6	299,6	199,7*	0	499,3
Long Season	8	404,8	202,4**	(-)128,7	478,5
All year	12	588,2	294,1	(-)316,8	565,4

* Heat used for humidity control assumed to be 40% of total heat requirements without artificial lighting.

** Heat used for humidity control assumed to be 30% of total heat requirements with artificial lighting.

Economic evaluation:

Table 4 - Savings achieved by using waste heat from industry for greenhouse production of round tomatoes.

Scenario	Turnover without waste heat (nok/year)	Turnover with waste heat (nok/year)	Savings (nok/year)
Season	22 464	3 522 464	3 500 000
Long season	2 313 040	6 313 040	4 000 000
All year	2 605 480	7 405 480	4 800 000

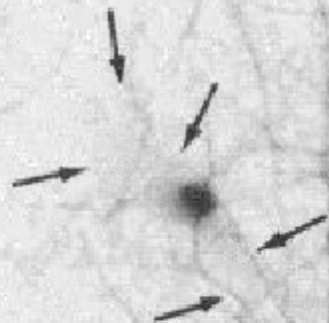
Considering the total usable waste heat from xxx (97 323 600 kWh), the heat requirements for a 10 000 m² greenhouse would comprise ~ **5% of the total heat available.**

To use all the usable heat from xxx would require a production area of around **0,20 km² (or 20 greenhouses of 10 000 m²)**

The use of excess heat from xxx can potentially increase the annual turnover for the grower if energy is supplied for **free or at a lower price than market price.**

Market access is fundamental for the successful exploitation of waste heat from Eramet for horticultural production.

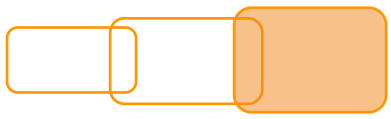




smart hub2hub collaboration



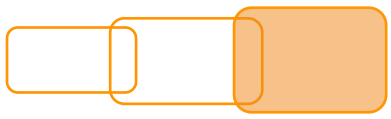




Waste

Most people view unwanted materials or byproducts from industrial production as costly problems that are bad for our planet. We see waste streams as valuable, untapped resources that can create new economic opportunities, more green jobs and make a real impact in reducing environmental footprints. We call this bringing waste to life.





Home

The Problem

Our Solution

The Market

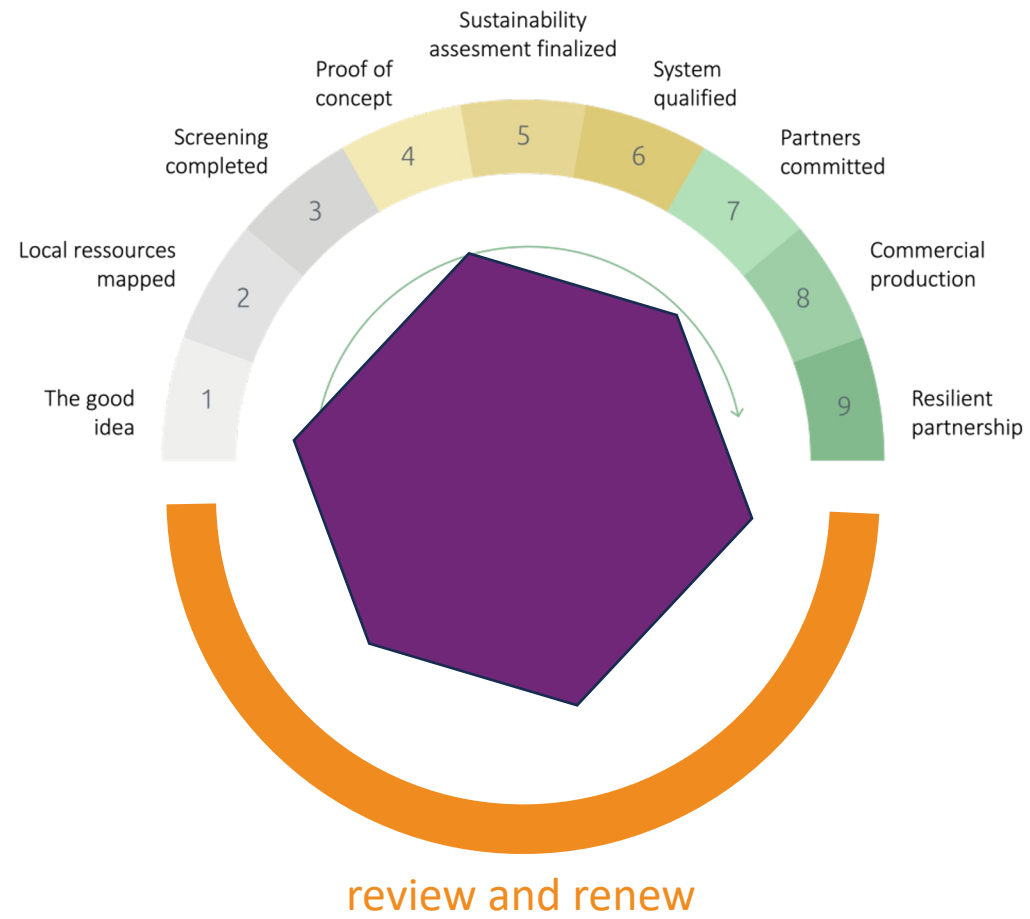
Our Facility

The Future

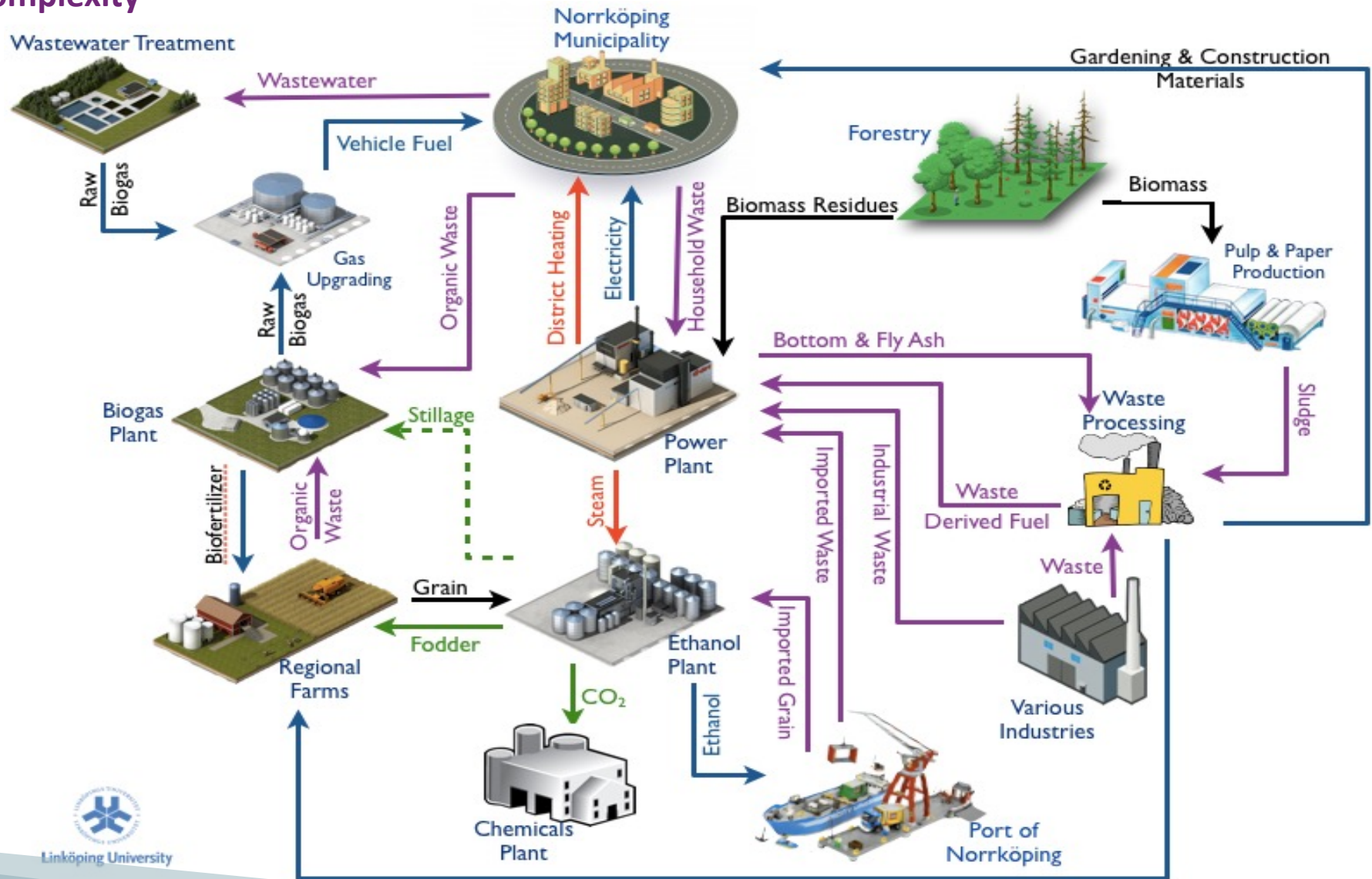
It's time for a world without waste –

The Refacture system unlocks the potential of waste to create a global zero-waste economy.





Industrial-Urban Complexity





christophe@eydecluster.com
<https://www.eydecluster.com/en/>

