



# Climate-KIC

Climate-KIC is supported by the  
EIT, a body of the European Union



## Maritime Sector and Industrial Symbiosis: EIT Climate-KIC

27 May 2020

Maria Loloni, Maritime Programme Manager EIT Climate-KIC



@ClimateKIC

A person is shown from the chest down, wearing a green tank top, holding a large amount of dark, rich soil in their hands. The soil is being held in a way that it appears to be falling or being released. The background is a blurred green field, suggesting an agricultural or natural setting. The overall tone is dark and earthy.

EIT Climate-KIC is a climate innovation agency and community working to catalyse these transformations, using systems innovation as a key tool.



# Our 10-year track record in climate innovation

**1600+**  
climate-positive  
start-ups incubated

**€3.4bn+**  
climate funding  
leveraged

**595**  
new products  
and services

**€550m+**  
total value of  
funds managed



**391+**  
formal partners,  
across 33 countries  
(including *Linked 3<sup>rd</sup>*  
*Parties*)



**>€1bn**  
investment attracted  
to start-ups



**>2,300+**  
full-time jobs created  
since 2010



**44,000**  
participants in our  
education activities



10 years of experience has taught us that achieving the systemic change we need requires a different order of innovation.

## Incremental

## System innovation

## Transformational

Project finance model

Portfolio finance model

Single projects and incremental change

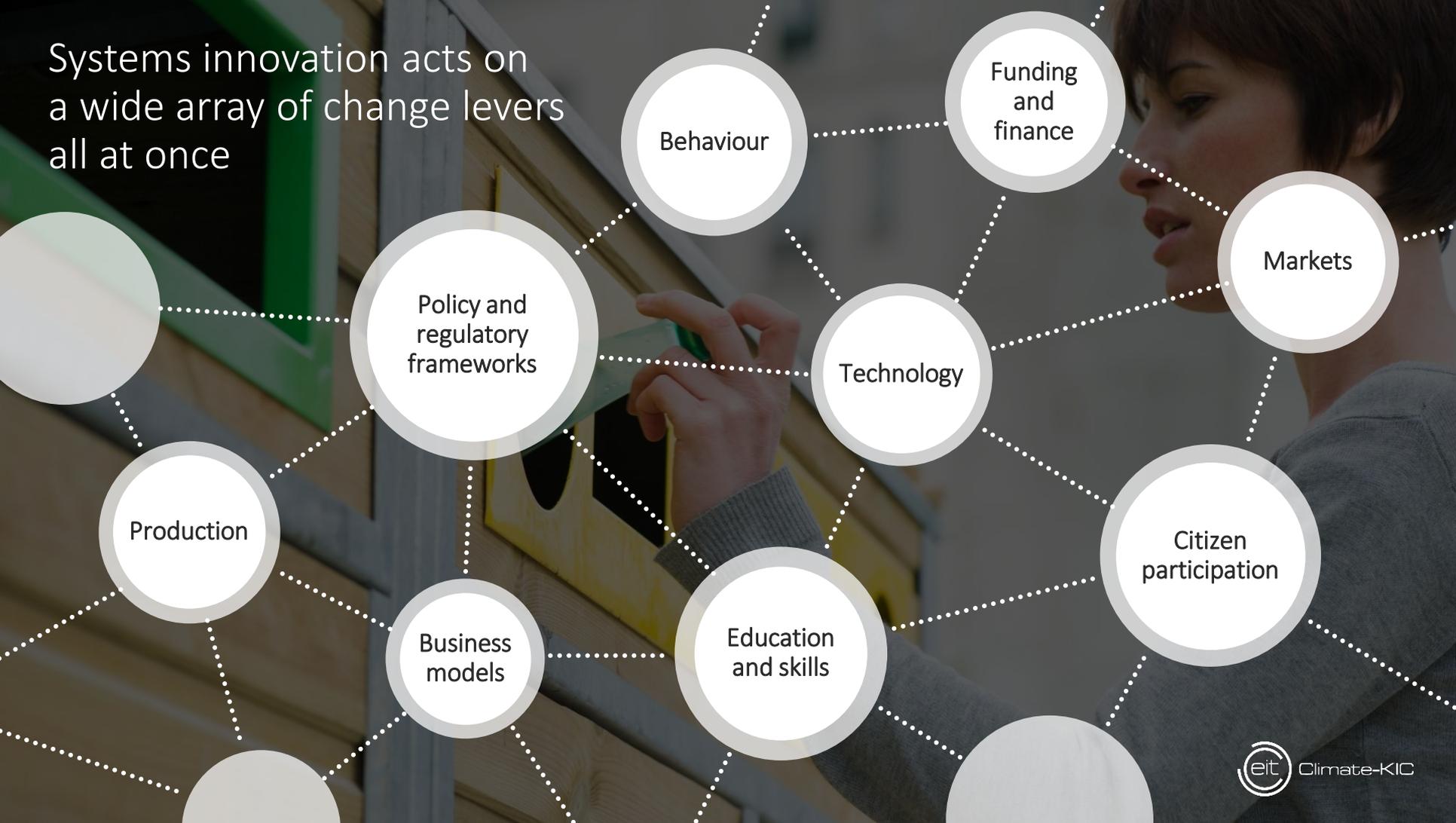
Portfolio of connected innovation projects that learn from each other

Siloed and fragmented activities, often focused on technological improvements

Wide appreciation of change levers



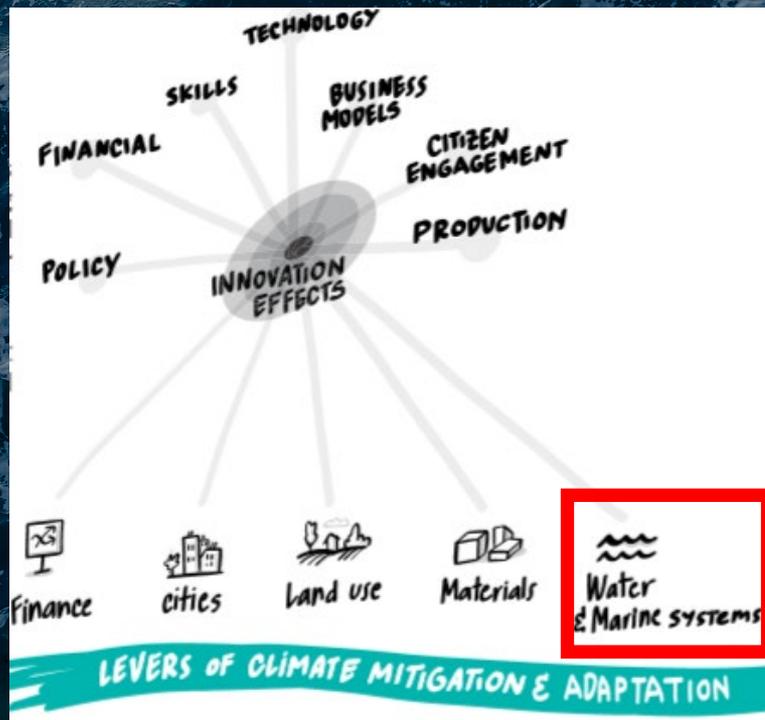
Systems innovation acts on a wide array of change levers all at once



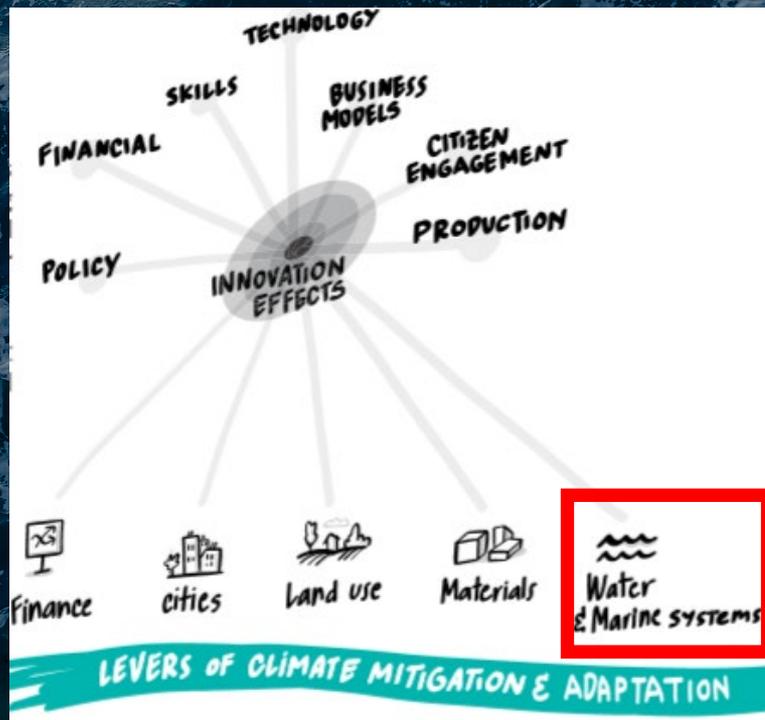


# EIT Climate-KIC work in the Maritime Sector

# “Transformation in Time”



# “Transformation in Time”



Circular

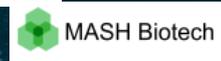
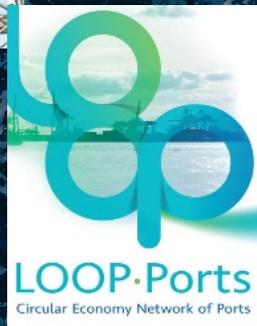
Inclusive

Resilient

Net-zero carbon

# EIT Climate-KIC work in The Maritime Sector

- BI.EU Climate
- A Transition for Aarhus
- Deep Demonstration in Maritime Hubs



Climate-KIC is supported by the EIT, a body of the European Union

A deep demonstration of...

## Resilient, Net-Zero Emissions, Maritime Hubs

The maritime sector accounts for 90% of global trade and 2.2% of global GHG emissions – a figure projected to increase threefold by 2050. Within the Deep Demonstration Net-zero Emission, Resilient Maritime Hubs we are working with ambitious partners on land (Port of Valencia, Port of Piraeus) and at sea (Cyprus Shipping Registry, through the Cyprus Deputy Ministry of Shipping) who share an ambition to create a circular, inclusive, net-zero-emissions maritime sector.

# Net-Zero Emission, Resilient Maritime Hubs

## Challenge owners

---

We are currently working with three Mediterranean partners in our fifth focus area on water and marine systems.



1

**Port of  
Valencia**

1

2

**Port of  
Piraeus**

2

3

**Cyprus Ship  
Registry**  
through Cyprus  
Deputy Ministry  
of Shipping

3

# Designers

---





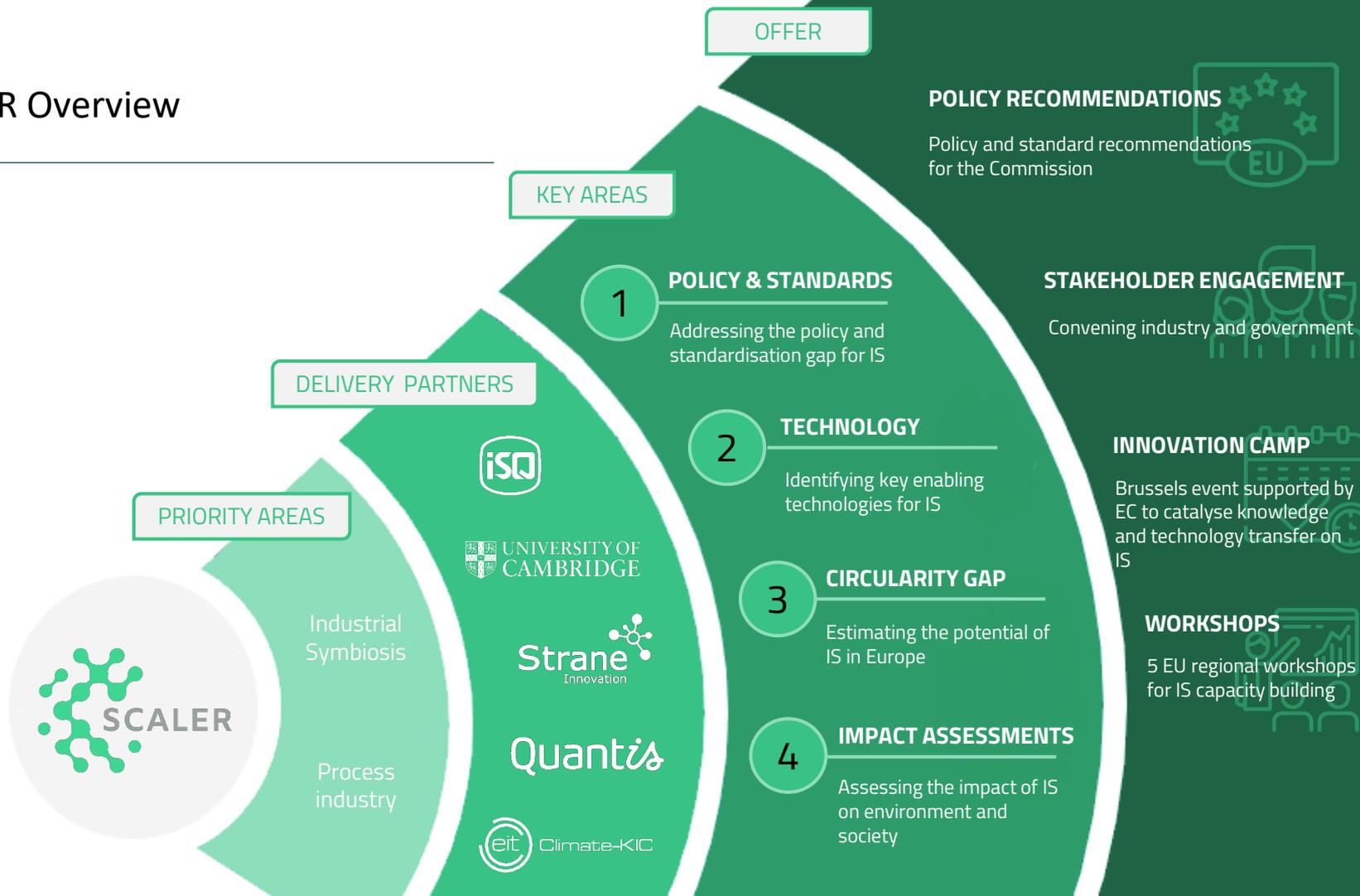
# SCALing European Resources with industrial symbiosis



This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement no 768748

**SPRE** Sustainable Process Industry through  
Resource and Energy Efficiency

# SCALER Overview



OFFER

## POLICY RECOMMENDATIONS

Policy and standard recommendations for the Commission



## KEY AREAS

1

### POLICY & STANDARDS

Addressing the policy and standardisation gap for IS

2

### TECHNOLOGY

Identifying key enabling technologies for IS

3

### CIRCULARITY GAP

Estimating the potential of IS in Europe

4

### IMPACT ASSESSMENTS

Assessing the impact of IS on environment and society

## DELIVERY PARTNERS



## PRIORITY AREAS

Industrial Symbiosis

Process industry



## STAKEHOLDER ENGAGEMENT

Convening industry and government



## INNOVATION CAMP

Brussels event supported by EC to catalyse knowledge and technology transfer on IS



## WORKSHOPS

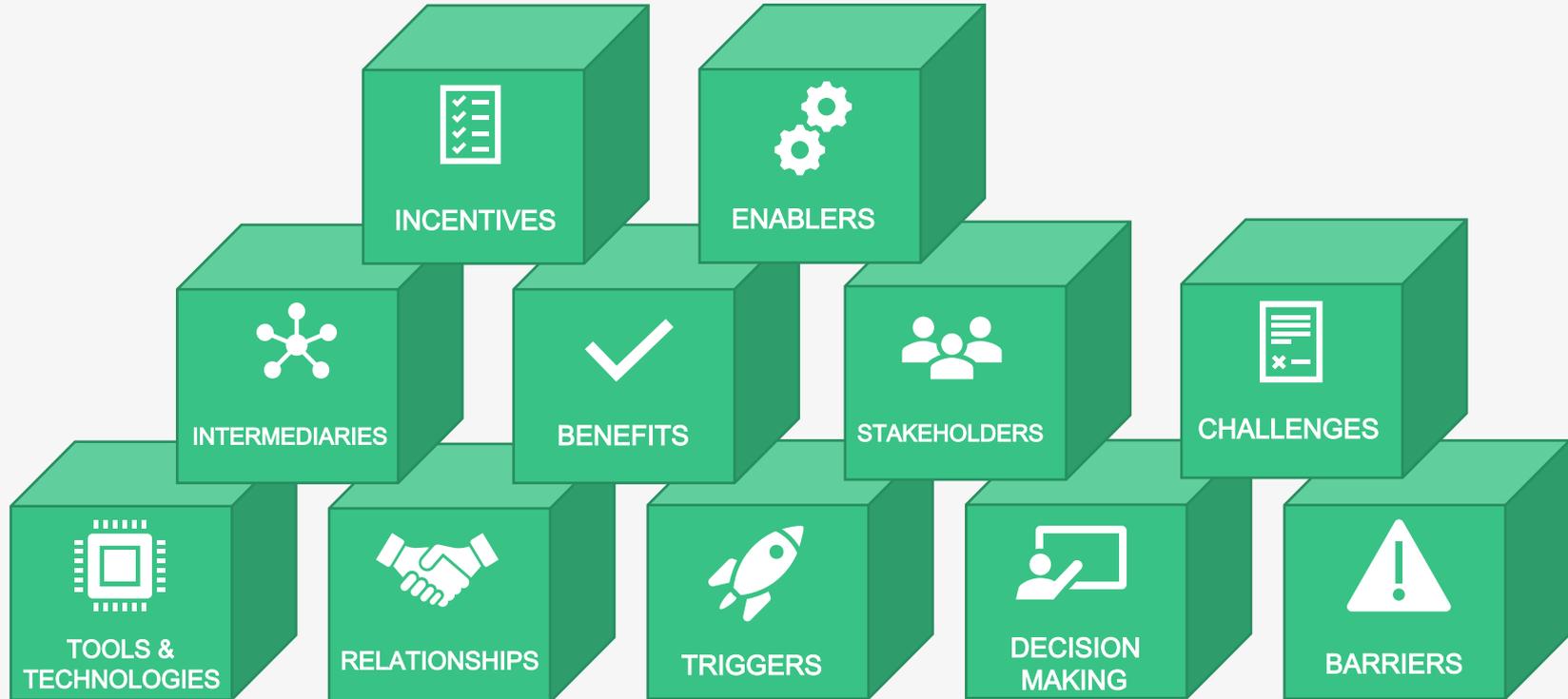
5 EU regional workshops for IS capacity building



Research on state of the art

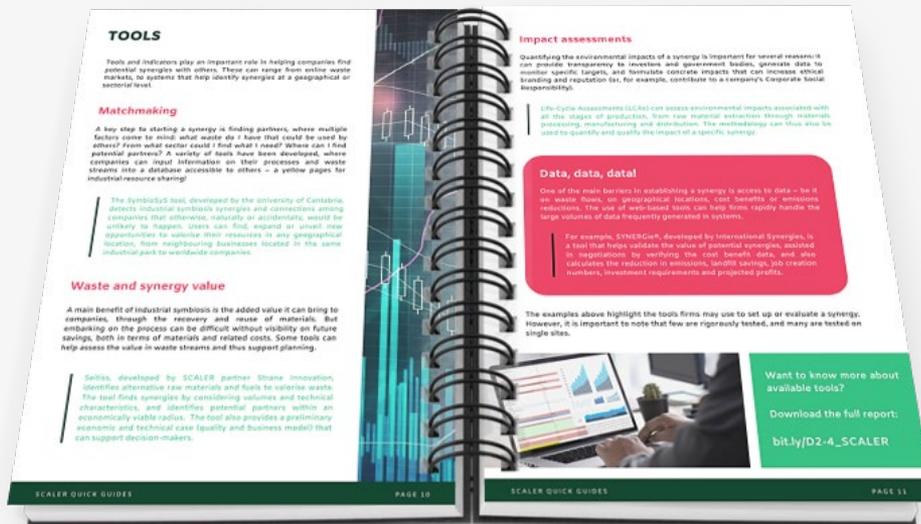
# What did we look at?

---





Download at [scalerproject.eu/resources/guides-outlooks](https://scalerproject.eu/resources/guides-outlooks)



## 25 case studies

Among which...



## 25 case studies

Among which...

**Read the report**  
<https://www.scalerproject.eu/resources/reports>

The West Midlands Industrial Symbiosis Programme (WISP), West Midlands, UK

Relvão Eco Industrial Park, Municipality of Chamusca, Portugal

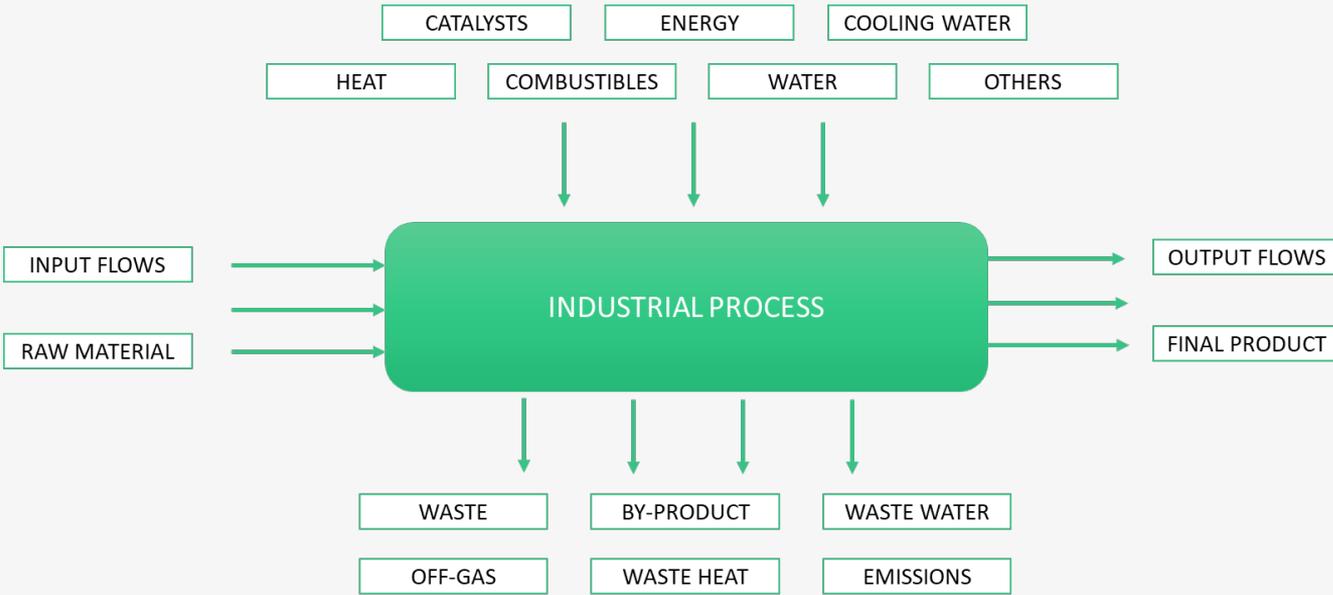
Neiye Sugar Co., Ltd. , China

Kawasaki Eco-town, Japan

The Kwinana Industrial Area, Western Australia

## Flows & Synergies : Identification, Characterisation & Assessment

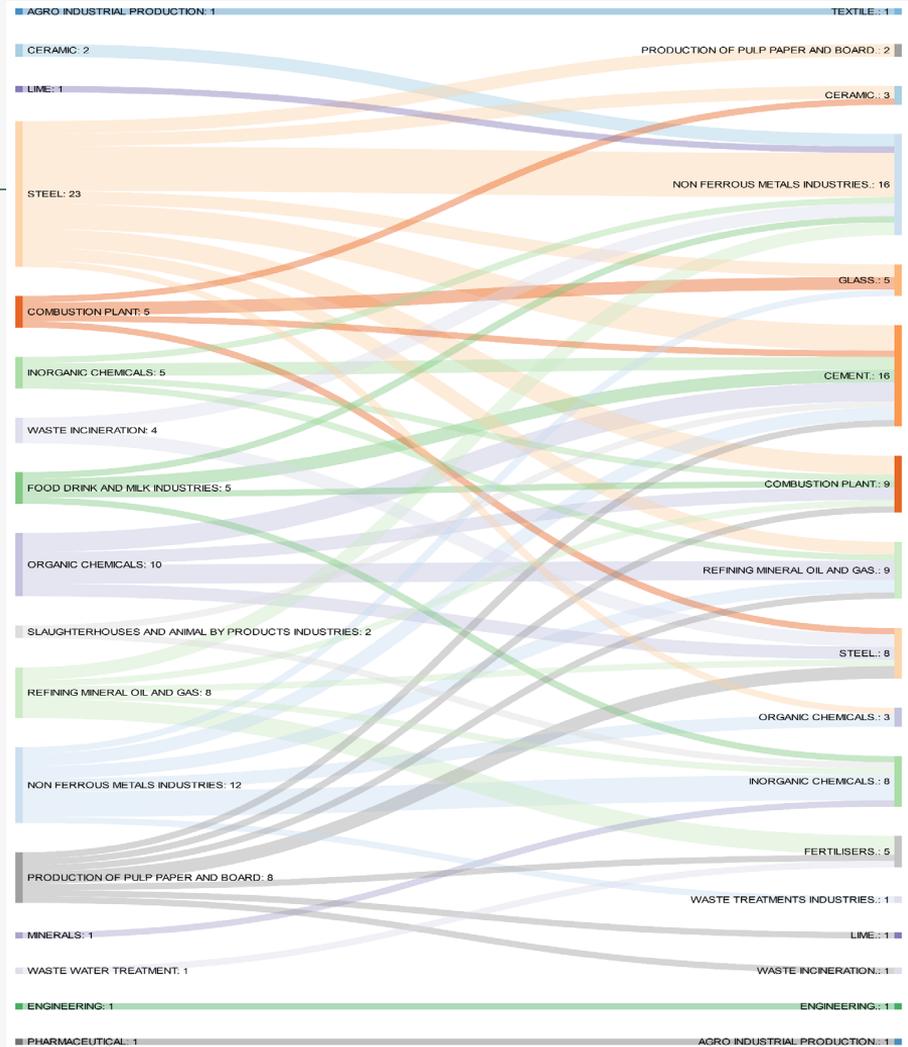
# Systemic approach



- QUANTITATIVE COLLECTED DATA
- Sector annual flow rate
  - Number of facilities
  - Process annual flow rate
  - Number of processes
  - Inputs flow rate
  - Outputs flow rate
  - Flows state of matter
  - Flow composition
  - Resource composition
  - Process temperature
  - Flow characteristics : pH, LVH, temperature, conductivity

# Results

## List of 100 varied and promising synergies



IF THE ENTIRE  
100 SYNERGIES  
PRESENTED  
WERE TO BE  
FULLY  
IMPLEMENTED  
IN EUROPE.....

**122 M**

TONNES CO<sub>2</sub>-EQ  
could be saved

**33.5 B€**

VALUE ADDED  
could be created

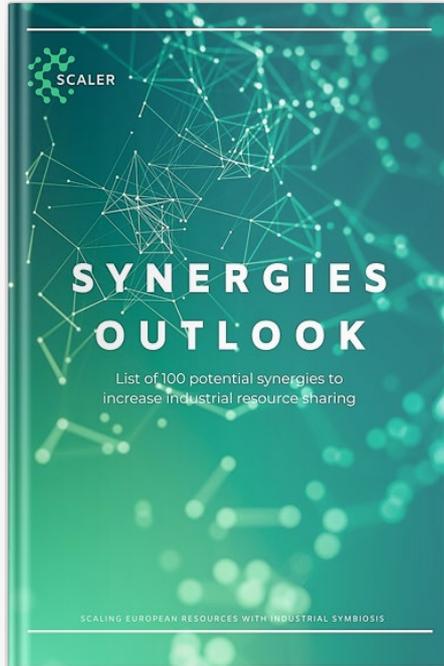
**350 000**

DIRECT JOBS  
could be generated

**7 500 000 M€**

CARBON TAX  
could be reduced

# Synergies outlook



Download at [scalerproject.eu/resources/guides-outlooks](https://scalerproject.eu/resources/guides-outlooks)



# Get involved!

---



## Visit our website

Find out more at [www.scalerproject.eu](http://www.scalerproject.eu) and see how you can work with us.

## Join our newsletter

Keep abreast of the latest information on industrial symbiosis by joining our newsletter: [http://bit.do/scalerproject\\_newsletter](http://bit.do/scalerproject_newsletter)

## Contact us

Need more information or want to work with us? Contact us at [info@scalerproject.eu](mailto:info@scalerproject.eu) to get in touch.





[maritimehubs@climate-kic.org](mailto:maritimehubs@climate-kic.org)

[maria.loloni@climate-kic.org](mailto:maria.loloni@climate-kic.org)