SCREEN

Synergic CirculaR Economy across European regioNs

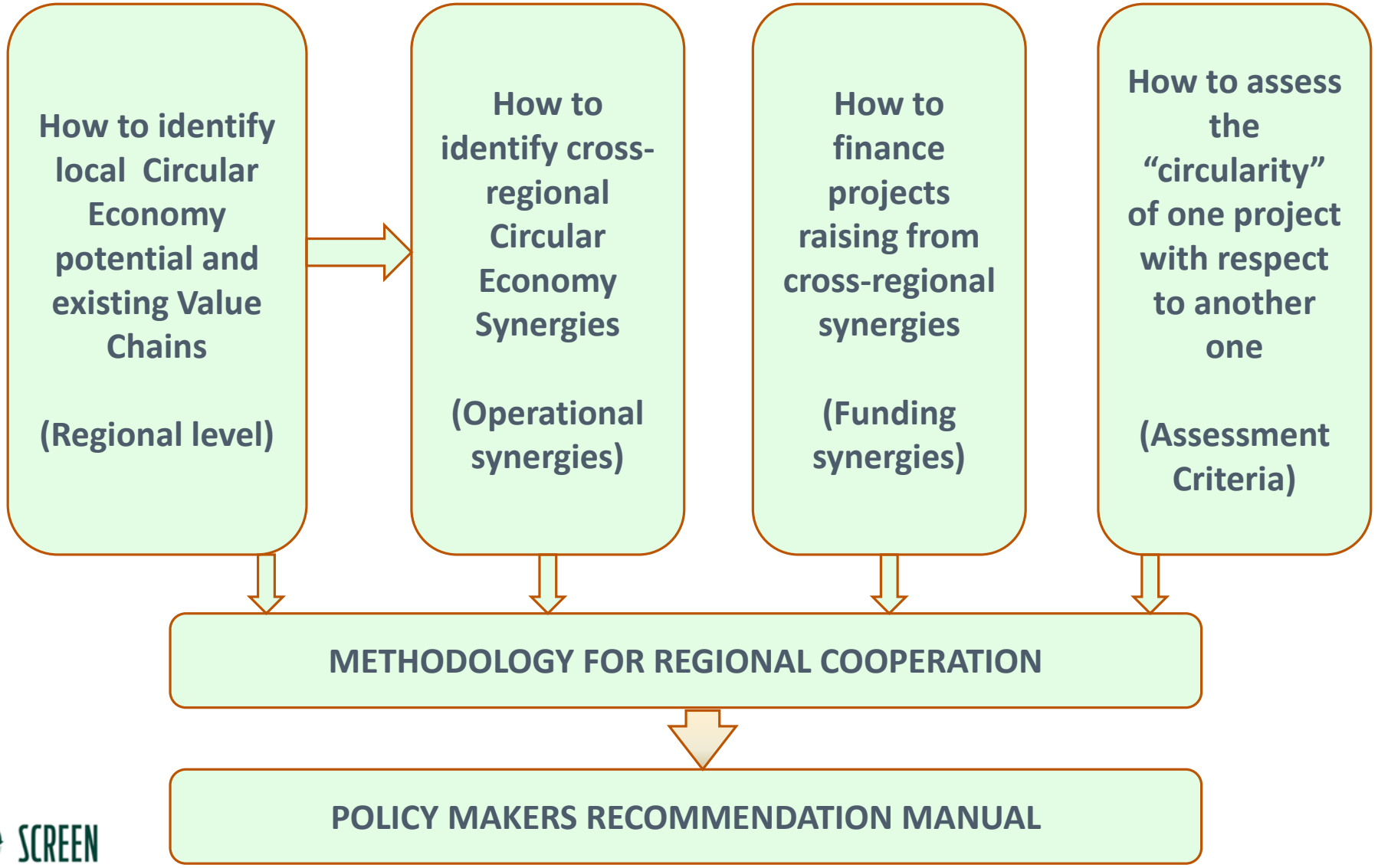
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No730313

From local to cross regional synergies

Prof. Marcello Colledani – AFIL, Lombardy Region cluster on Intelligent Factory

3rd SCREEN International workshop
"Barriers and shortcuts to Circular Economy",
Brussels, 22 February 2018

The four steps of the SCREEN project



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SCREEN Methodology: From local to cross-regional value-chains

1. ***Data Collection*****:** A tool has been designed to collect data about existing capabilities in the Screen Regions, also considering the Smart Specialization Strategies and the key industry sectors.

2. ***Analysis:*** A twofold data-driven and interaction-driven approach has been followed in order to analyse the existing capabilities and identify the existence of regional hotspots and cross-regional opportunities and emerging ideas.

3. ***Synthesis***: The existing cross-regional value-chains have been formalized and specific opportunities that can potentially result in actions to be implemented through cross-regional cooperation have been formalized.

Data Collection: SCREEN Mapping tool

1. RIS3, strategic areas, and SWOT Analysis
2. Focus Sectors & Companies
3. Capabilities overview:
   R&D, Innovation, Education capabilities
4. Emerging ideas
5. Existing Circular Economy legislation
6. Existing funding instruments

Strategy

Mapping
Baseline Situation

Innovation
Explicit Emerging Actions

Barriers and Funding opportunities

VANGUARD INITIATIVE
New growth through smart specialisation

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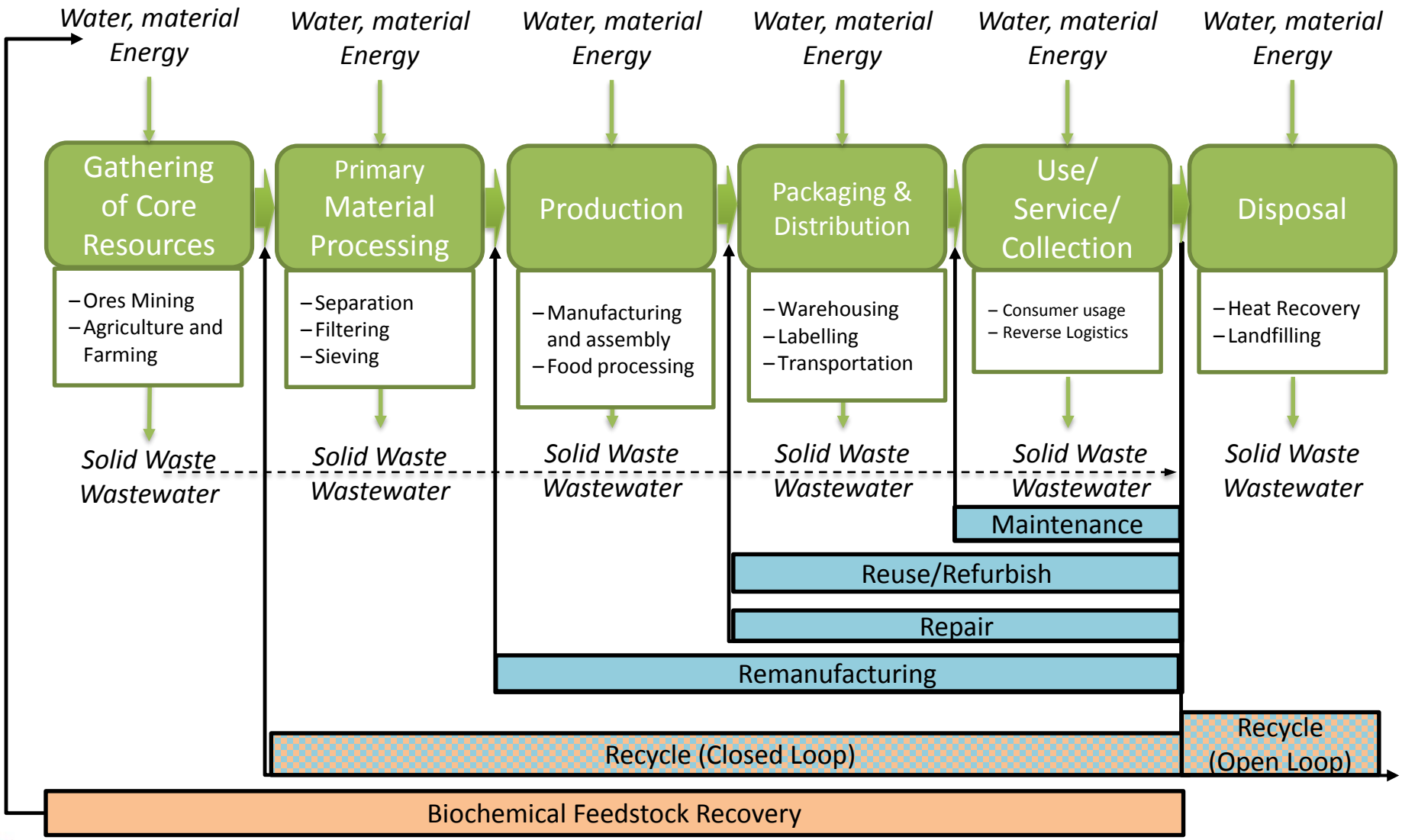
These steps have been formalized within the SCREEN tool. The Regions have compiled the tool and this has been the basis for the local and cross-regional analyses

Reference Framework: Value-Chain oriented approach



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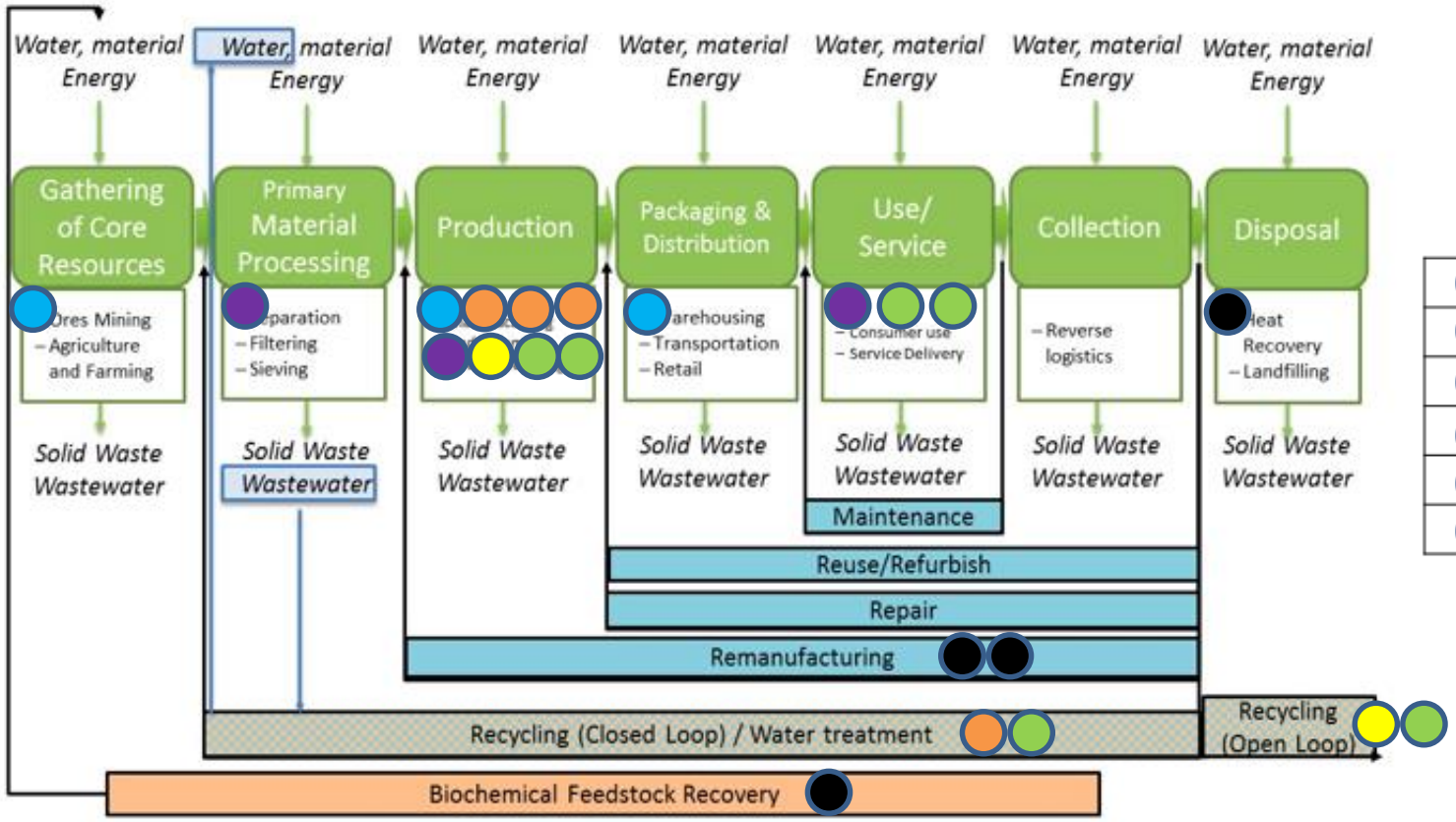
Glossary: A definition for the different circular economy options has been elaborated (relation to existing standards and references).

Data Driven Analysis

Starting from the tool inputs a data-driven analysis of the potential cross-regional value-chains (sector-driven, material-driven) has been carried out.



Transport and mobility value-chain.

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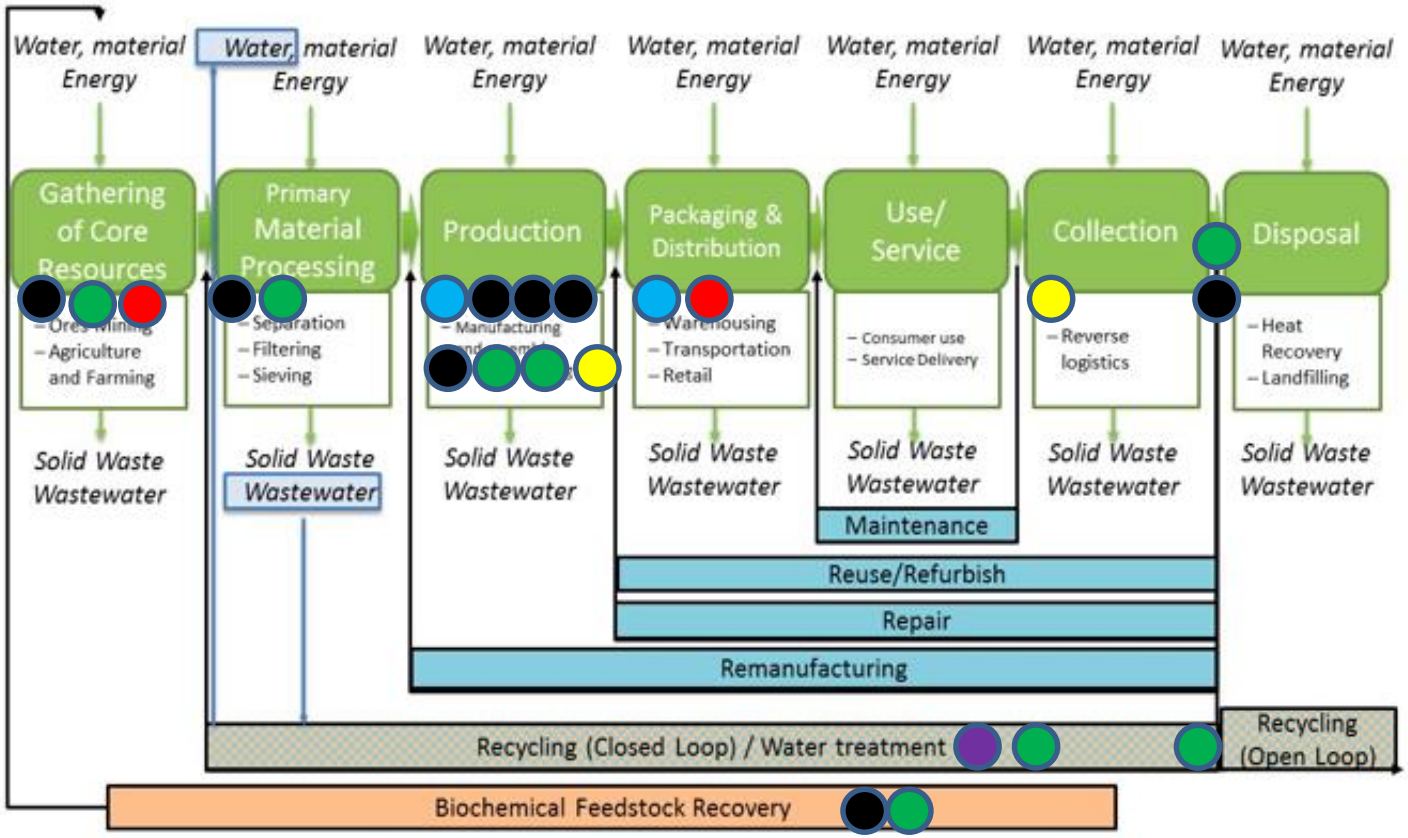

	Centro Portugal
	Navarra
	Lazio
	Fryslan
	Crete
	Scotland

Food and beverage value-chain.

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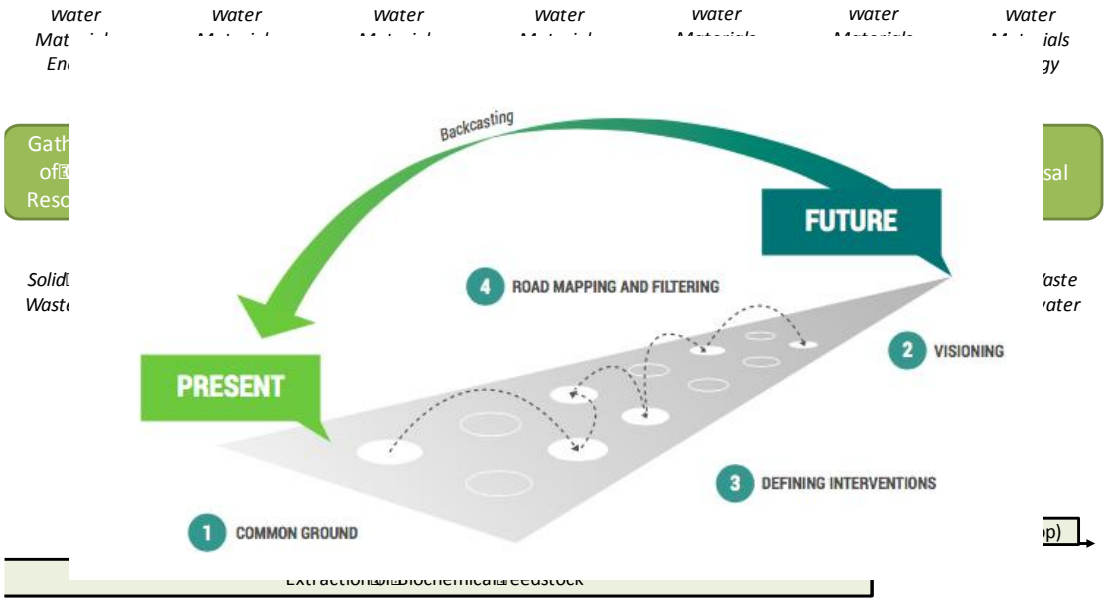
SCREEN workshops

Starting from the tool inputs and data analysis, value-chains have been further analyzed through international and local workshops.

SCREEN Local workshop held in the Lombardy Region on November 2017, on the "*Circular value chain for the automotive sector*"



Potential synergies with other Regions have been highlighted

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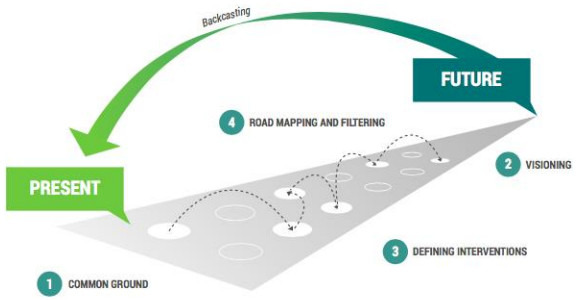
SCREEN Cross-regional value chains

Starting from the tool inputs, local and consortium workshops, the cross-regional synergies are being identified.

Example of cross-regional value chain for the "Manufacturing and Remanufacturing" sector among Tampere (Finland), Lombardy (Italy) and Navarra (Spain)



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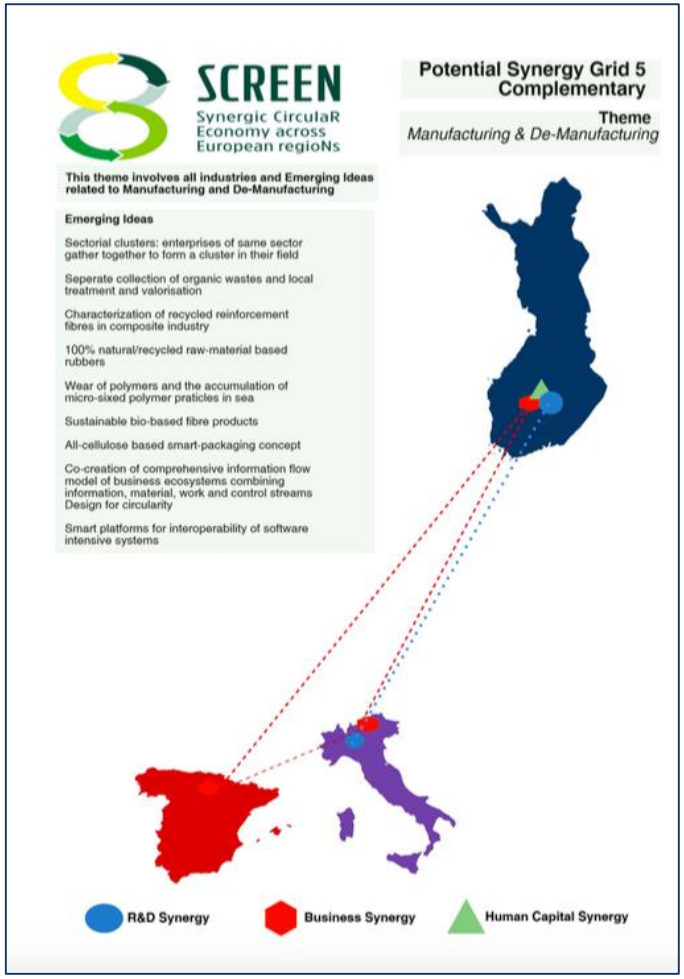
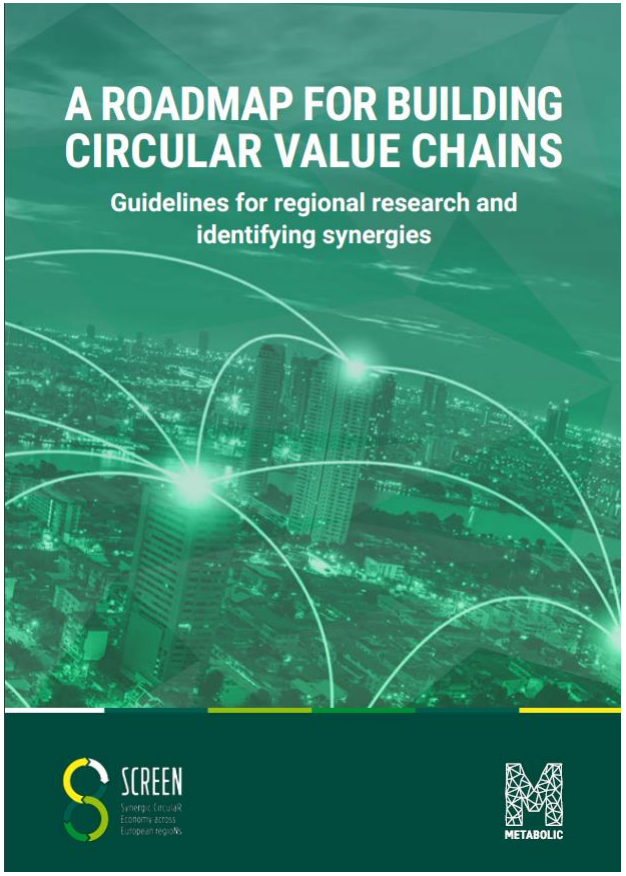


SCREEN Cross-regional value chains



Sludge recovery and utilization

HOTSPOT

LAZIO AND TAMPERE:

Lazio in Italy and Tampere in Finland face a challenge with the production of sewage sludge that contains important nutrients. Current sewage systems dilute the sludge, making it harder to valorize and there is a lack of technologies to productively extract the valuable materials.

Barriers

1. Lack of filtration
2. Lacking consumer acceptance
3. Absence of specific legislation

Stakeholders

Tech-Marketplace

TAMPERE UNIVERSITY OF TECHNOLOGY

UNIVERSITÀ Tuscia

EMERGING IDEAS

FRIESLAND:

Cirtec and KNN Cellulose BV have developed a filtering technology that filters only the cellulose out of the sludge making it possible to use it for example as drainage inhibitor under roads. The extraction of the cellulose also makes the rest of the sludge easier which can lead to a cost reduction of 15-20% for aeration.

KNN Cellulose BV

CIRTEC

Ecophos in Friesland have developed a system that can extract almost 99% of phosphate from incinerated sludge, making it easy to add this highly effective valorization step at the end of the process.

SYNERGY

TECHNOLOGY EXPORT

Because the innovations are so mature in this case, we would suggest a Technology Export, from Friesland to Lazio and Tampere.

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SCREEN Cross-regional value chains

The most relevant value-chains have been identified and analyzed:

Material-driven value-chains

- Agriculture
- (Smart) Packaging
- Water and wastewater
- Biobased materials & biotechnology
- Manufacturing & de-manufacturing
- (Bio)waste management
- Construction/Build Environment

Business driven sectorial value-chains

- Electrical and Electronic Equipment
- Energy
- Paper and forest-based industry
- Textile
- Transport and mobility
- Food and beverage

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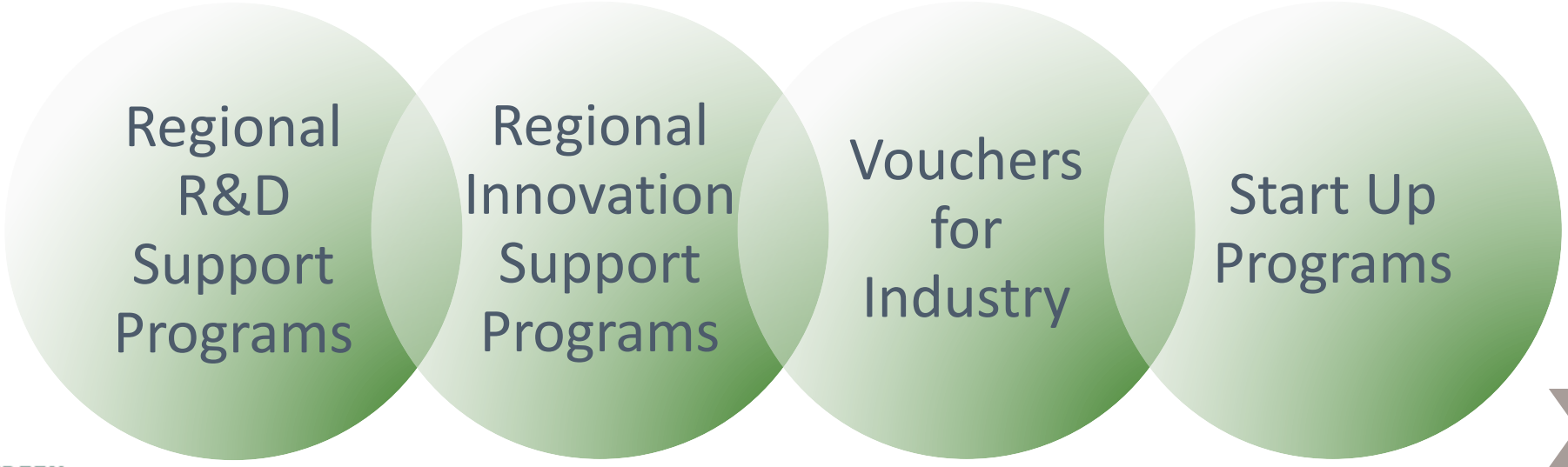
Existing financial instruments

"<u>Existing financial Instruments</u>" have been revised including the instruments already available in the regions which are mapped to:

1. *Further develop **the emerging ideas**, stemming from the results of the previous steps within Screen.*
2. *Gather **best practices** and hints which can fuel the policy lab, created within the project.*



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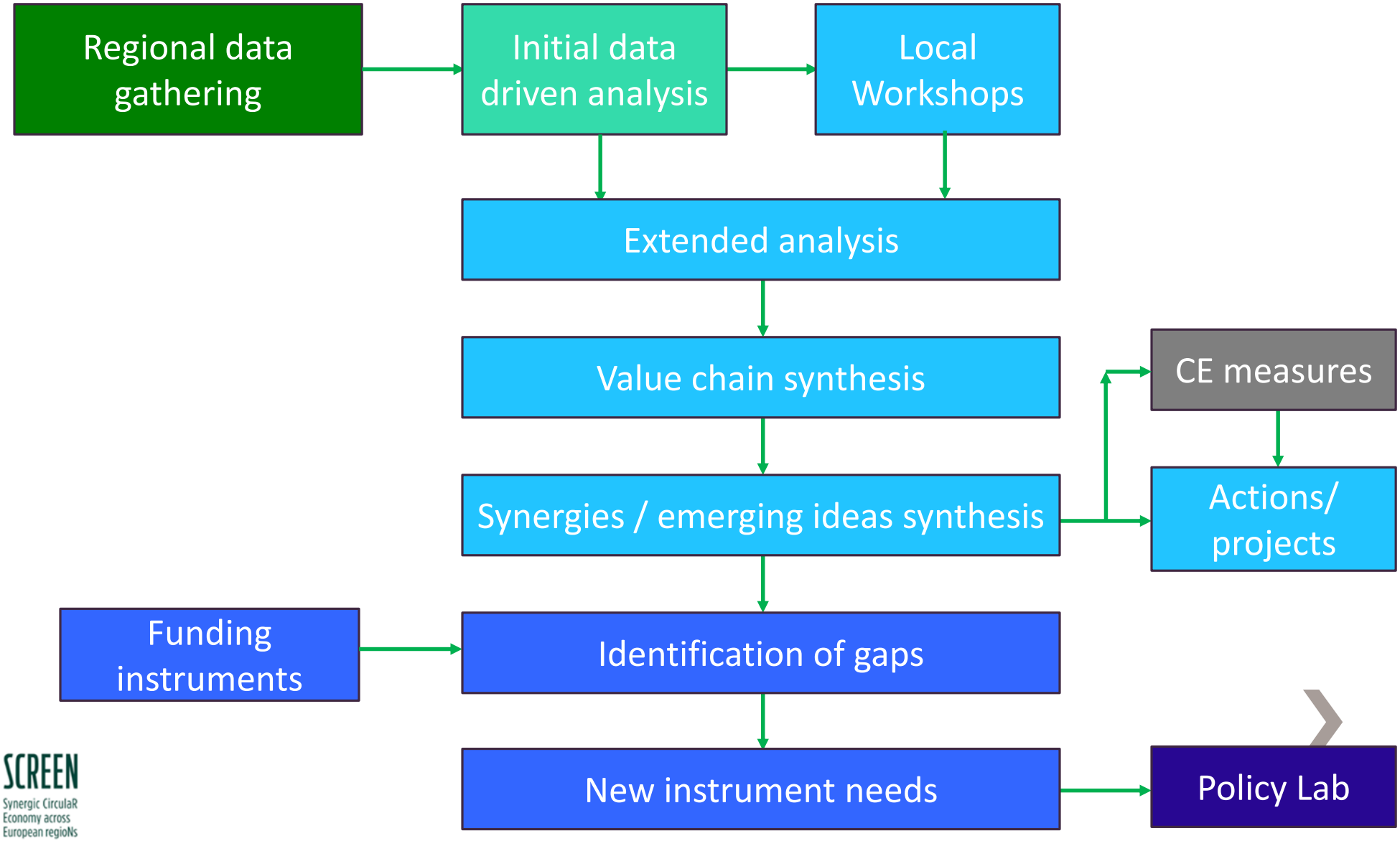
SCREEN Methodology: From local to cross-regional value-chains



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