



# 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

## Synergic Circular Economy Across European Regions

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

Water Technology Unlocking and Scaling Up the  
Circular Economy  
May 30th, Committee of the Regions



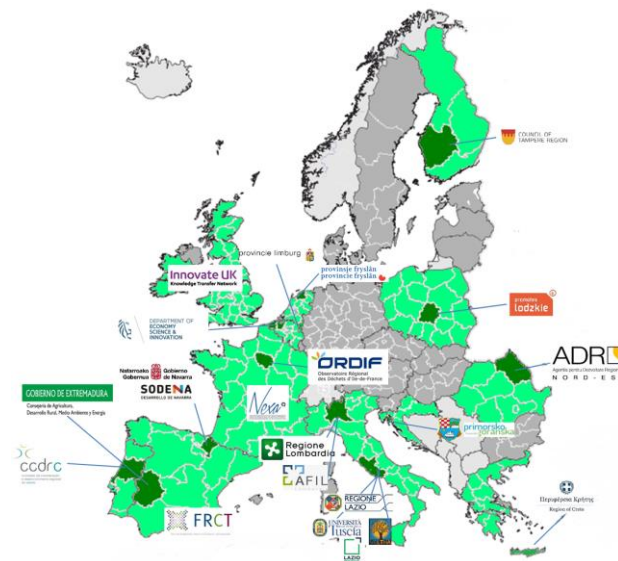
# Horizon 2020 Coordinating/Supporting Action - Duration:24 months, started on 01/11/2016

## 16 European regions from 12 different European countries, and 1 UK national body

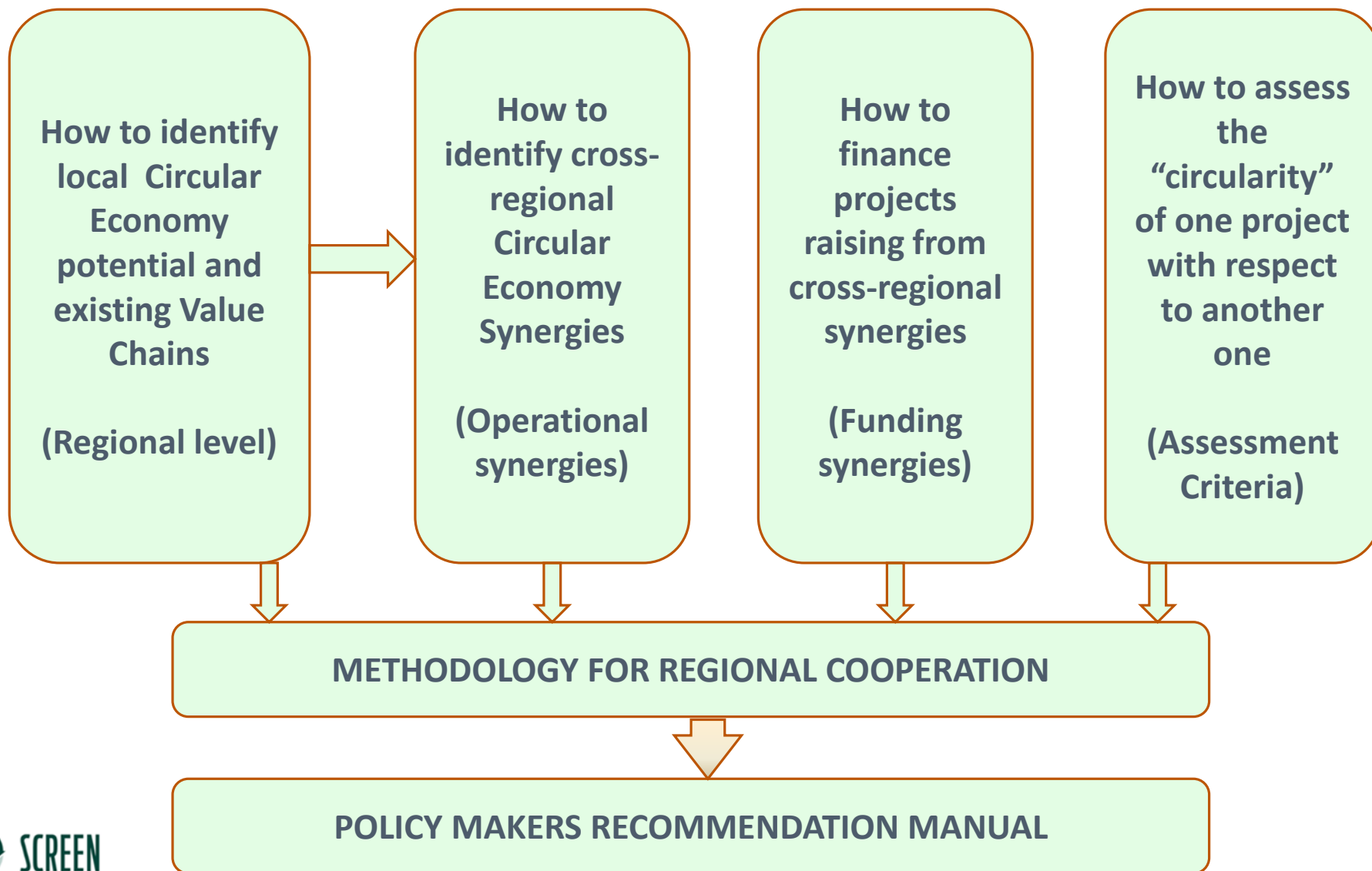


**SCREEN** aims at defining a **replicable and scalable approach**, to support **European Regions** in the transition to new **Circular Economy cross-regional value-chains**. This will be done through the identification and implementation of **operative synergies** between R&I investments of H2020 program and EU structural funds.

The methodology developed within the project will be replicable in all the European Union, thus creating an interregional framework for financing Circular Economy value chains.



# The four steps of the SCREEN project

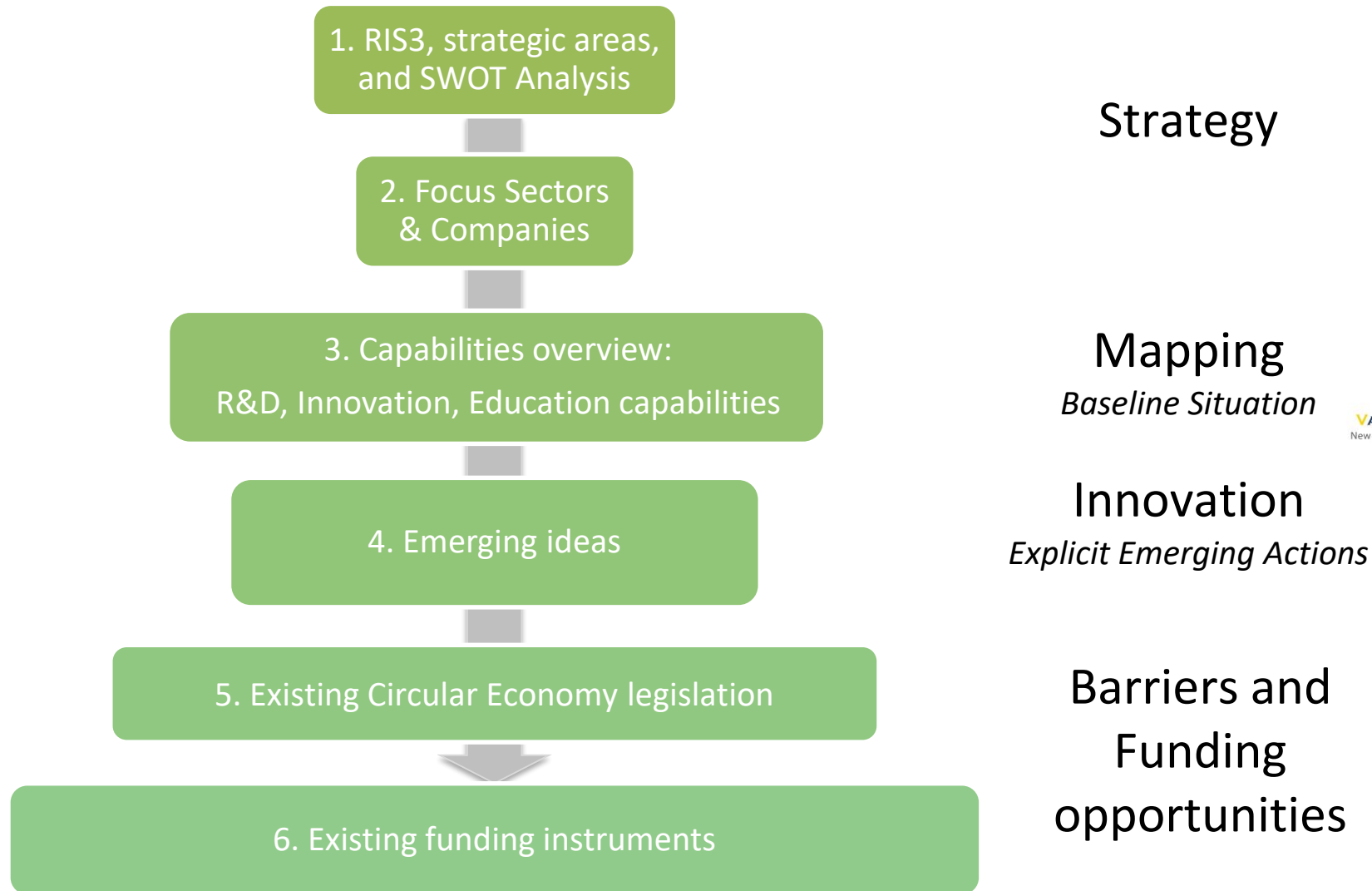


# SCREEN Methodology: From local to cross-regional value-chains

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.



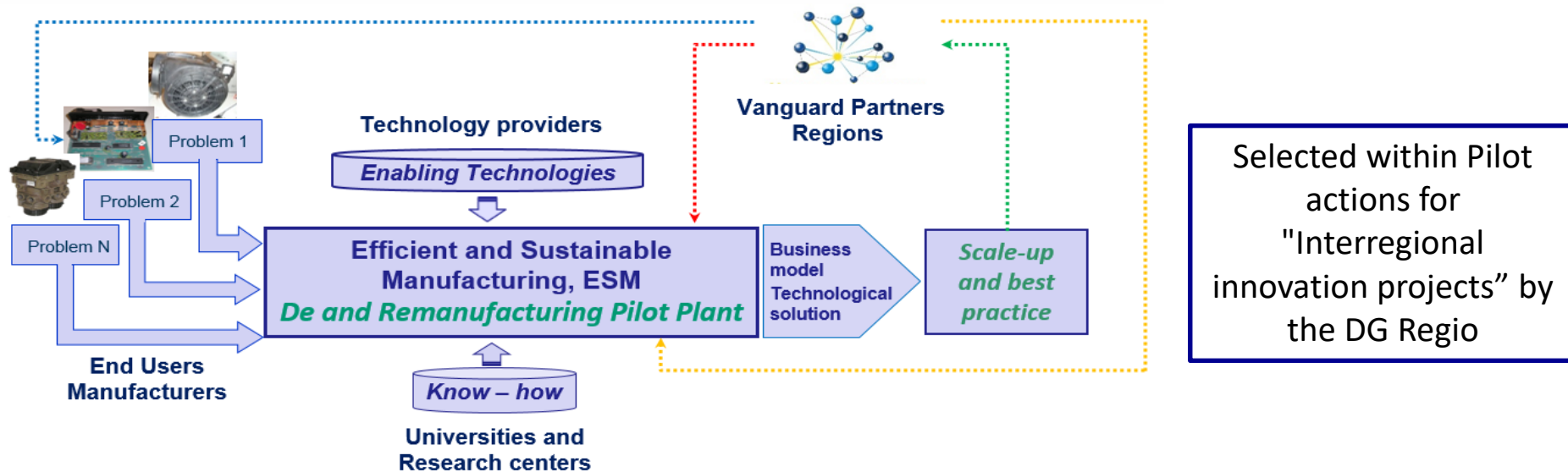
# Data Collection: SCREEN Mapping tool



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

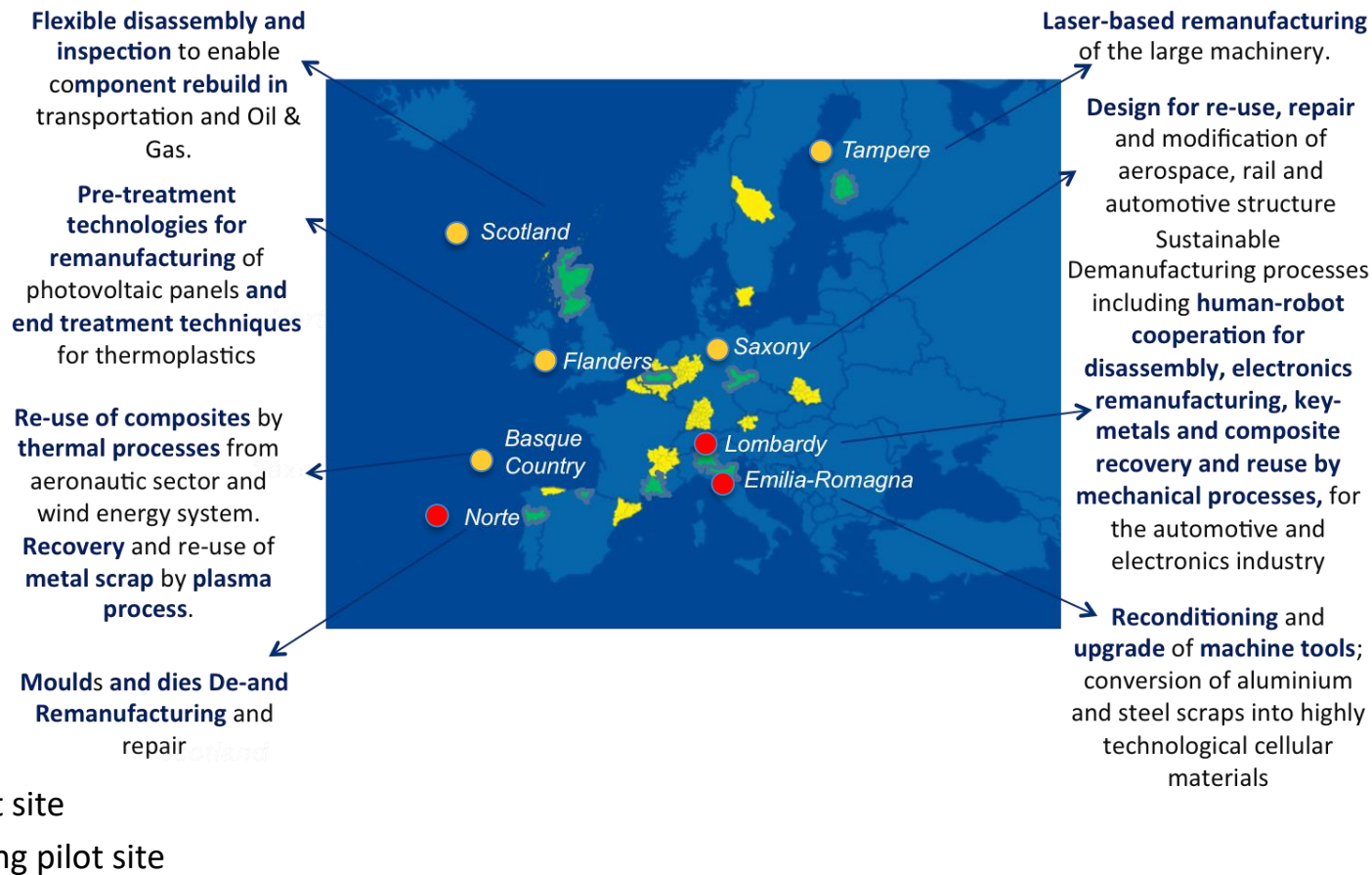
# VI ESM De-and Remanufacturing for Circular Economy

The main objective of the De-and Remanufacturing pilot network is to **integrate** a multidisciplinary set of **advanced and innovative enabling technologies and digital innovations** (TRL 7-8) and to exploit the **regional Smart Specializations** in synergic way to offer services to European end-users, mainly manufacturing companies, to solve specific **sustainability-oriented problems** related to their products.



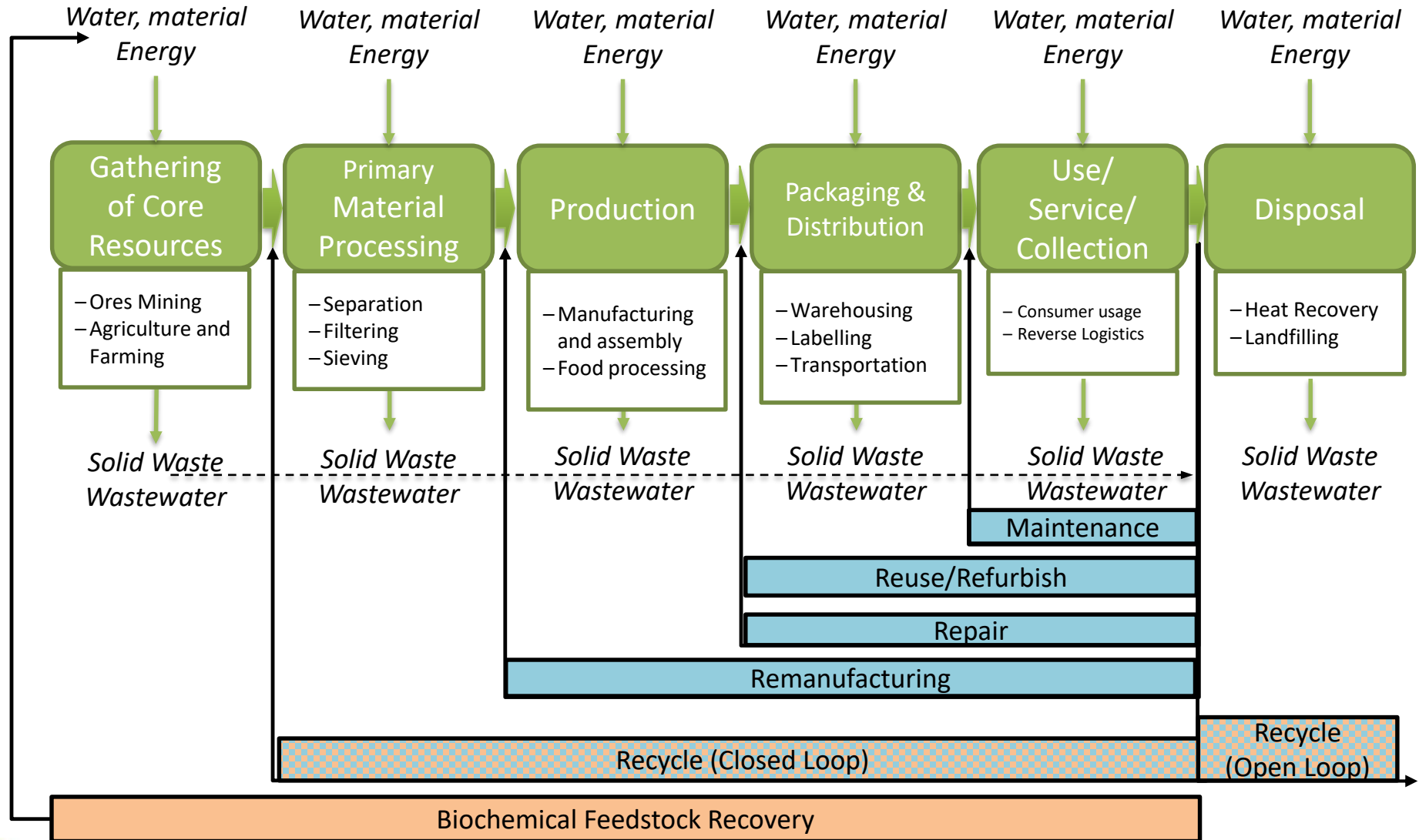
The pilot network nodes will act as **Innovation Hubs for Circular Economy**, being a network of competence and technology centers and supporting future producer-driven replication at industrial scale (TRL 9).

# Geographic Configuration and Regional Specialization

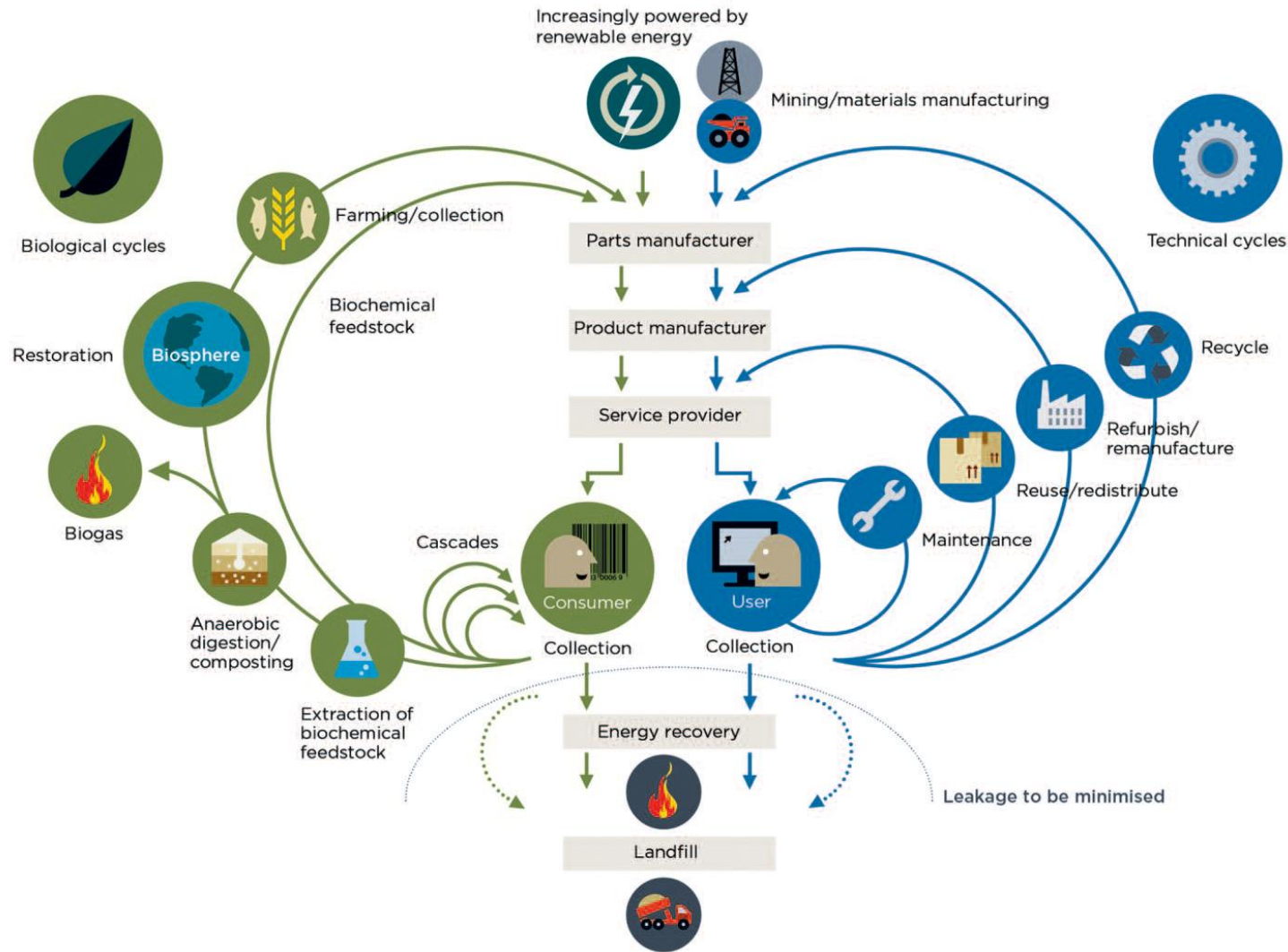


**Key Issue:** integrated pilot plant solutions, needed by industry to *validate high-risk investments* in circular economy businesses before the industrial implementation.

# Reference Framework: Value-Chain oriented approach

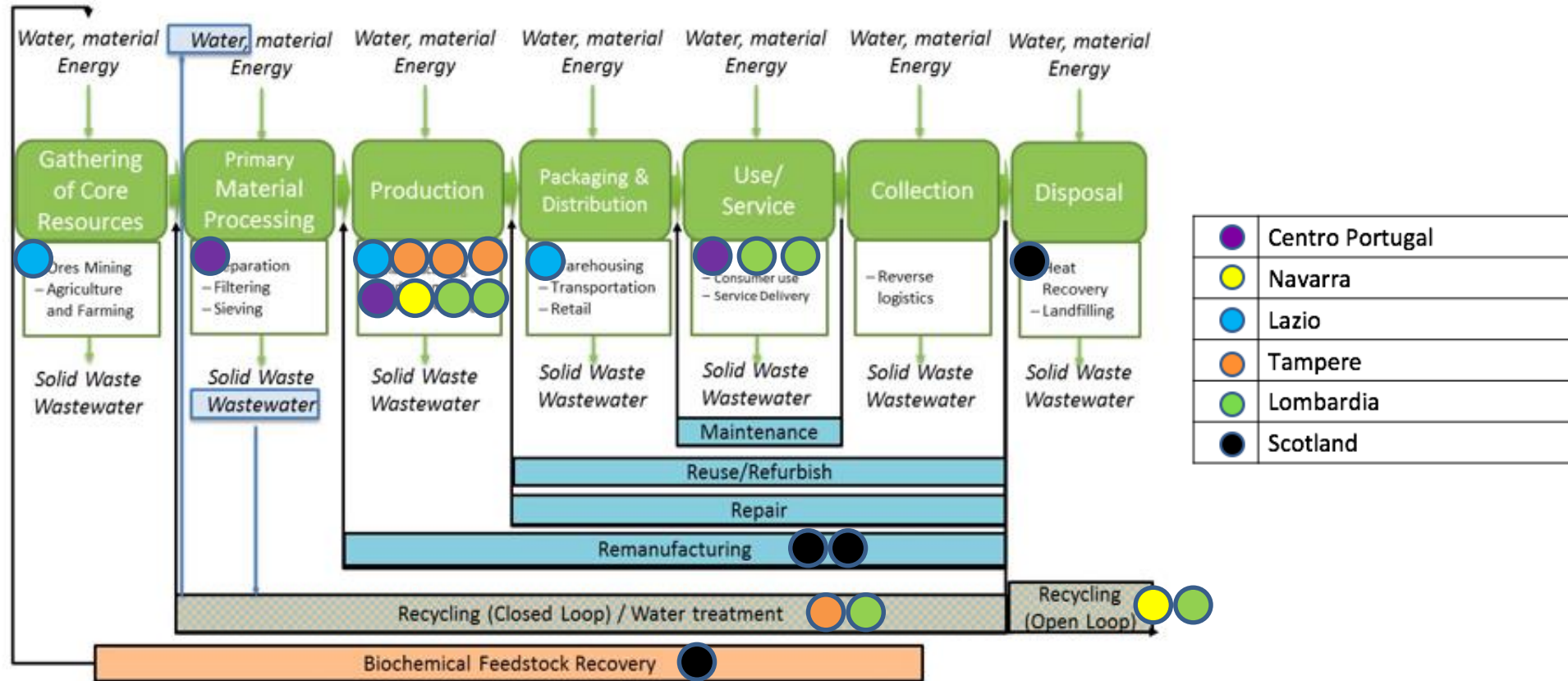


# Reference Framework: Value-Chain oriented approach



# Data Driven Analysis

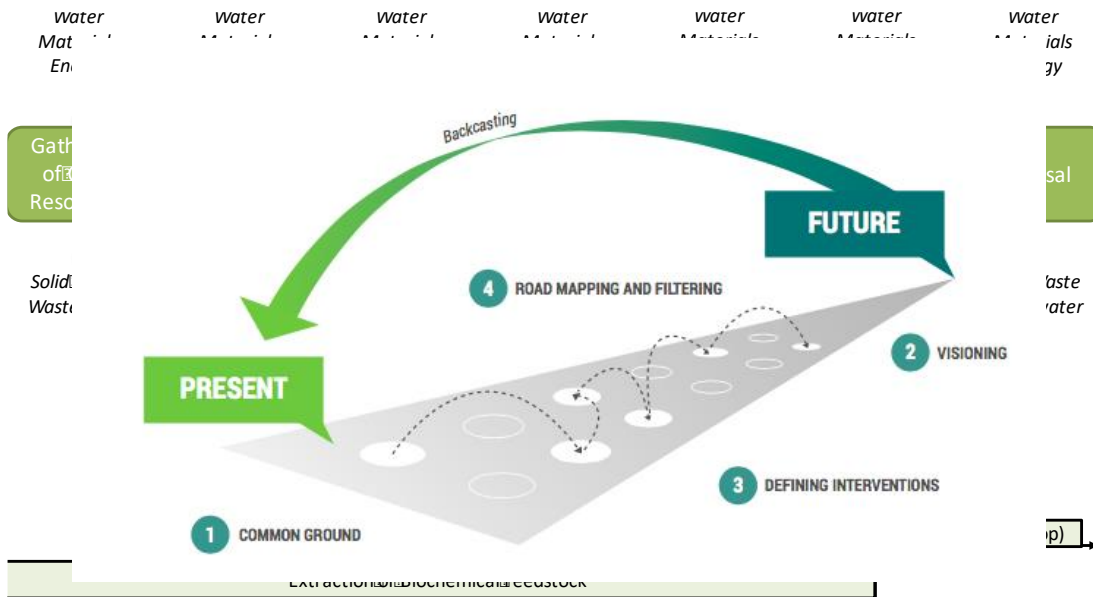
Starting from the tool inputs a data-driven analysis of the potential cross-regional value-chains (sector-driven, material-driven) has been carried out.



# SCREEN workshops

Starting from the tool inputs and data driven 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”

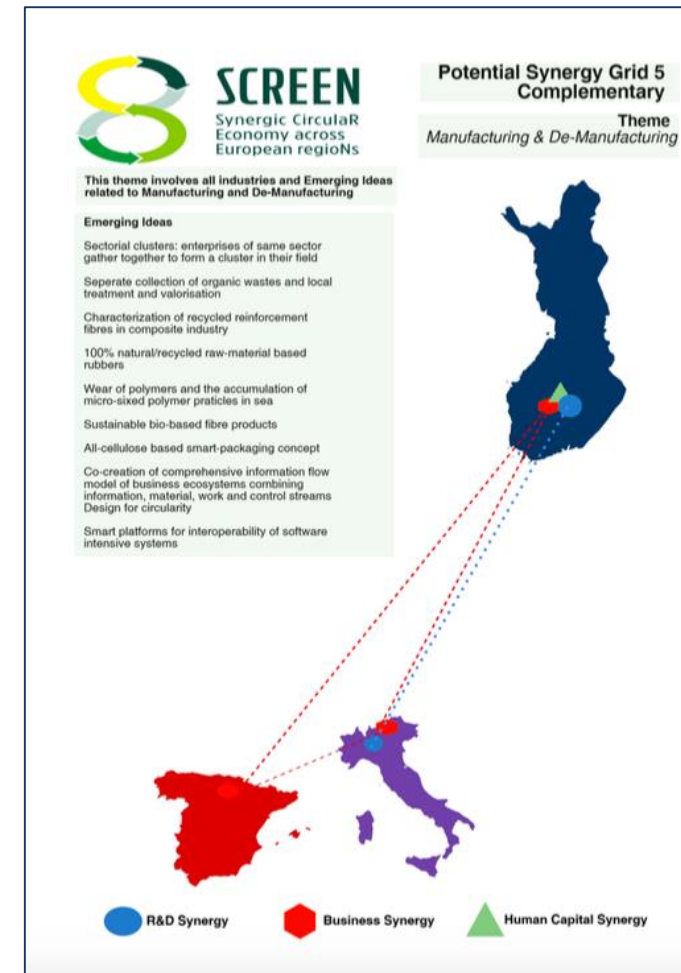
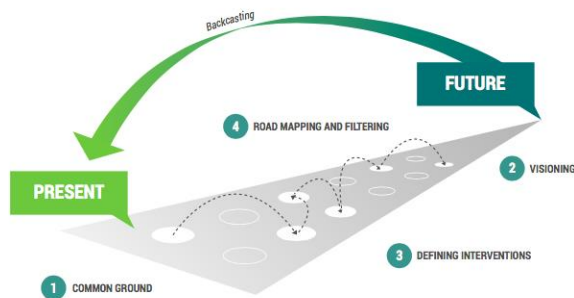


Potential synergies with other Regions have been highlighted

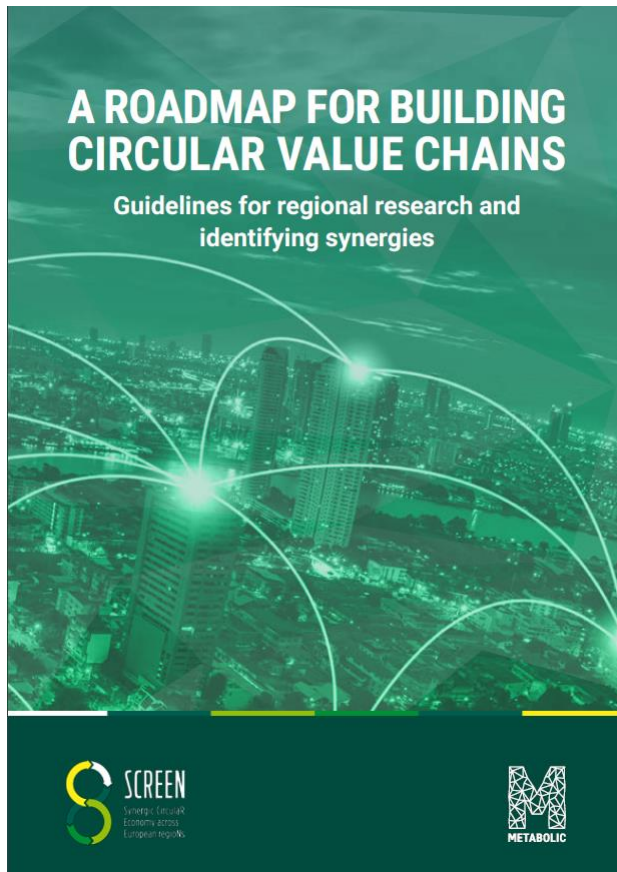
# SCREEN Cross-regional value chains

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)*



# SCREEN Cross-regional value chains



## Sludge recovery and utilization



# 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

# Existing financial instruments

“Existing financial Instruments” 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.*

Regional  
R&D  
Support  
Programs

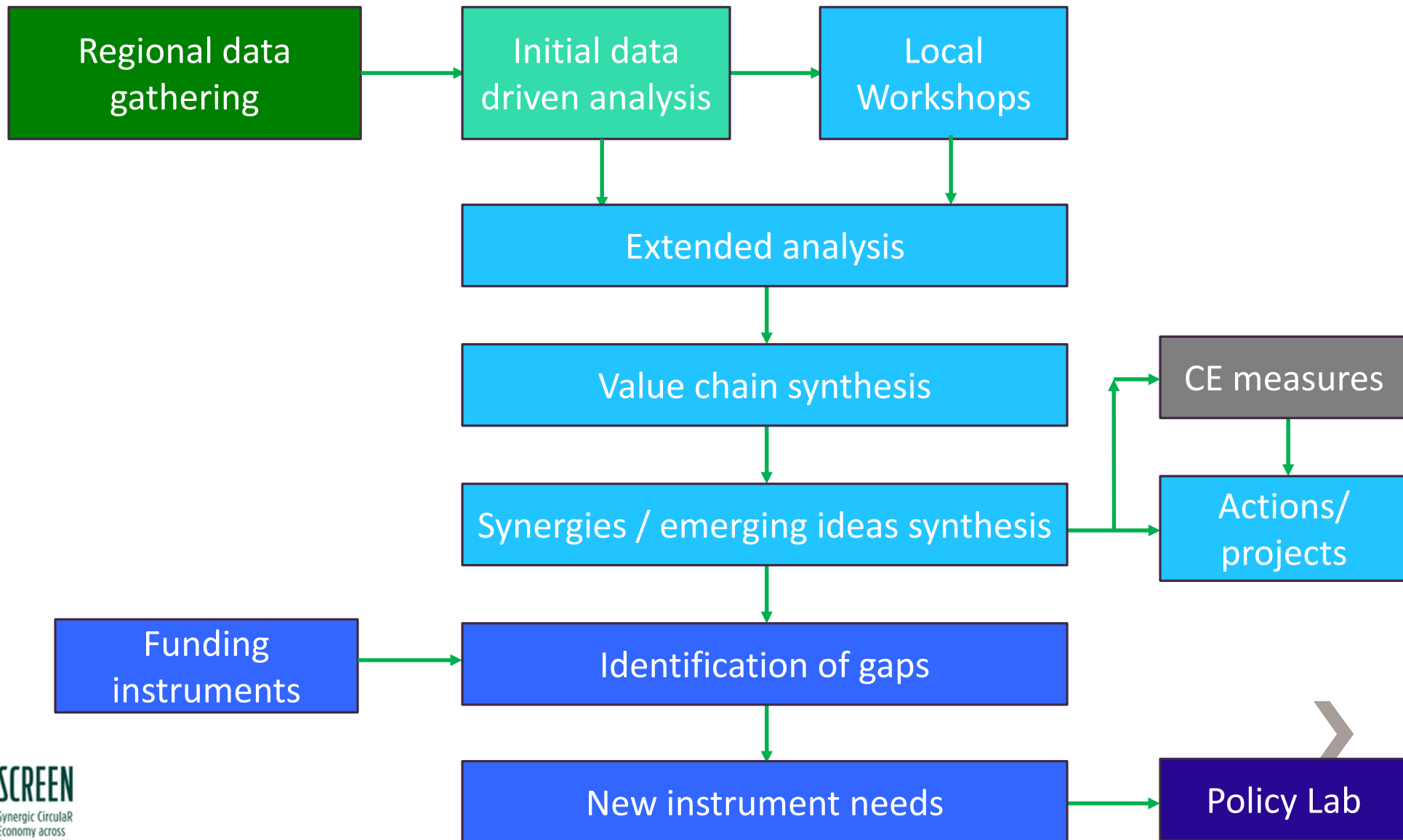
Regional  
Innovation  
Support  
Programs

Vouchers  
for  
Industry

Start Up  
Programs



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





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