SCREEN

Synergic CirculaR Economy across European regioNs

Classification methodology (D3.3)

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D3.3 – Classification methodology

Methodological deliverable

Development of a three level classification methodology

For the classification of initiatives

Belonging to the strategic sectors identified

Three prospected criteria:

- Technology readiness level

- Weighted analysis of circularity and market potential

- Current trends of existing sectors

Existing synergies (sources D3.1)

Synergy	Sectors
Sludge recovery and utilization	Sewage
Valorisation of grass	Agriculture
Making bioplastic competitive	Sewage
Biogas from waste streams	Sewage
Eutrophication in the Baltic Sea	Agriculture Water
Reducing waste from milk production	Agriculture

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Criterion 1 - TRL

Three level classification for the TRL:

- Innovation targets (TRL 1 – 4):
  - Basic principles observed
  - Technology concept formulated
  - Experimental proof of concept
  - Technology validated in lab
- Innovation needs (TRL 5 – 8):
  - Technology validate in relevant environments
  - Technology demonstrated in relevant environment
  - System prototype demonstration in operational environment
  - System complete and qualified
- Mature fields (TRL 9):
  - Actual systems proven in operational environment

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Criterion 2 – Multi-level classification

Assessment criteria of circularity of initiatives

Contextual use of multiple criterion

Environmental criteria
- Mass of waste resources recovered and re-introduced in the own production cycle
- Industrial symbiosis: mass of waste resources recovered and reintroduced in another production cycle
- Increase in the recyclability of waste generated
- Avoidance of waste generated
- Net energy balance respect to the previous system or amount of energy recovered

Social criterion
- Net balance of jobs

Economic criterion
- Increase of economic value (life cycle)

Criterion 3 – Economic trends

Heterogeneity of sectors provided by regions during the mapping phase

Identification of market trends in relation to the most significant figures:
◦ Turnover
◦ GDP
◦ Level of employment
◦ Level of waste

Sources of data:
◦ Turnover, GDP, and level of employment: regional statistics, national statistics, partition criteria based on continuous metrics
◦ Level of waste: availability of data limited (though improved by recent EU directives) but would be an anticipator of the availability of future resources

Sector
Accomodation
Services
Agriculture
Arts and entertainment
Automotive
Manufacture
Construction
Digital
Food and beverage
Water management
Energy
Finance
Industry
Transport
Mining
Printing
Public administration
Real estate
Trade
Waste
Warehousing
Waste management

Potential further synergies

Identification of potential synergies by crossing mapping tools data

Hotspots:
- Emerging ideas and capabilities
- Typically they have a high TRL (7 – 9)

Operational:
- Input and output material flows across companies
- Input and output material flows across capabilities
- Potentially high TRL

Innovation:
- Match between emerging ideas, challenges with projects or hotspots
- Typically they have a low TRL (1 – 4)

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Updates on past and future deliverables

We have worked revising the deliverable following the comments received during the last review meeting

Clarify the role of the meta-model in relation with the mapping tool and the methodology

Describe the actions performed to cross and interpret data in the methodology section so to make the steps reproducible by further regions willing to reproduce the local analysis

Clarify the nature and quantity of the collected data

Clarify the circularity potential of the different regions