



# Research and Innovation Activities on Urban Circular Bioeconomy

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# BIOECONOMY

# Bioeconomy (EU BioE Strategy, 2012)

*'The Bioeconomy encompasses the production of renewable biological resources and the conversion of these resources and waste streams into value-added products, such as food, feed, bio-based products and bio-energy'.*

# Biobased value chains

- Agricultural
- Forestry
- Algae
- Wastes
- etc.

# Biowaste-based products

- Compost and biogas
- Ethanol and methanol
- Chemicals, fertilisers, plastics, feed ingredients
- etc.

**→ LINK WITH CIRCULAR ECONOMY**

# URBAN BIOWASTE AS AN ISSUE

# Urban biowaste as an issue

- 1.3 billion t of MSW – 50% organic
- Lost of valuable substances
- Pressure on human health & environment
- Costly management
- etc.

# UNAVOIDABLE URBAN BIOWASTE AS A RESOURCE



# Biowaste as a resource

- City as geographical concentration of biowaste flows
- These flows contain valuable substances

**→ CAPTURE THE VALUE OF URBAN BIOWASTE FLOWS IN EU CITIES**

# POTENTIALS AND CHALLENGES

# Potentials

- Boosting a local circular biobased economy
- Improving (bio)waste management schemes
- Reducing GHG emissions
- Resource efficiency and security
- Industrial symbiosis
- etc.

# Challenges

- Low-value products and landfilling
- Participation of cities
- High costs for TRL upgrade
- Regulatory obstacles
- etc.

# R&I ACTIONS

# R&I actions

- Analysis
- R&I projects
- Matchmaking
- Dissemination

# R&I projects on this value chain

## RIAs:

- RES URBIS
- PERCAL

## DEMOS:

- EMBRACED
- URBIOFIN
- Topic CE-SFS-25-2018 'Integrated system innovation in valorising urban biowaste'