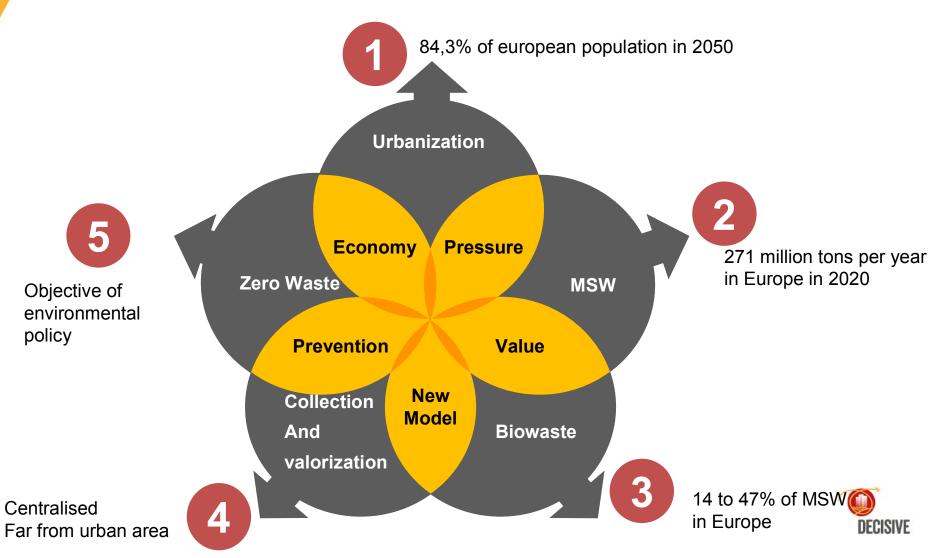
Working for a circular bioeconomy at local and regional level

Innovations proposed by the DECISIVE project





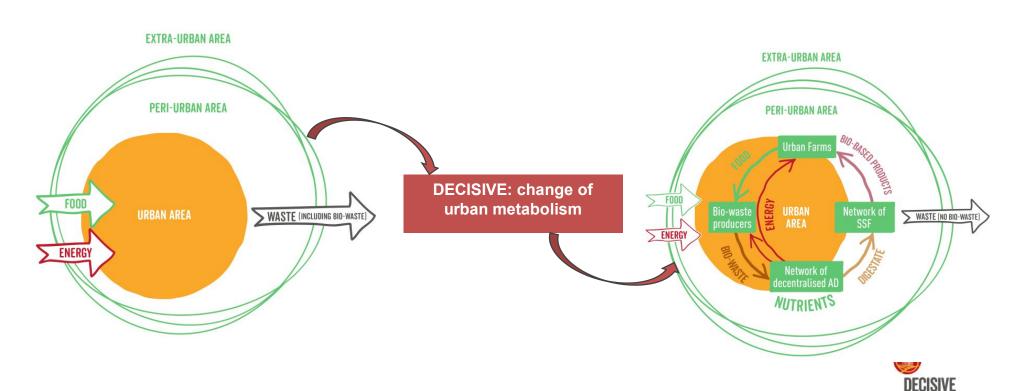
What is DECISIVE about?



What is DECISIVE about?

A new paradigm of urban organic waste management :

- promotion of decentralised treatment points networks
- short circuits and circular economy in the urban space



What impact on a local/regional level?

Circular economy

Concept of a resilient city using organic waste to develop urban farming and circular economy

Waste Prevention

Increase of citizen awareness

Renewable energy

_ocal valorizatior of heat and electricity

Eco-quarter Urban rehabilitation

Urban

planning



How do we do this?

Multi-stakeholders

Research organisations; public service; association and foundation working with cities; waste operator; process sellers; urban farm; expert committee (public authorities, citizens, politicians)

Concept and tools Consolidation work

Biowaste decentralised management system: concept and impact indicators

Decentralised AD and SSF processes

Integrated decision support tool for planning system implementation

Innovation Demonstration work

Demonstration implementation

Eco-innovation assessment

Waste prevention

Social, ecological and economic impacts

Business outlooks

Communication and Dissemination

Multi-disciplinarity

Geographical analysis; material flow analysis; network analysis; environmental and sustainability assessment; economic and social assessment; bioengineering; waste characterization



Sept. 16 Sept. 18 Sept. 20

DECISIVE: partnership































Proposed innovation in DECISIVE?

Organisational innovation:

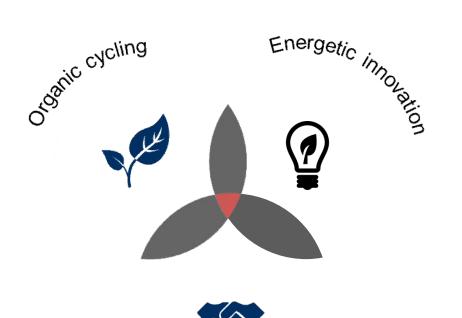
 A method to plan efficient (enough simple and accurate) decentralised management scheme for urban organic solid waste based on urban metabolism study

Technological innovations:

- Micro-AD and biogas local valorisation
- SSF

Policy and economic innovation

- Guidelines/advices for environmental Policy
- Urban farm concept
- New waste business



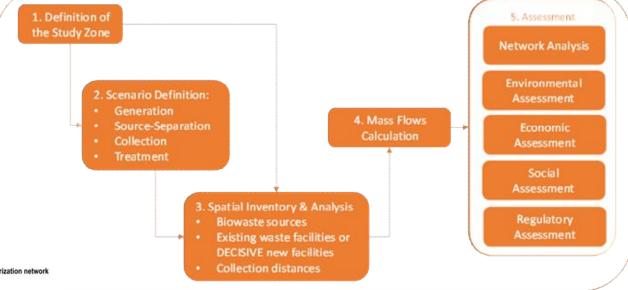


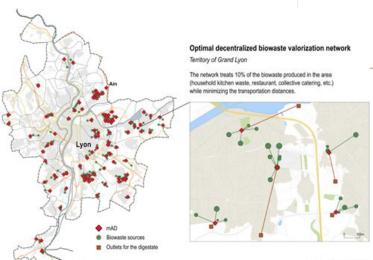


Project progress: DST for decentralised management planning

WORKING FLOW

- Decision support tool
 - Current situation
 - Scenario proposals
 - Assessment





- Spatial optimization of decentralised networks
 - Inventories of sources, locations, valorization points, surrounding farming

DECISIVE

• Optimization on distance, regulatory obligations, etc.

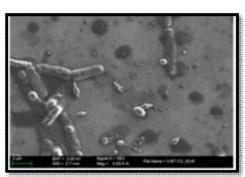
Project progress: technologies

- Micro-anaerobic digestion (mAD)
 - Target 50 to 200 t biowaste / y
 - Existing offer => challenge for lowest scale
 - New development for robust dry mAD in progress at pilot scale



Solid Substrate Fermentation

- Post-valorization of digestate
- Lab-test OK; pilot scale in test
- Product target: Biopesticide (Bt)



Bt and paraesporal crystals.

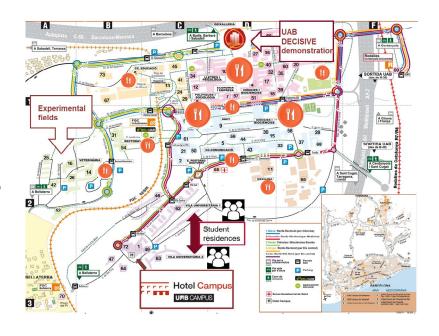


Project progress: Demonstrations in preparation

- France, Lyon
 - Urban hydroponics Farm Refarmers + horticol school
 - Restaurant and school canteens
 => 50 t/y
 - · Valorization on the farm



- · Spain, Barcelona
 - UAB Campus
 - Campus restaurants; Residencies
 => 100-200 t/y
 - Valorization on the campus



Opportunities for local Economy

- New offer for services:
 - Diagnosis for waste management
 - Local waste collection management
 - Processes supply
 - Urban agriculture and food delivery
- Linked jobs



Current limits for advancing the innovations

National Health and Energy diversity Safety retribution regulations throughout Europe Digestate Responsibilities regulation /competencies **Thinking** Rights for about Limits for individual Adaptation to model production proximity replication? and use management Limits for **New positions** scale recycling and to be found circular for public economy authorities and waste stakeholders

