



Project WCYCLE

**Model of Urban Circular Economy for Municipality of Maribor,
Slovenia**

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Born in 2010: How much is left for me?



Energy

Metals used in renewable energy solutions

Other industrial metals

PROJECT OBJECTIVES

- TRANSITION INTO CIRCULAR ECONOMY AND EU GOALS
 - By 2030, recycle 70% of municipal waste and 80% of packaging waste
 - From 2025, prohibited the dumping of waste, which can be recycled, in landfills
 - By 2025, reducing marine waste and food waste by 30%
 - Improving the traceability of hazardous waste
 - By 2030, increasing the resources productivity by 15%
- STRATEGIC OBJECTIVES OF THE PROJECT
 - Reducing environmental burden
 - Reducing the use of natural resources
 - Increasing the use of recovered materials, energy and water
 - Creating new mostly green jobs
 - Creating added value and economic growth
 - Use of new technologies, and our own research and development

Maribor Project starting points

- The city has no landfill and does not want to have it, nor does it want to dispose of waste with incineration
- In the process of processing, with the goal of maximizing re-use, everyone in the urban area of the city will get output sources, preferably from the population, utilities, construction, industry, agriculture, water management and service activities
- The advantage of recovering source materials is recycling materials and water, and the production of new composite materials, followed by energy use
- The holders of the processing of output sources for each strategic project area are enterprises in predominantly municipal public ownership, which are already being implemented as a public service point, while the holder of soft contents of the social environment is the city administration
- New processing and service capacities for the management of output sources are planned as priority areas for urban degraded areas with the aim of their regulation and revitalization
- Only close cooperation between public companies, citizens, industry and local government leads to a successful interconnected system that optimizes resources and economic, environmental and social results





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EU LEVEL

- ▶ Closing the loop - An EU action plan for the Circular Economy to develop a sustainable, low carbon, resource efficient and competitive economy, dec. 2015

NATIONAL LEVEL

- ▶ Smart Specialization Strategy, July 2015
- ▶ Framework program for the transition to a green economy, Oktober 2015
- ▶ Waste management program and waste prevention program of Republic of Slovenia, June 2016
- ▶ Roadmap towards Circular economy in Slovenia May 2018

LOCAL LEVEL

- ▶ Waste management strategy in MO Maribor, mar. 2015
- ▶ Sustainable Urban Strategy of the Municipality of Maribor, feb. 2016
- ▶ Strategy for transition of Maribor to Circular Economy 21.06.2018



- WHAT IS THE WCYCLE PROJECT

- Wcycle is a strategic development project of the Municipality of Maribor in the field of integrated management of all waste generated in the region on the basis of circular economy policy, energy and water management and the use of processed waste as a new resource

- PROJECT APPROACH

- Defining the project's baseline
- Determining the project objectives
- Designing the organizational model



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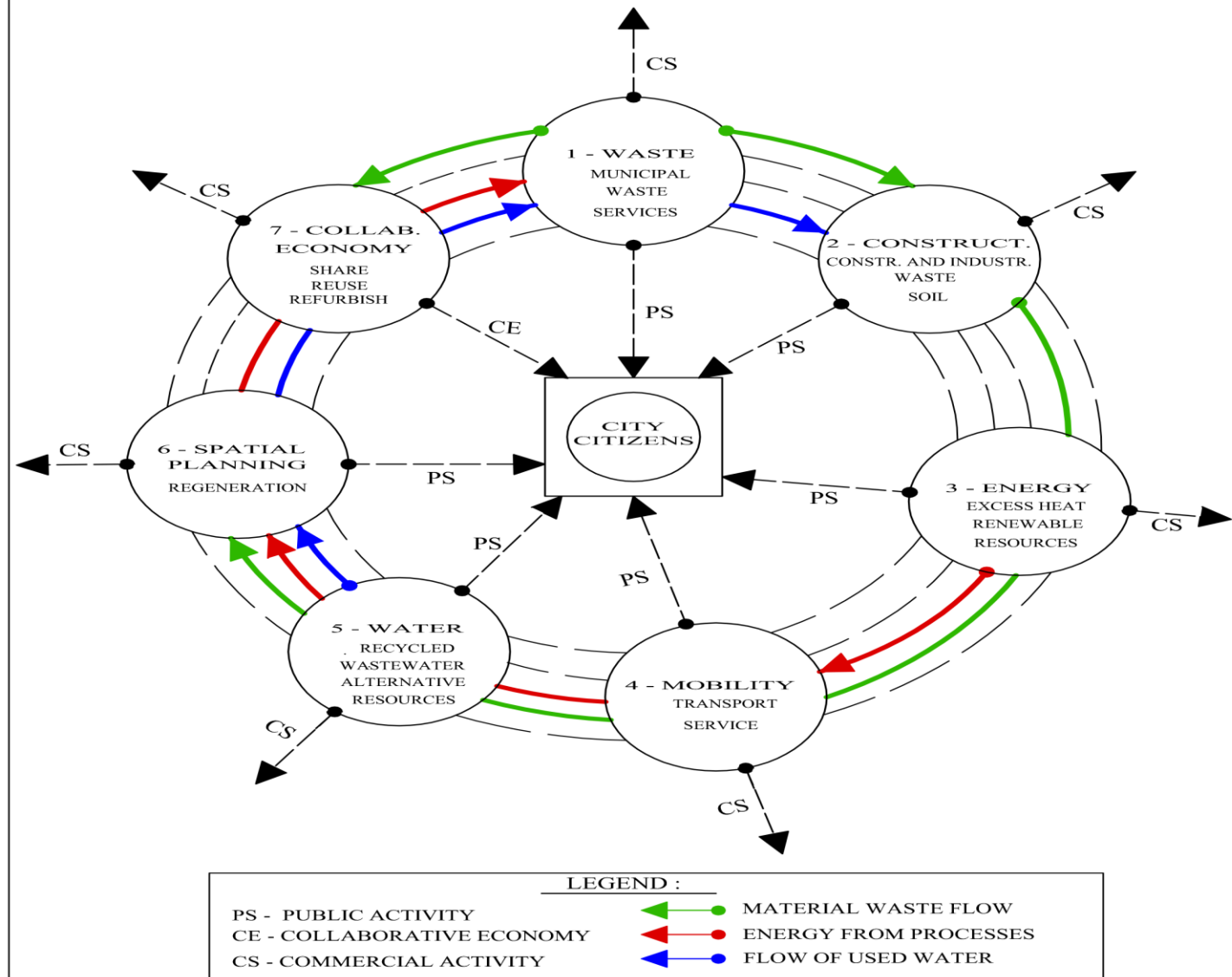
HORIZONTAL MODEL

- The priority is material flow
- The priority is the flow of energy and water
- Unified flow of ideas
- Economically and with nature
- People for People
- For citizens, the market, for tomorrow
-

May 2018

V6 - ENG

Wecycle Maribor



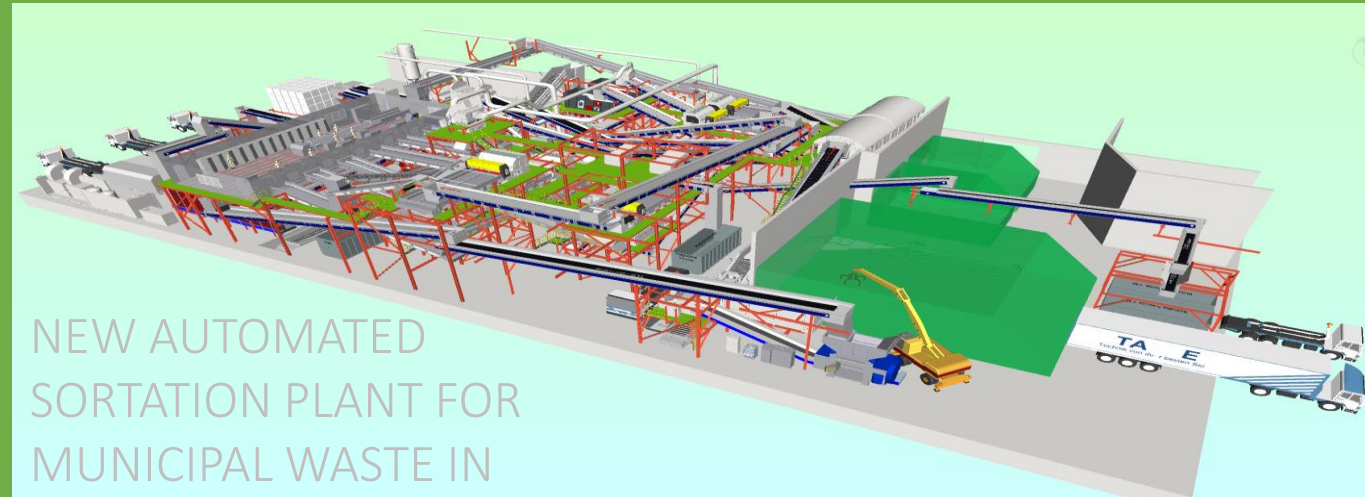


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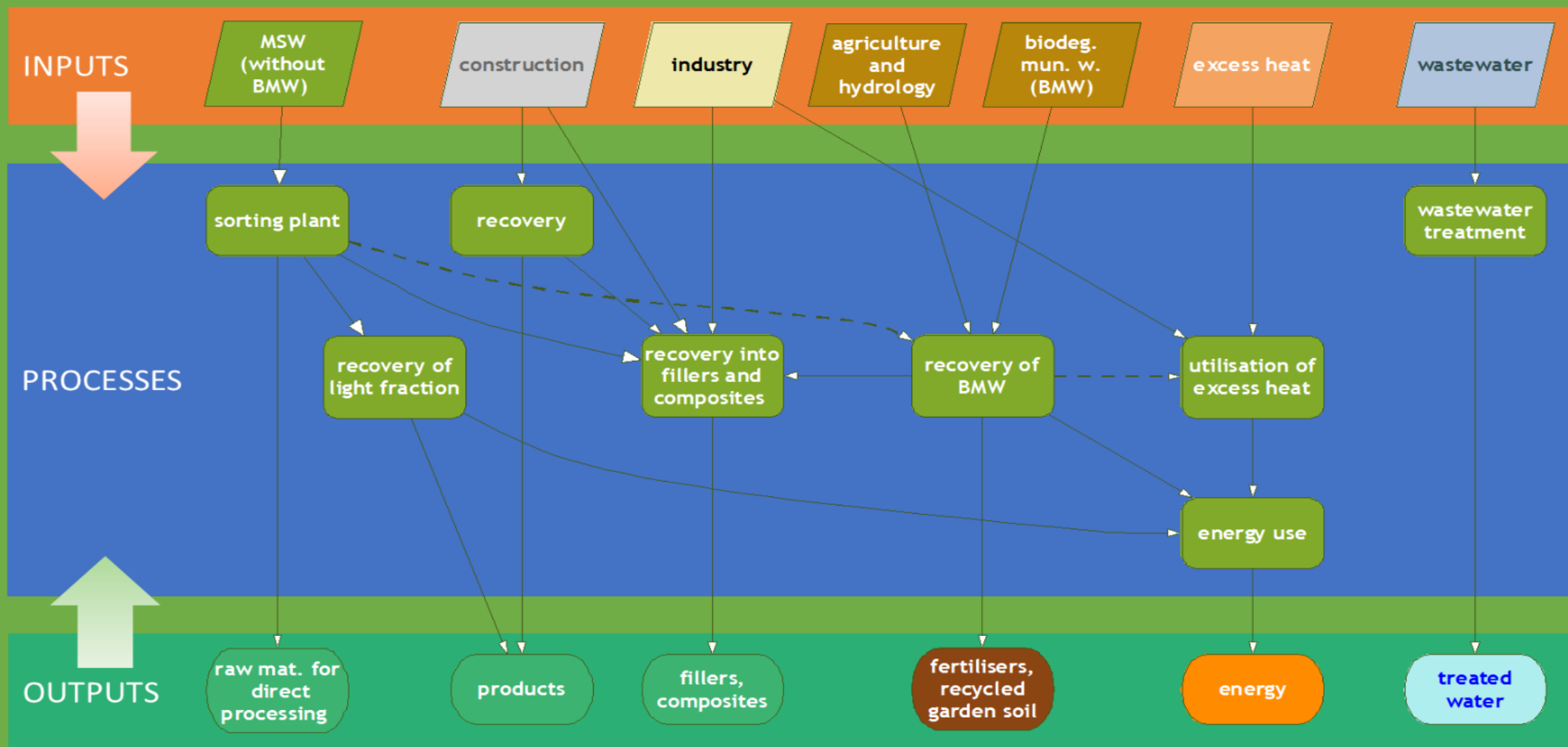
Strategic project areas

- Municipal waste management
- Handling of construction and industrial waste
- Waste energy management
- Management of transport services
- Reuse of water
- Spatial planing
- Coolaborative economy





PROJECT DESIGN



ORGANIZATIONAL PROJECT MODEL

- Recovery operators for specific project pillars – project circles are the companies owned mostly by the municipality, which are already carrying out public services for the citizens
- The municipality is responsible for softer contents (sharing, repair, reuse, self-supply)
- The priority is primarily the cooperation of companies mostly owned by the municipality each within its own circle with the aim of achieving the project objectives
- The responsible for each project circle additionally carry out free market services, all with the aim of improving public services for the citizens

DESIGN AND PROCESS IMPLEMENTATION

- For research and development in the field of process and information technologies and organizational procedures companies predominantly owned by the municipality
- Snaga, company for waste management and other municipal services, d.o.o.
- Energetika Maribor, public company, d.o.o.
- Nigrad, utility company, d.d.
- Mariborski vodovod, public company, d.d.
- Marprom, public company for urban transport, d.o.o.
- established the Wcycle Institute Maribor; and today under the umbrella of the Institute the companies are preparing 18 projects for implementation in the field of circular economy on the basis of approved process design, with the aim to realize them until the end of 2020.



Funding

Total eligible costs: 1.946.272 EUR

ERDF grant: 1.654.331 EUR

Duration

Project start date:

01/11/2016

Project end date:

31/10/2019

GREENCYCLE at a glance

- ❖ Strategic framework for circular economy
- ❖ Toolbox for circular economy deployment
- ❖ Establishment of transnational circular economy marketplace – cooperation platform
- ❖ Testing the pilots

City of Maribor (Mestna Občina Maribor)

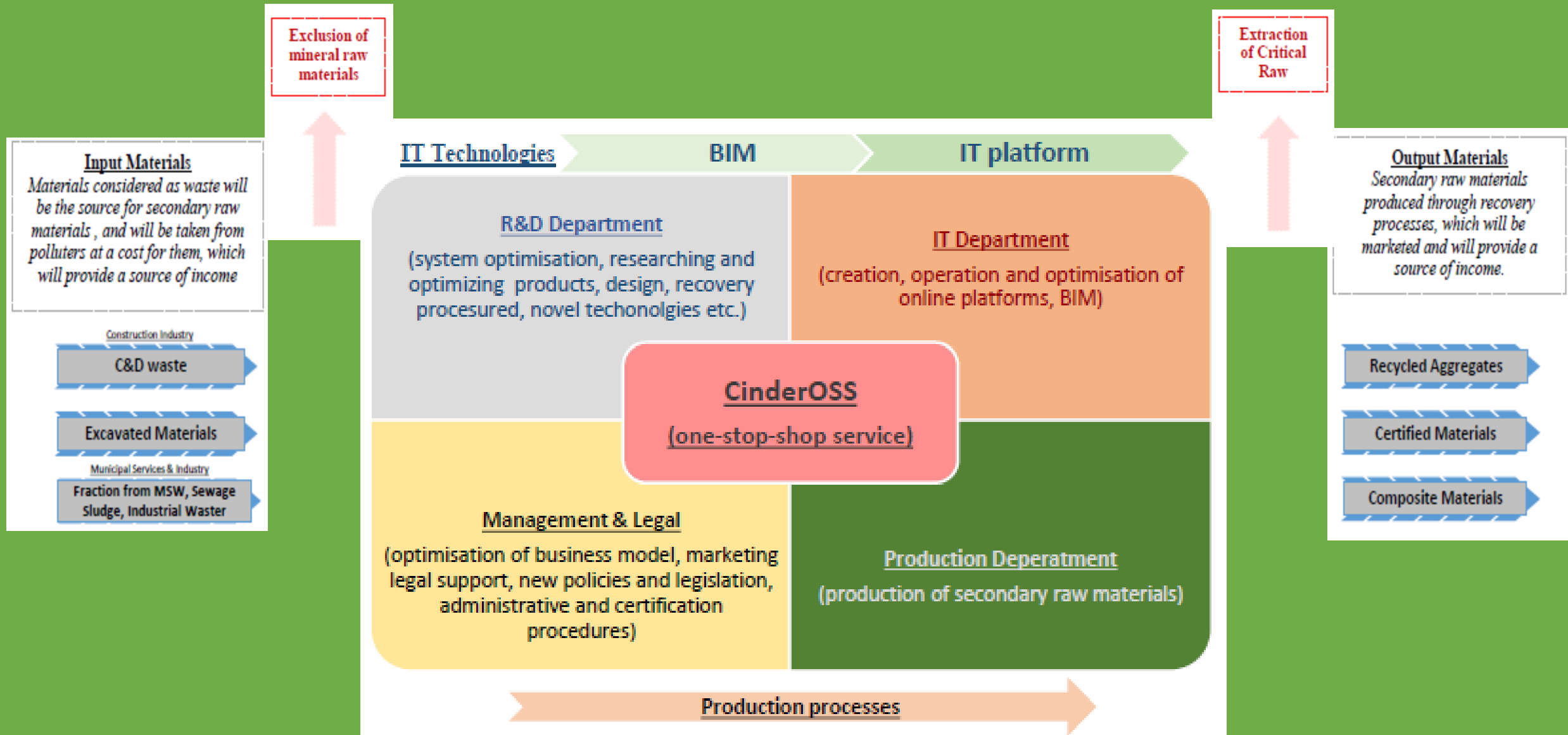
Total Cost : € 3,747,650.00; ERDF Budget: € 2,998,120.00 ; Project start 01.11.2017

The URBAN SOIL 4 FOOD will test a model of urban soil-based economy circle in order to increase local food self-sufficiency and to minimize the city's environmental footprint. The aim is to use cities' internal waste – particularly excavated materials from construction sector – as input material to produce recycled, standardized and certified soil for meeting cities' needs, and notably to be reintroduced to the ground in order to improve soil quality and increase food production. A pilot system for urban soil production including wastes from different sectors will be tested, and urban community gardens will be developed using the standardized soil produced. In parallel, food distribution will be structured around the creation of an urban food chain and local urban food labels, and an Agri Living Lab will be set up where different experiments relating to social innovation, urban environment and agriculture will take place.

Partnership:

City of Maribor; 3 NGOs: Institute for Innovation and Entrepreneurship; E-institute for comprehensive development solutions; AKTIVIRAJ SE Development of social projects and promotion of active life association; 2 Infrastructure and Public Service Providers: Snaga; Wcycle Institute Maribor; 1 service and consulting company: Deltaplan; 1 Higher Education and research Institute: Slovenian National Building and Civil Engineering Institute (ZAG).

CINDERELA



CONCLUSION

- Waste management due to new requirements of environmental legislation and the lack of appropriate solutions is becoming a major global business opportunity
- The city of Maribor is setting high goals in the area of processing waste from all sources of their generation, which it wishes to achieve through the construction and operation of the pilot plant for processing waste Wcycle Maribor
- Production operating companies for different service pillars are the companies mainly owned by the Municipality, which are the blood vessels of the city and which are obliged to carry out their public services for citizens and to provide the highest quality conditions of their residence and living in an urban area in general