

## CINDERELA Demo Pilots

CinderCEBM and CinderOSS are built upon and validated in real environments under six DEMO pilots:



Phosphorus extraction as a step in a cascade recycling of sewage sludge as SRM;



Manufacture of SRM-based construction products for building and civil engineering applications;



Geotechnical works with the use of SRM-based materials to revitalise a degraded area;



Construction of a building with SRM-based construction materials;



Construction of a road with SRM-based construction materials;



3D printing of a building component involving combination of robotic 3D printing and recycled plastic waste.

## Who benefits from CINDERELA and how?

CINDERELA involves a range of different stakeholders, including waste holders, manufacturers of construction materials and construction companies, municipal services, procurers, architects and designers, decision makers and the general public. CinderCEBM and CinderOSS are dedicated in particular to:

- construction companies that can use the SRM-based construction products in construction;
- waste collecting and transporting companies that can serve as brokers of SRM;
- public bodies (specifically policy makers and decision makers) that can adopt or change;
- legislation, policy and public tenders to facilitate the circular business models depicted in CinderCEBM;
- architects and design companies that can design with the SRM-based construction products and with the associated BIM-libraries.



# CINDERELA

## New Circular Economy Business Model for More Sustainable Urban Construction



### CINDERELA project facts

Project duration: June 2018 - May 2022 (48 months)

Total Project budget: 7 635 365.25 €

Project Coordinator: Slovenian National Building and Civil Engineering Institute (ZAG)

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### Project partners



[www.cinderela.eu](http://www.cinderela.eu)



@CinderH2020



CINDERELA Project



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## About the project

CINDERELA is a large scale H2020 demonstration project with an ambition to make circular economy an industrial concept in construction sector.

### Why CINDERELA?

Fact 1

Construction sector belongs to Europe's biggest consumers of resources that uses about half of all materials extracted and generates one third of all EU waste.

Fact 2

Construction and demolition waste (CDW), together with waste from industry and municipal sector, make excellent secondary raw materials (SRM) for construction works.

Fact 3

These waste streams provide an enormous potential for circular economy business cases by reducing the demand for virgin materials and waste generation while maximizing the value of recovered materials.

Fact 4

Building circular approaches in construction sector that involve use of SRM from waste is a challenging task for companies due to lack of appropriate knowledge, technologies, good practices and incentives to stimulate the demand and the supply actors to take action.

### CINDERELA provides a pathway to bring circular business models into real life

The project aims to develop and demonstrate a circular economy business model (**CinderCEBM**) to assist companies in setting up successful circular economy business cases based on waste-to-resource opportunities.

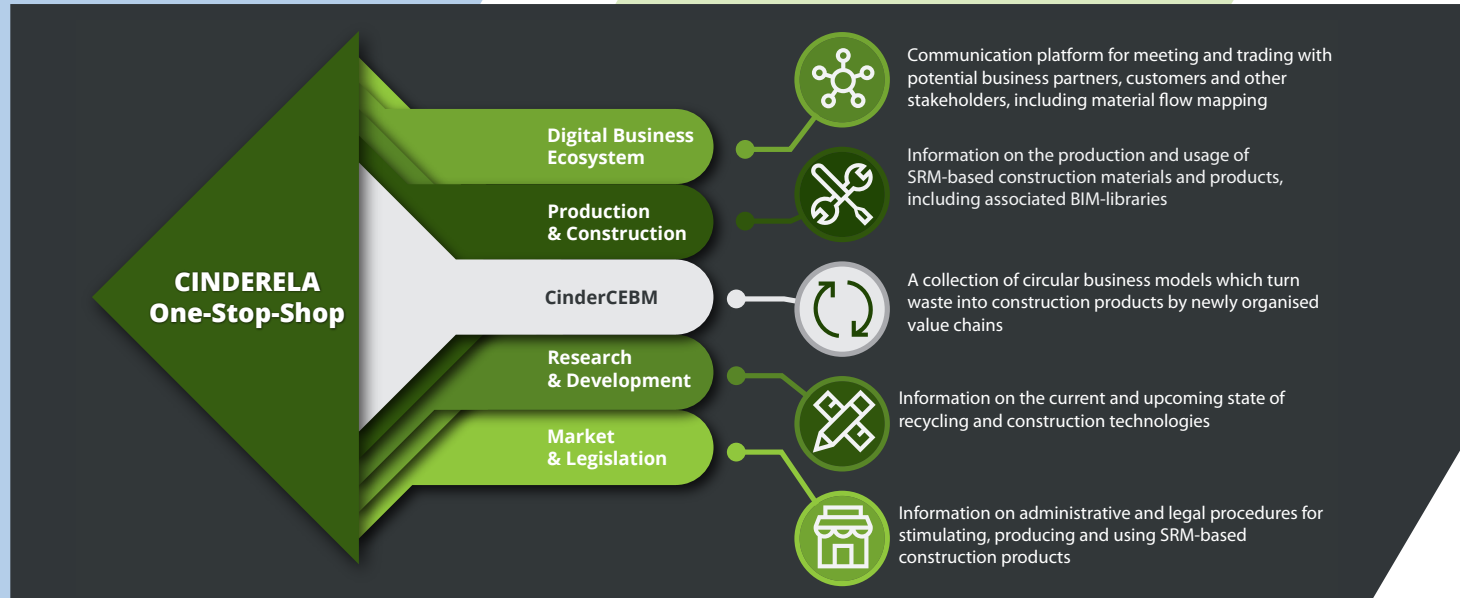
The business model will be accompanied by a „One-Stop-Shop“ (**CinderOSS**) service offering all that companies need to know for manufacturing and application of SRM-based construction materials in buildings and civil engineering works.

## CinderCEBM

CinderCEBM is a collection of new circular business models that provides a basis for the use of competitive, locally available and environmentally friendly secondary raw materials (SRM) based construction products by newly organized value chains.

## CinderOSS

CinderOSS is a „One-Stop-Shop“ service that makes the use of SRM-based construction products resulting from CinderCEBM more transparent, traceable, and attractive to users, i.e. investors, companies, local administrations and decision makers at local and regional levels.



### SRM materials and applications

CinderCEBM addresses manufacturing and use of SRM-based materials for civil engineering and construction applications such as:

- Recycled aggregates from recycled construction and demolition waste (CDW);
- Manufactured aggregates from recycled industrial waste, originating from industrial processes involving thermal or other modification;
- Building composites (e.g. green concretes, geotechnical composites);
- Recycled soils.

### CINDERELA One-Stop-Shop

- Provides a digital environment enabling setting of circular business models depending on local / regional conditions together with information on SRM availability and the associated stakeholders;
- Delivers evidence-based knowledge on the enabling framework conditions for design, production and use of SRM-based construction materials;
- Helps build confidence in SRM-based construction materials by providing reliable test data on their performance based on testing protocols meeting the construction sector's requirements.