



fenix



FENIX is a project funded by the European Union Framework Programme for Research and Innovation Horizon 2020 under G.A. n. 760792

Some data



- TITLE: Future business models for the Efficient recovery of Natural and Industrial secondary resources in eXtended supply chains contexts
- GRANT #: 760792
- START: Jan 1st 2018
- END: Dec 31th 2020
- BUDGET: EUR 3,196,100.00
- WEBSITE: www.fenix-project.eu



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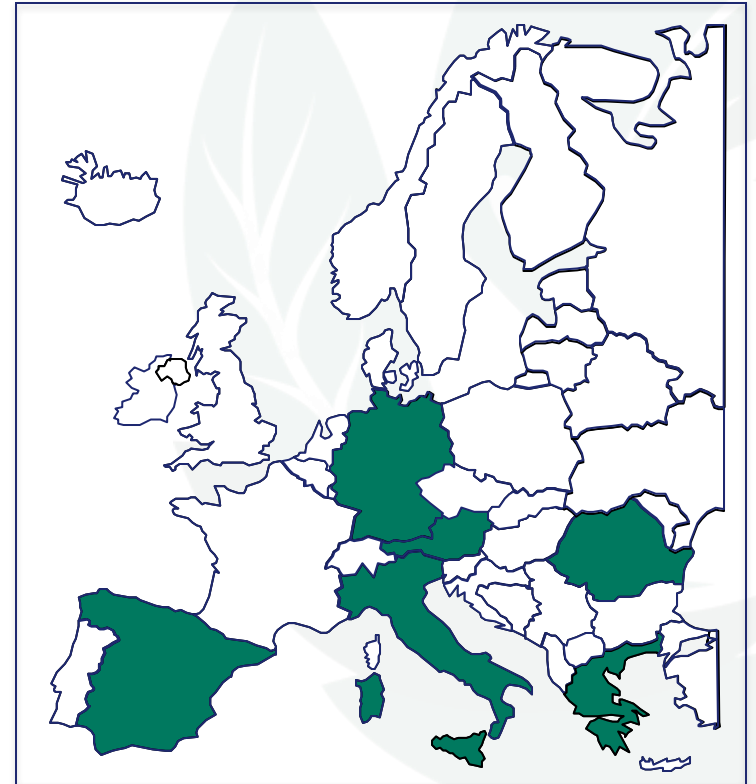
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CONSORTIUM

FENIX partners



| | |
|---|-----|
| Austrian Society for Systems Engineering and Automation | AUT |
| POLITECNICO DI MILANO | ITA |
| Università dell'Aquila | ITA |
| Fundació Privada Centre CIM | SPA |
| BALance Technology Consulting GmbH | GER |
| SingularLogic | GRE |
| S.C. Greentronics S.R.L. | ROM |
| Nafpigios Mixanologos Mixanicos | GRE |
| MBN nanomaterialia S.p.A. | ITA |
| Centre for Research & Technology Hellas | GRE |
| 3D Hub | GRE |



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MAIN OBJECTIVES

General objectives



- **Define** a set of potential B2B and B2C **business models and industrial strategies** in several manufacturing sectors
- **Implement novel supply chains** focused on sustainable and **functional recycling of secondary raw materials**, starting from different waste streams and sectors
- **Demonstrate**, through dedicated pilot plants, the **real implementation of a circular economy**
- **Support** the evolution of current end-of-life processes towards the **information sharing** with all end-users (both industrials and consumers)
- **Prove** how production **process flexibility** could be **exploited** to easily **reuse/reconfigure capacity** in several supply chains, what are the processes **enabling their integration** and how they could be able to **offer new business opportunities**

Specific objectives (1/2)



THE MAIN AIM of FENIX is developing new business models and industrial strategies for three novel supply chains, in order to enable value-added product-services:



- **A modular, multi-material and reconfigurable pilot plant producing 3D printing metal powders**



- **A modular, multi-material and reconfigurable pilot plant producing customized jewels**



- **A modular, multi-material and reconfigurable pilot plant producing 3D printing advanced filaments**

Specific objectives (2/2)



THE SECOND AIM of FENIX is representing a set of success stories coming from the application of CIRCULAR ECONOMY PRINCIPLES in different industrial sectors. They will be implemented through three pilot plants:

- **Industry 4.0 Lab of POLIMI**
- **Mobile hydrometallurgical pilot plant of UNIVAQ**
- **High Energy Ball Milling pilot plant of MBN**

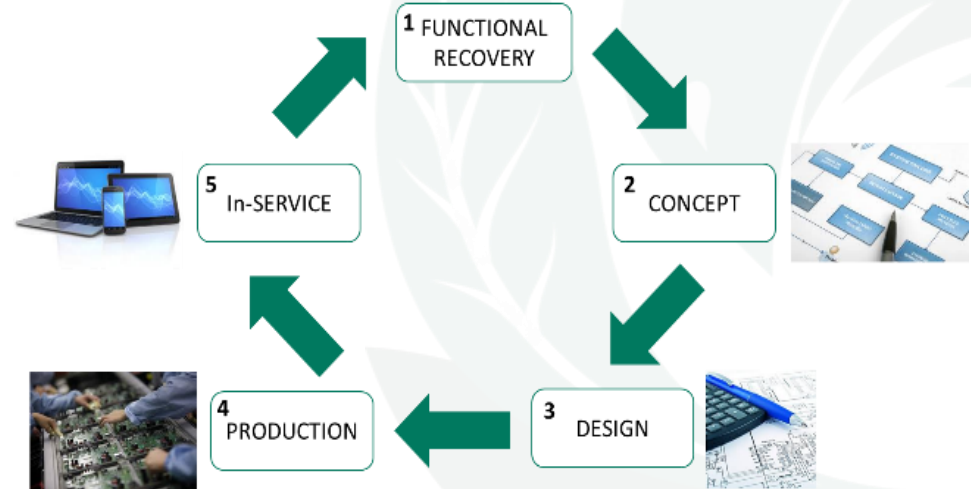
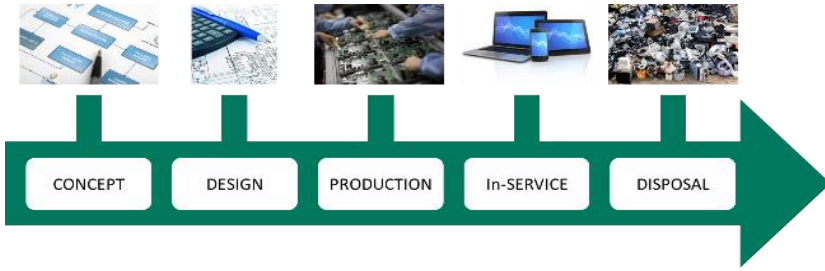
THE THIRD AIM of FENIX is integrating Key Enabling Technologies (KETs) for the efficient recovery of secondary resources:

- **Advanced manufacturing systems (e.g. Industry 4.0)**
- **Industrial biotechnologies (e.g. biometallurgy)**
- **Nanotechnologies (e.g. nano-structurization of materials)**

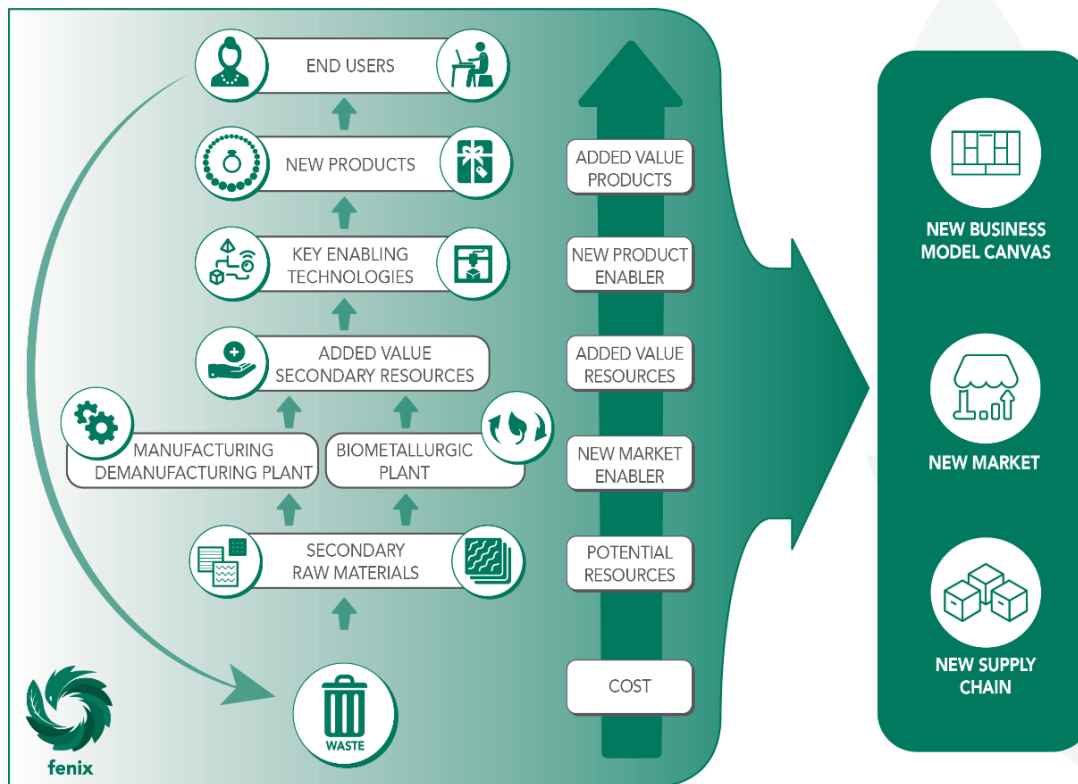
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CONCEPT & APPROACH

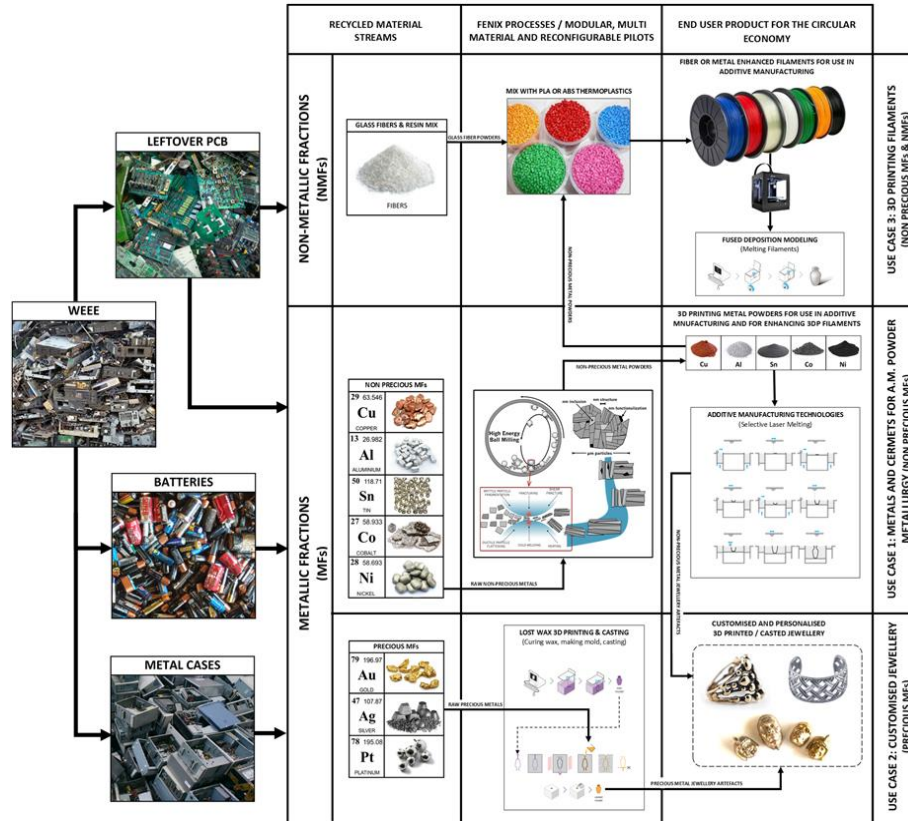
From Linear to Circular Economy



Overall concept



Use cases' complementarity



A small-scaled Circular Economy

