
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 (April 30th 2021)
- BUDGET: EUR 3,196,100.00
- WEBSITE: www.fenix-project.eu

# 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**

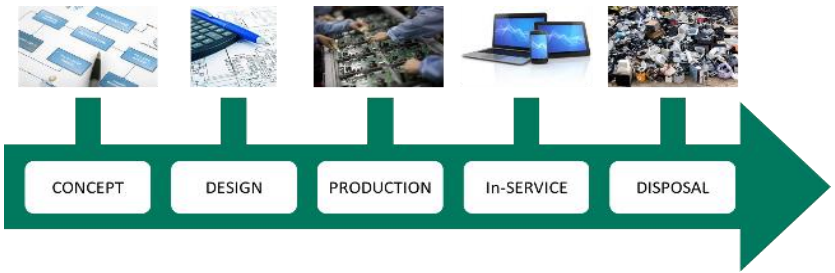
THE THIRD AIM of FENIX is integrating Key Enabling Technologies (KETs) for the efficient recovery of secondary resources:

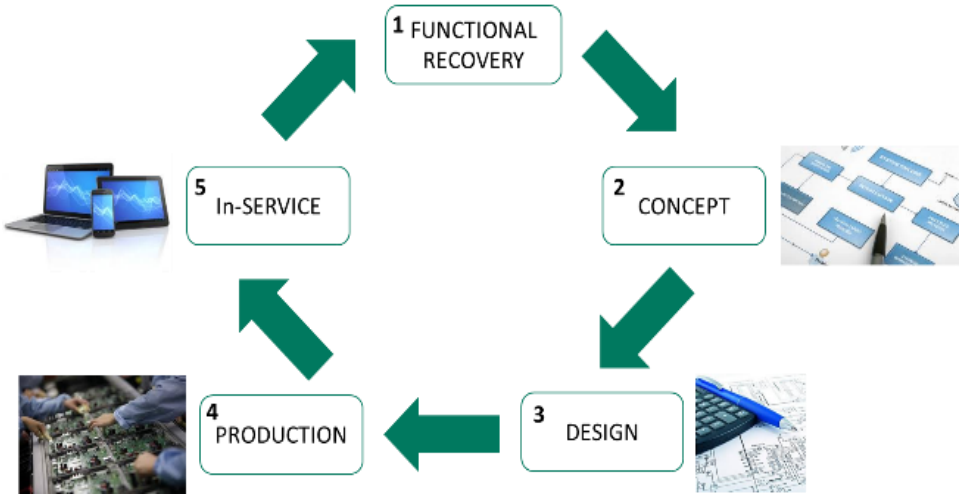
- **Advanced manufacturing systems (e.g. Industry 4.0)**
- **Industrial biotechnologies (e.g. biometallurgy)**
- **Nanotechnologies (e.g. nano-structurization of materials)**

The FENIX project

# CONCEPT & APPROACH

# From Linear to Circular Economy



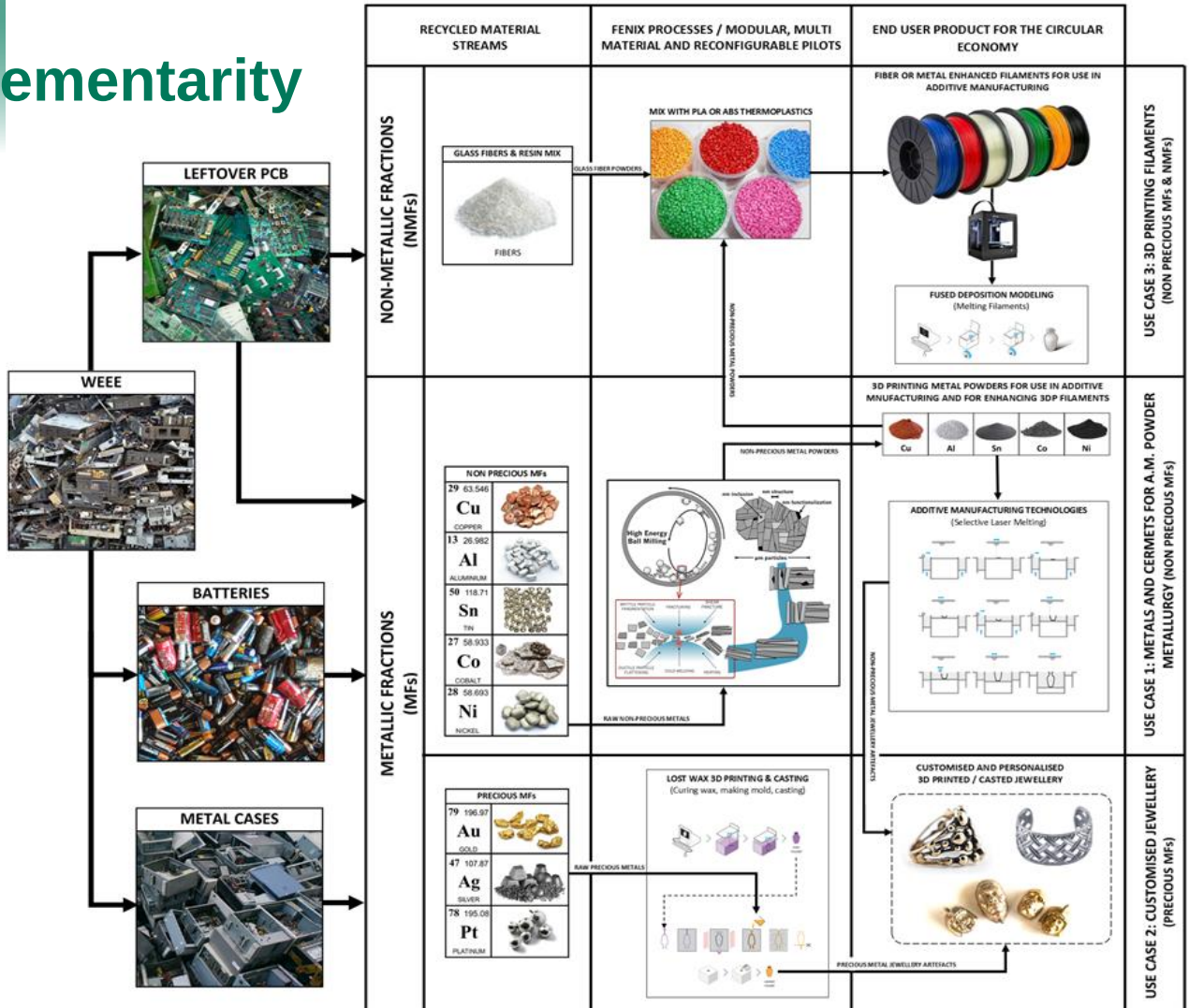
# A small-scale Circular Economy

**B2B side:**
**Industrial companies bring their scrap (or obsolete) products to the plant**

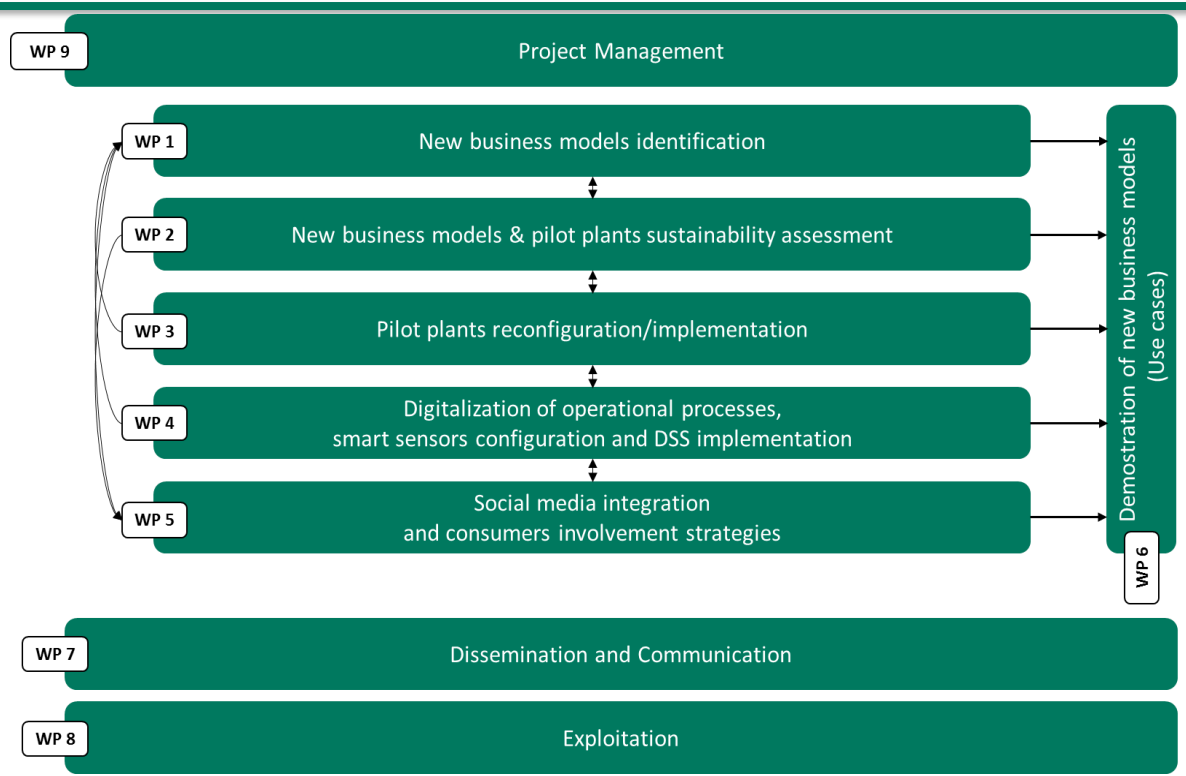
Manufacturing/demanufacturing pilot plant + Green materials recovery pilot plant + Additive manufacturing pilot plant

**B2C side:**
**Consumers bring their obsolete products to the plant**

# Use cases' complementarity



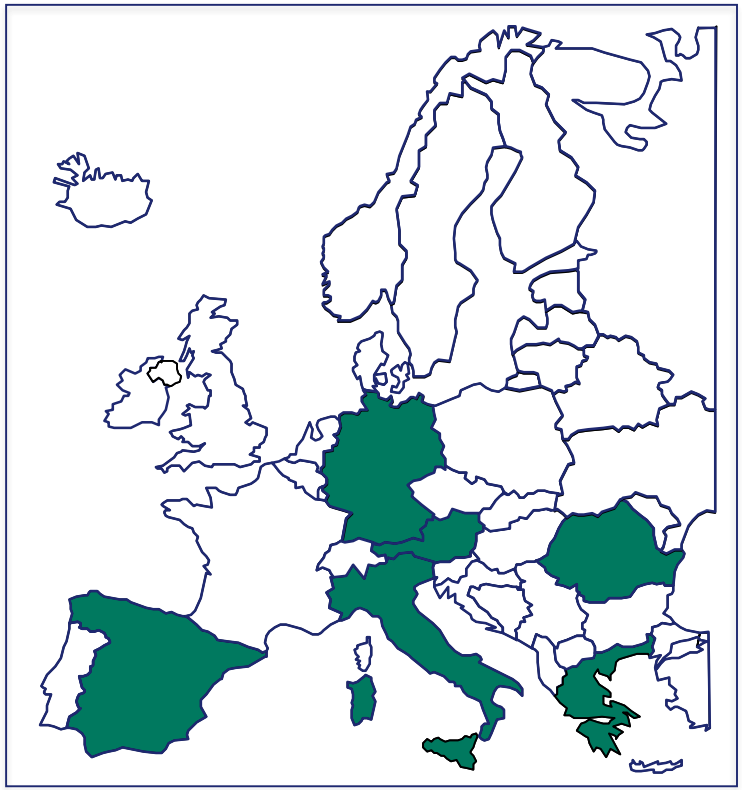
# Structure




FENIX project overview

# FENIX partners

| | |
|---|---|
| Austrian Society for Systems Engineering and Automation | AUT |
| POLITECNICO DI MILANO | ITA |
| Università dell'Aquila | ITA |
| Fundaciò Privada Centre CIM | SPA |
| BALance Technology Consulting | GER |
| SingularLogic | GRE |
| Greentronics | ROM |
| I3DU | GRE |
| MBN nanomaterialia | ITA |
| Centre for Research & Technology Hellas | GRE |
| 3D Hub | GRE |



# FENIX Key Exploitable Results

| No. | KER Name | Lead partner | Participants |
|---|---|---|---|
| 1 | Semi-automated robotic assembly-disassembly cell | POLIMI | n/a |
| 2 | CEPA methodology | POLIMI | BAL |
| 3 | Innovative technology for WPCBs treatment | UNIVAQ | n/a |
| 4 | Process engineering/Turnkey plant for the recovery of precious and critical metals from waste | UNIVAQ | n/a |
| 5 | BAL.LCPA software tool | BAL | n/a |
| 6 | High Energy high capacity mills for powders production | MBN | - |
| 7 | 3D printing | FCIM | n/a |
| 8 | 3D scanning of human faces | I3DU | 3DHUB |
| 9 | FENIX integrated platform | SINGULAR | n/a |
| 10 | FENIX market place | CERTH | n/a |

# FENIX contact

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