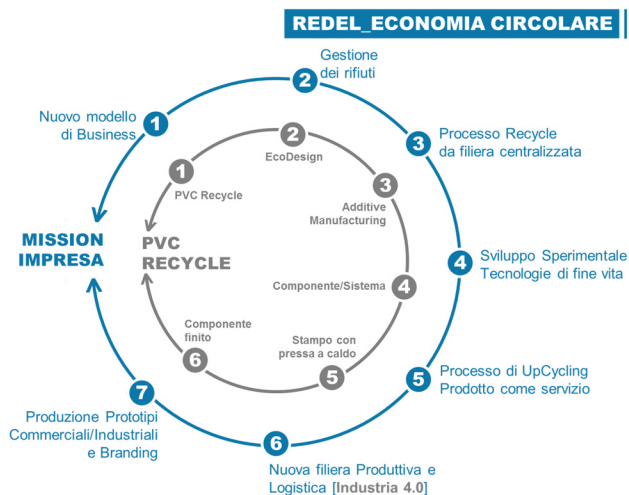


ARTICULATION OF THE PROJECT

START 18/11/2017 END 17/01/2018	WORKPACKAGE N° 1 CIRCULAR ECONOMY – INDUSTRIAL WASTE ZERO /SMART PROCESS
START 18/01/2018 END 17/01/2019	WORKPACKAGE N° 2 LIFE RECYCLE ASSESSMENT/ SMART MATERIALS
START 18/03/2018 END 17/10/2018	WORKPACKAGE N° 3 REMANUFACTURING/ SMART SOLUTIONS – PVC UP CYCLE LABORATORY
START 18/04/2018 END 17/10/2019	WORKPACKAGE N° 4 DISSEMINATION AND BRANDING
START 18/09/2018 END 17/04/2019	WORKPACKAGE N° 5 REMANUFACTURING/ SMART SOLUTIONS – PVC UP CYCLE PRODUCT
START 18/01/2019 END 17/05/2019	WORKPACKAGE N° 6 LABELLING/INDUSTRIAL PATENTS AND TRADEMARKS



ORGANIZATIONAL STRUCTURE



R.ED.EL S.R.L. (www.redel.it)

UMBERTO BARRECA
BUSINESS MANAGER AND TECHNICAL MANAGER OF THE PVC UP CYCLING

CONSUELO NAVA
UNIRC RESEARCHER / COORDINATOR AND SCIENTIFIC DIRECTOR OF THE PVC UP CYCLING PROJECT

UNICAL - DIPARTIMENTO DIATIC (www.unical.it)

PROF. ING. MASSIMO MIGLIORI
PROJECT REFERENT

PROF. GIROLAMO GIORDANO
FULL PROFESSOR OF ENVIRONMENTAL CHEMISTRY

PROF.SSA SIGLINDA PERATHONER
CONSULTANT

PROF. GABRIELE CENTI
CONSULTANT

DOTT. ALESSIA MARINO
UNIVERSIDAD REY JUAN CARLOS IMDEA ENERGY INSTITUTE

ENEA (www.enea.it)

ING. CORRADINO SPOSATO
REFERENTE DEL PROGETTO

ING. PIERO DE FAZIO
RICERCATORE

M. BRUNA ALBA
RICERCATRICE

REMANUFACTURING / SMART SOLUTIONS DISSEMINATION AND BRANDING

PMopenlab s.r.l.s. (www.pmopenlab.com)

Arch. A. Procopio, Arch. G. Mangano, Arch. A. R. Palermiti, Arch. D. Emo (Soci PMopenlab srls), Dott. D. Lucanto, Arch. G. Arena, Arch. F. Autelitano

DEVELOPMENT AREA



calabriaeuropa.regione.calabria.it

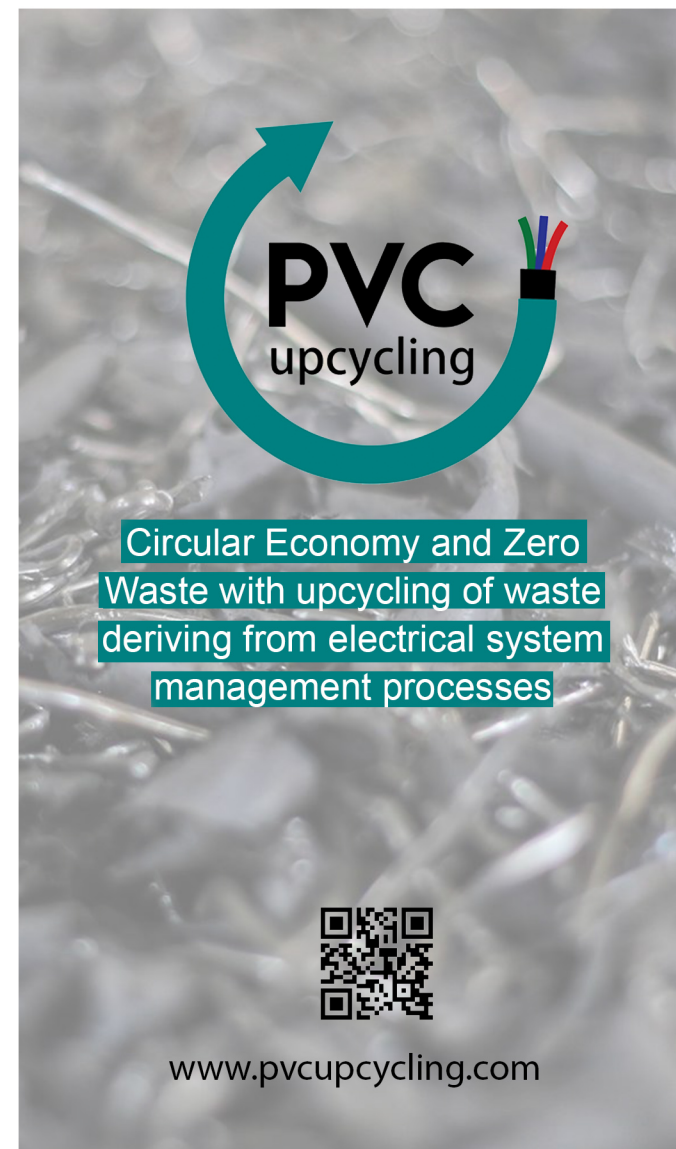
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COMMUNICATION [PMopenlab srls]



R.ED.E.L.
REGIONE CALABRIA ELETTRICA



www.pvcupcycling.com



POR Calabria 2014-2020
Fesr-Fse
Il futuro è un lavoro quotidiano



| PROJECT SYNTHESIS

The **PVC UPCYCLING** project aims to facilitate the transition in the current production chain of the REDEL Company, from a **LINEAR ECONOMIC MODEL TO A CIRCULAR ECONOMY** model through actions aimed at recovering the PVC of electric cables coming from the disposal of plants energetic: de-manufacturing; to the recycling of the same PVC in products with low environmental impact: re-manufacturing. **THE PVC UPCYCLING PROJECT THEREFORE** involves both **THE PROCESS CHAIN** and the **PRODUCT CHAIN** produced at the REDEL company.

COST OF THE PROJECT

Total project investment > € 679,204.00
Funded by POR Calabria 14-20 > € 365.257,63

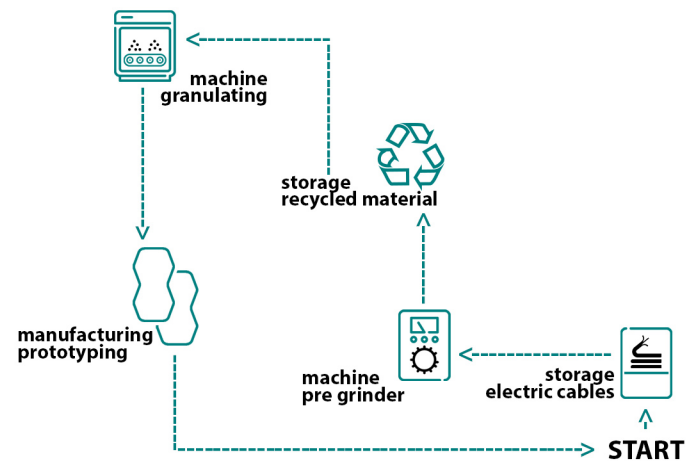
PROCESS INNOVATION

Process to be triggered with the PVC UpCycling project and to be grafted into the Company's production chain, aims to **RECOVER, RECYCLE, REUSE THE WASTE MATERIALS** that constitute the leakages of the different phases of its production system, based on the creation and management of the supplies connected to electrical installations.

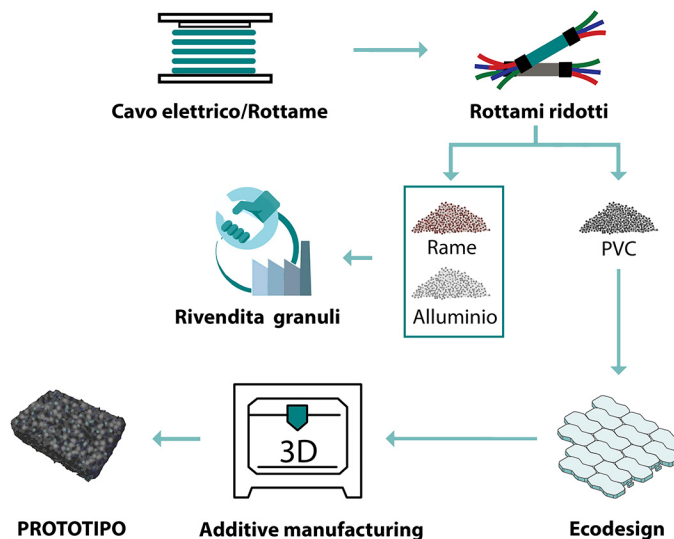
PRODUCT INNOVATION

The grafting of **DE-MANUFACTURING** enabling technologies (recovery and recycling of pvc of electrical cables for energy plants) to **RE-MANUFACTURING** (products with low environmental impact). This innovation therefore materializes the objective "production of value" of process innovation, in accordance with the production of qualified ecodesign typical of the "cradle to cradle" model.

| MANUFACTURING MAPPING



| UPCYCLING PROCESS



| THE WORKSHOP LABORATORY

SCENARIO 1

coating for external flooring:
PVC tiles on existing screed



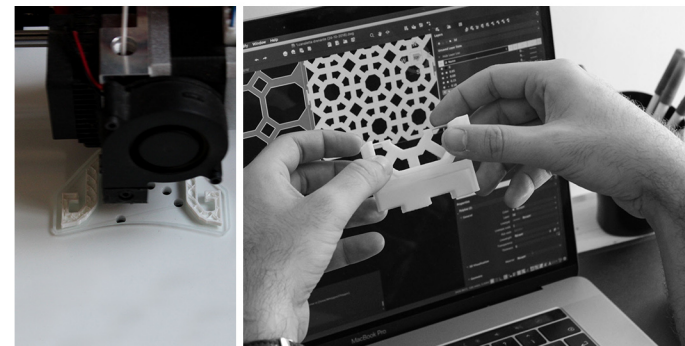
SCENARIO 2

Screed reinforced with mortar mixed with PVC granules



SCENARIO 3

Thick PVC blocks for Green Parking with 3D printed structural joints in PLA



S3 Innovation Area Smart Specialization Strategy
ENVIRONMENT AND NATURAL RISKS
with SMART MANUFACTURING (New energy technologies and reuse of waste and waste to reduce environmental impact).