

ITRB GROUP

**MATERIALS & PRODUCTS
FROM CRADLE TO CRADLE**

II EU-LATIN AMERICA DIALOGUE ON RAW MATERIALS

22-23 SEPTEMBER 2015



- **1. ITRB GROUP**
- **2. MATERIALS & PRODUCTS**
- **3. PROJECT REMAGHIC**
- **4. TARGETS**

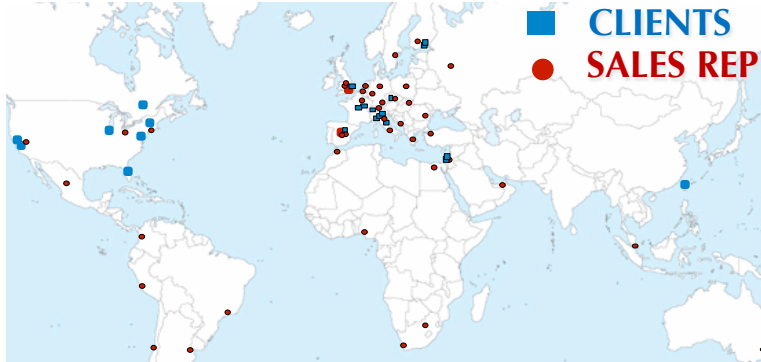
- 1. ITRB GROUP
- 2. MATERIALS & PRODUCTS
- 3. PROJECT REMAGHIC
- 4. TARGETS

HISTORY

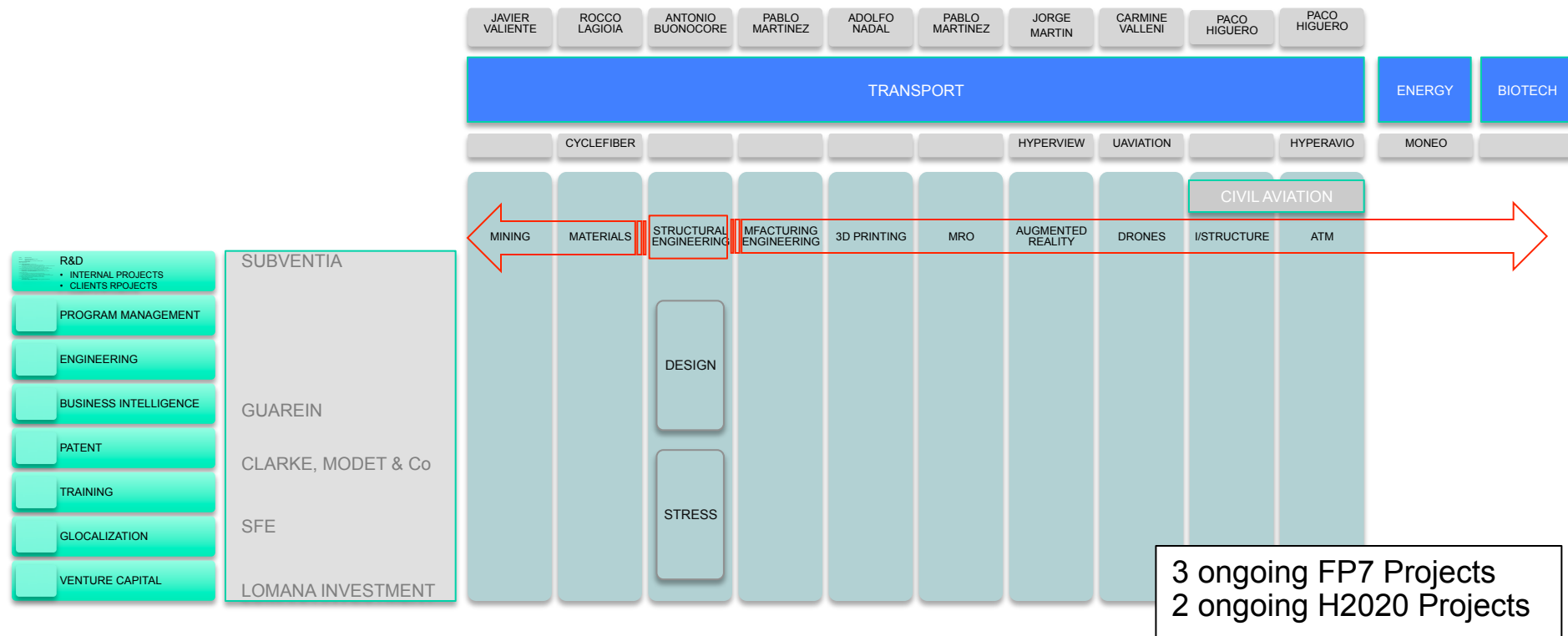
- 2008 ITRB is founded in by a group of engineers with an average of over 20 years of professional experience in Aerospace.
- 2012 ITRB 2.0 is launched with the target of bosting R&D content
- 2015 ITRB 4.0 is set to cover the entire Product Life-Cycle

GLOBAL PRESENCE

ITRB & SALES FORCE EUROPE establish the TECH HUB

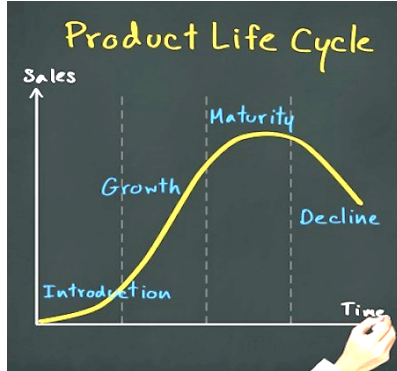


ITRB ORGANIZATION

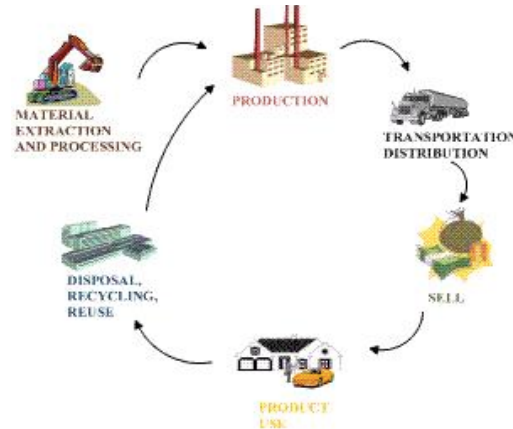


- 1. ITRB GROUP
- 2. MATERIALS & PRODUCTS**
- 3. PROJECT REMAGHIC
- 4. TARGETS

PRODUCT LIFE-CYCLE



AT "OLD" SCHOOL



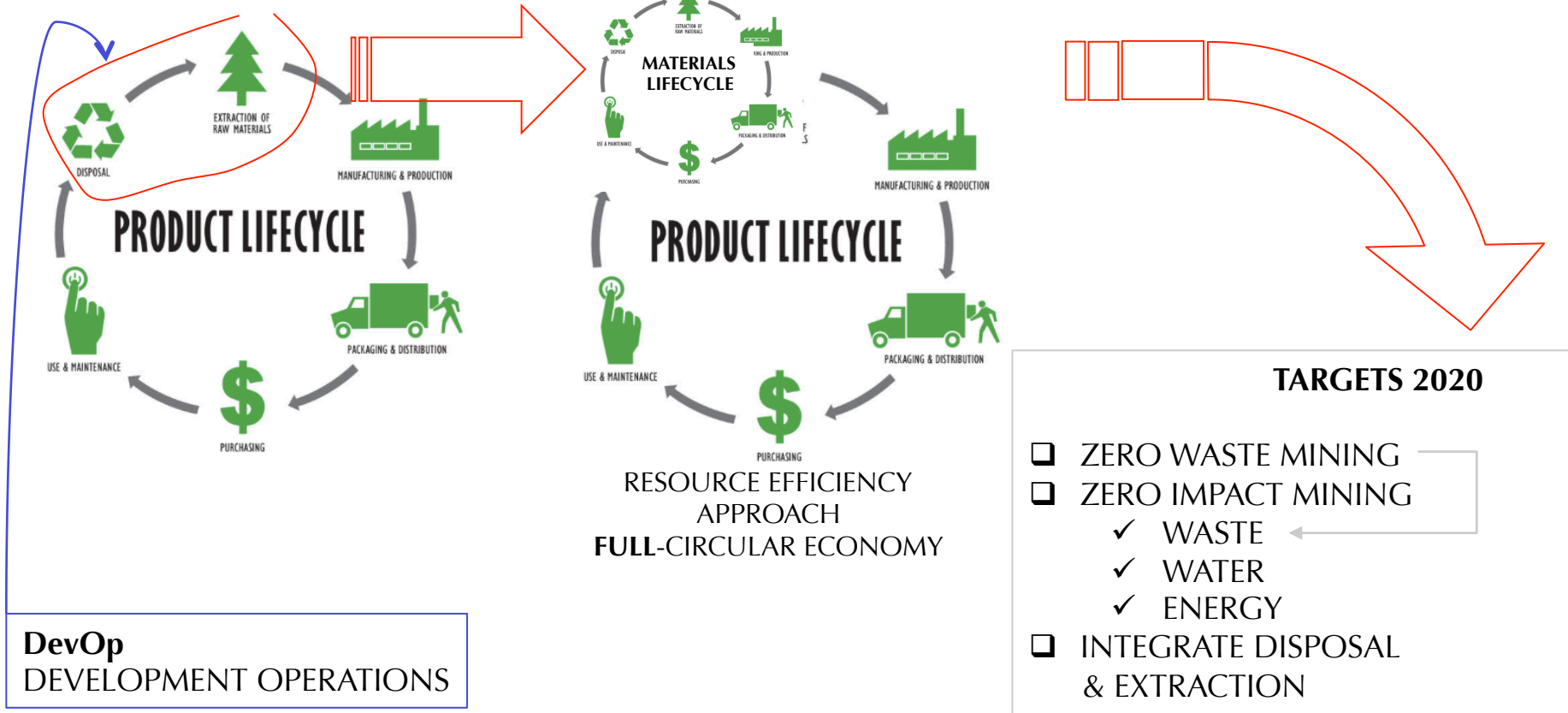
AT SCHOOL



RESOURCE EFFICIENCY APPROACH
SEMI-CIRCULAR ECONOMY

DESIGN FOR LIFE-CYCLE
@ EUROPEAN UNIVERSITY MADRID

MATERIALS LIFE-CYCLE



DevOp
DEVELOPMENT OPERATIONS

THE CYCLEFIBER PROJECT

“FROM CRADLE TO CRADLE”

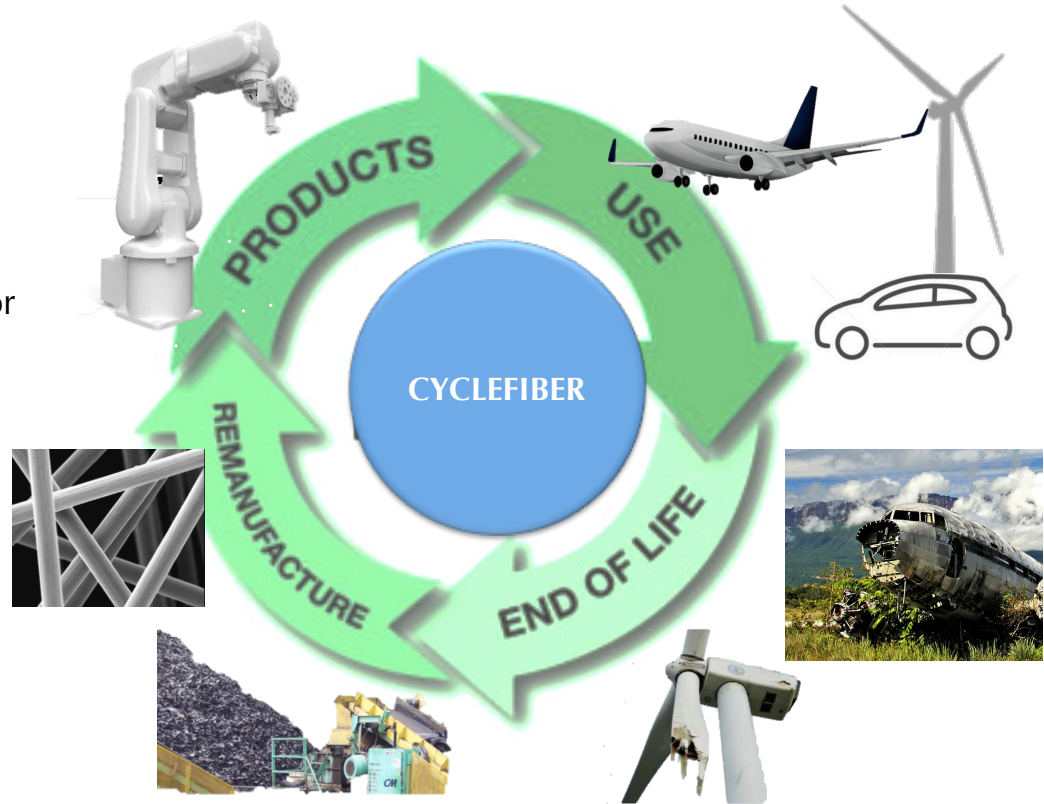
Not just a nice Theory but Industrial Application

TARGET

ReCycle of Fiber-based Materials as feedstock for
Large Scale 3D Printer
for Aerospace, Automotive and Wind Energy
Applications

PARTNERS

21 Partners
7 European Countries + Canada & USA



- 1. ITRB GROUP
- 2. MATERIALS & PRODUCTS
- **3. PROJECT REMAGHIC**
- 4. TARGETS

THE REMAGHIC PROJECT

New Recovery Processes to produce Rare Earth-Magnesium Alloys of High Performance and Low Cost

TARGET

The aim of the REMAGHIC project is to contribute to Europe's Rare-Earth recovery and Magnesium recycling technologies, improving the efficiencies of these processes and advancing the technology readiness levels for a new generation of industrial processes that will produce new low cost competitive alloys for a wide variety of sectors across Europe's manufacturing value chain.

PARTNERS

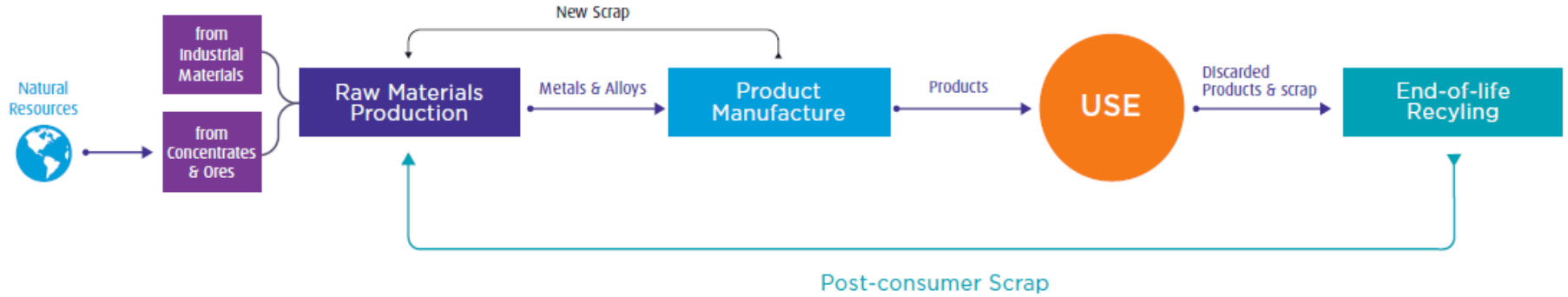
10 Partners
5 European Countries

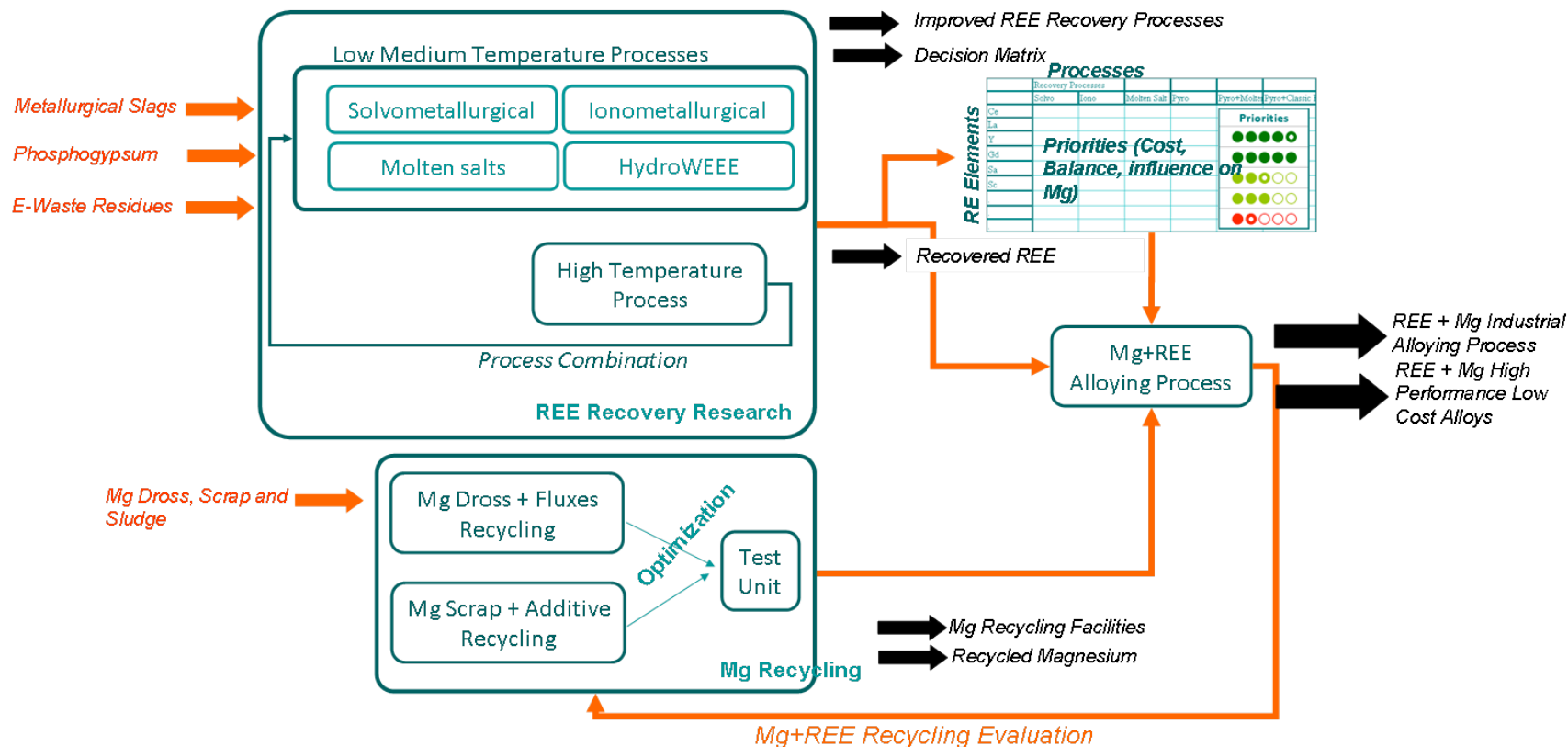
TIMELINE

3 years project

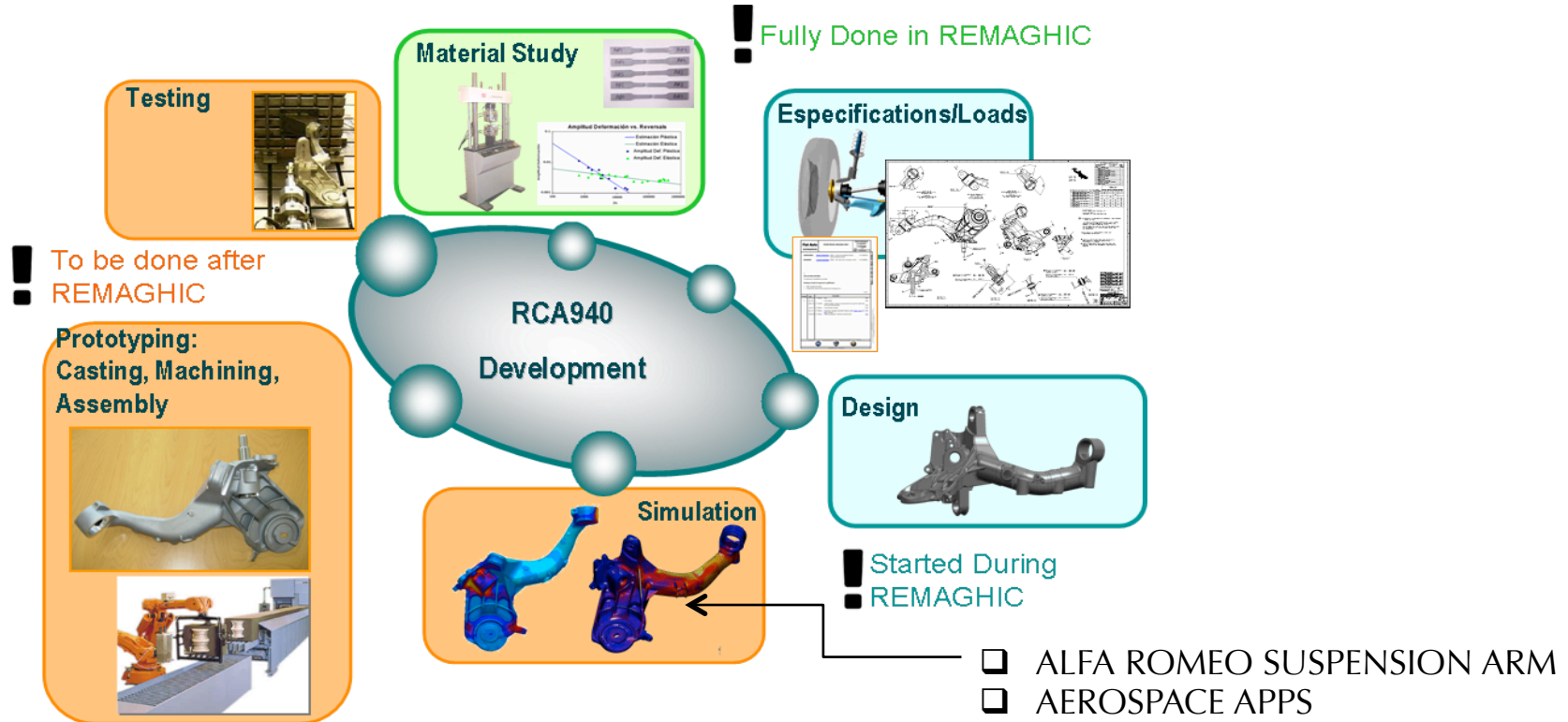
*New opportunities for the Mining Sector
by opening a new product line*

RARE EARTH LIFE-CYCLE





PRODUCT



- 1. ITRB GROUP
- 2. MATERIALS & PRODUCTS
- 3. PROJECT REMAGHIC
- **4. TARGETS**

INVESTMENTS

TARGET OPERATIONS

Support to Investment Pheasibility
Bby fostering Sustainable Operations.

TECHNOLOGY

New approach for Mining Process LifeCycle
based on
Knowledge Transfer from Product LifeCycle and ICT DevOp (Development Operations)

TECHNOLOGIES

TARGET OPERATIONS

Recycling of Mining Waste as Inputs for Remaghic and Secondary Source Raw Materials

SERVICES:

UAV OPERATIONS FOR MINING. OUTDOOR

TARGET OPERATIONS

Mapping
Safety

TECHNOLOGY

AutoDamage Detection
LIDAR
RADAR

UAVIATION

SERVICES:

UAV OPERATIONS FOR MINING. INDOOR

TARGET OPERATIONS

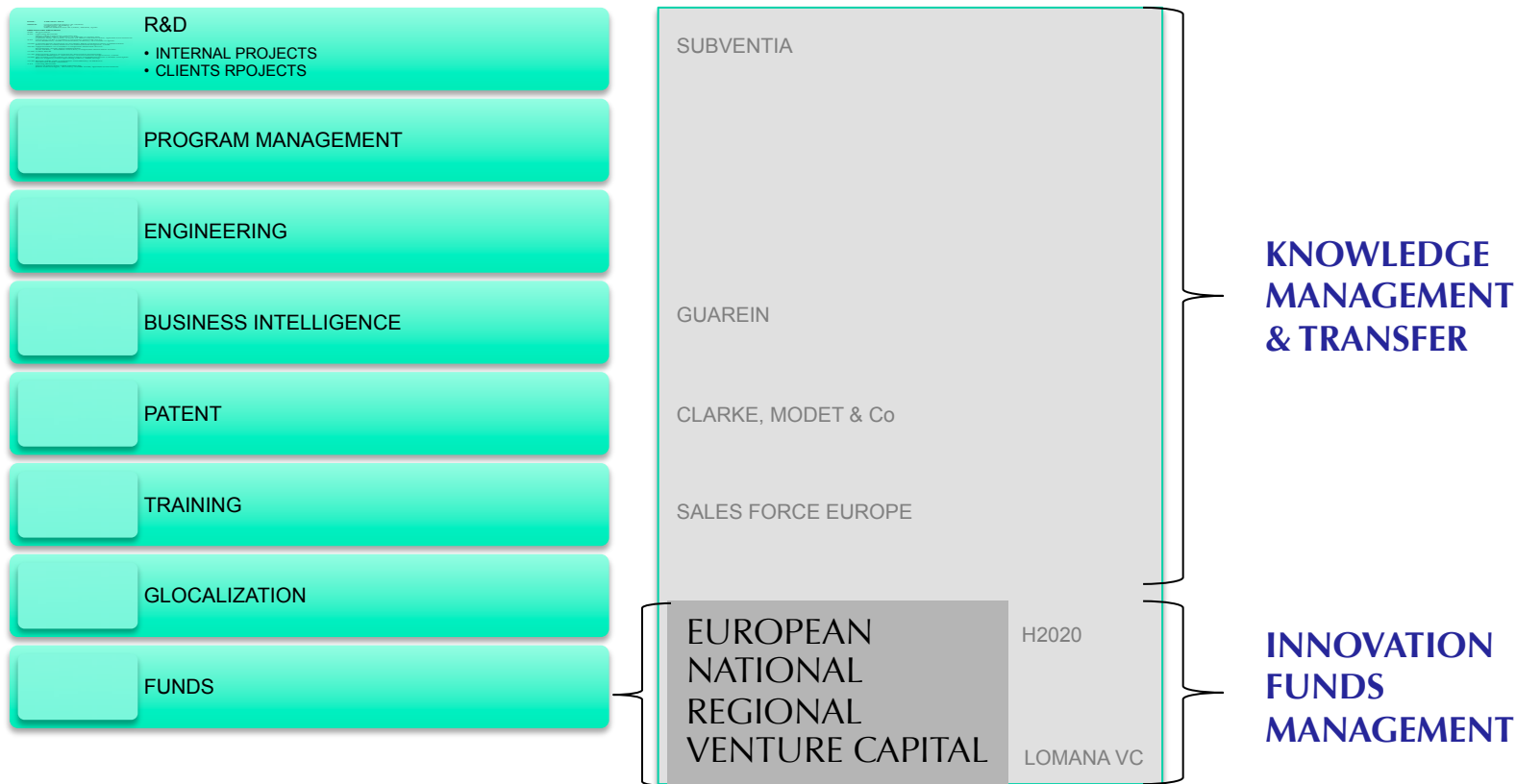
Mines Tunnels mapping
Disaster Reliefs

TECHNOLOGY

Collision Detect and Avoidance Software
100% Unmanned
ARMO Feature (Automatical Rerouting on Moving Obstacles)

UAVIATION

KNOWLEDGE AND INNOVATION FUNDS MANAGEMENT





THANK YOU

Rocco Lagioia
r.lagioia@itrbr.net