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MADE IN EUROPE 2026

ONLINE PITCHING

23 June 2026

What is CARTIF?

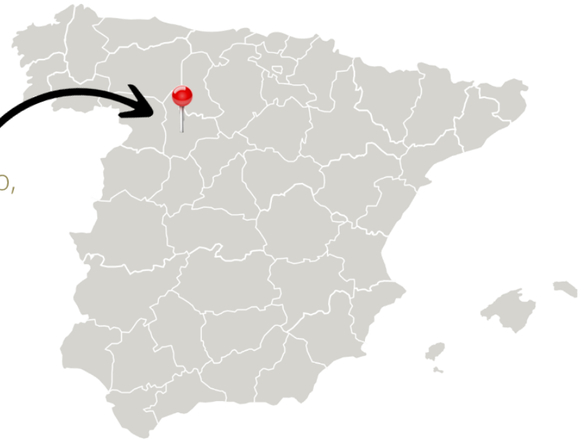
18.5 M€
Revenue (2025)

277
Clients (2025)

260
Staff (45 PhD)

CARTIF TECHNOLOGY CENTRE

Avda. Francisco Vallés 4,
Parque Tecnológico de Boecillo,
47151 Boecillo, Valladolid



AGRIFOOD AND PROCESSES

- Circular Economy and Biotechnology
- Natural Resources and Climate
- Agrifood
- Testing Laboratory

ENERGY

- Energy Efficiency
- Energy Systems
- Smart Grids
- City, Territory and Climate

INDUSTRIAL AND DIGITAL SYSTEMS

- Industry 4.0
- Natural and Cultural heritage
- Industrial Solutions
- Construction and Infrastructures
- Health and Wellness

151
Ongoing projects

Projects Procured with Public Funds

67%

Projects Procured through Private Contracts with Companies

33%

International

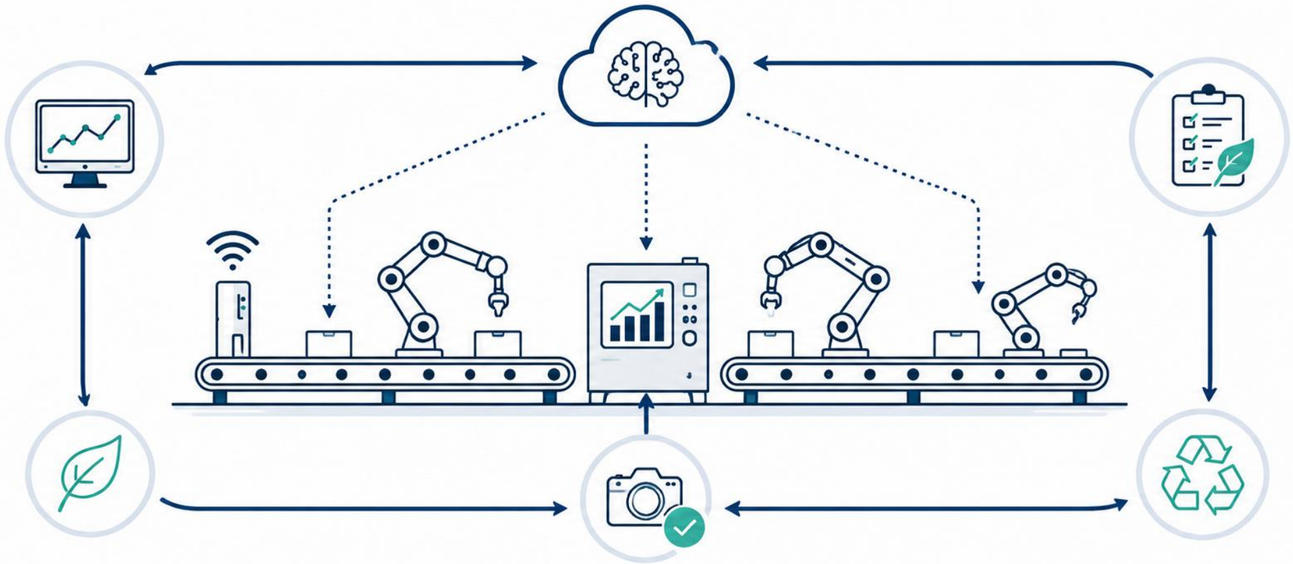
National

Regional

HORIZON-CL4-2027-01-MAT-PROD-02

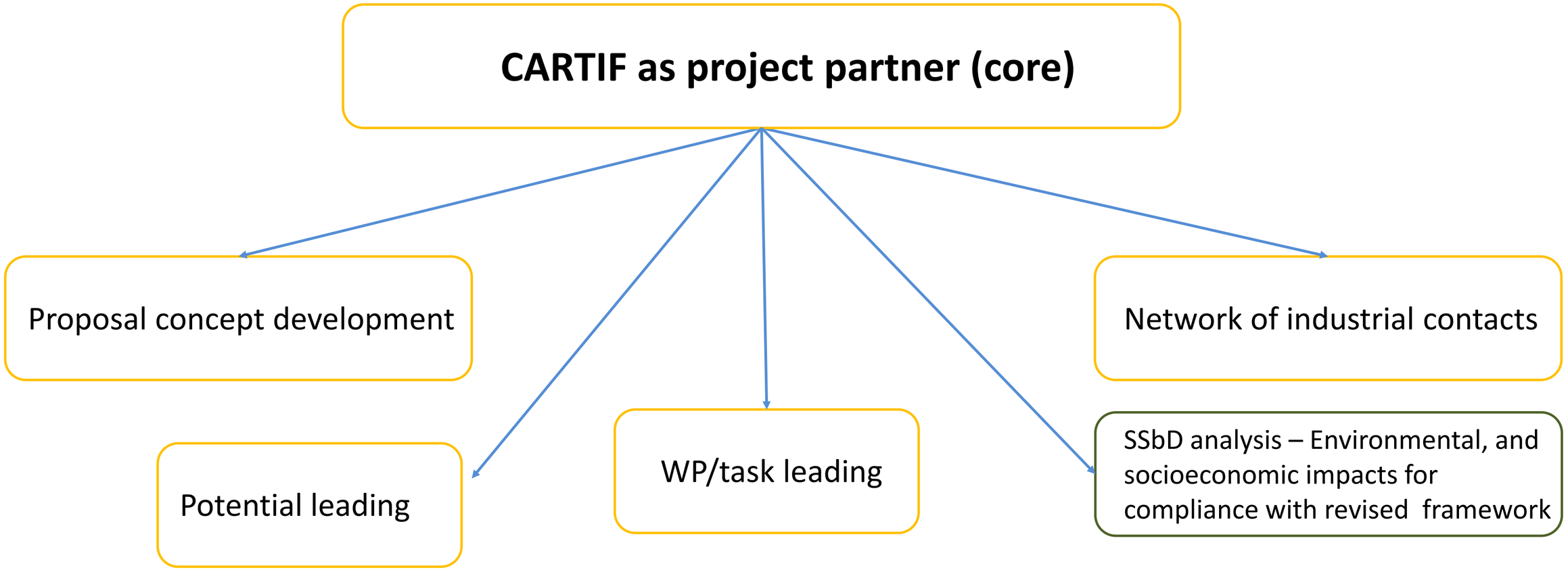
Advanced manufacturing for key products (IA) (Made in Europe partnership)

Project Idea 1 - Self-Adaptive Manufacturing Lines for Circular Products: Development of self-adaptive production systems capable of autonomously optimising manufacturing processes through AI-driven digital twins, real-time monitoring, inline quality inspection and circularity-aware decision support.



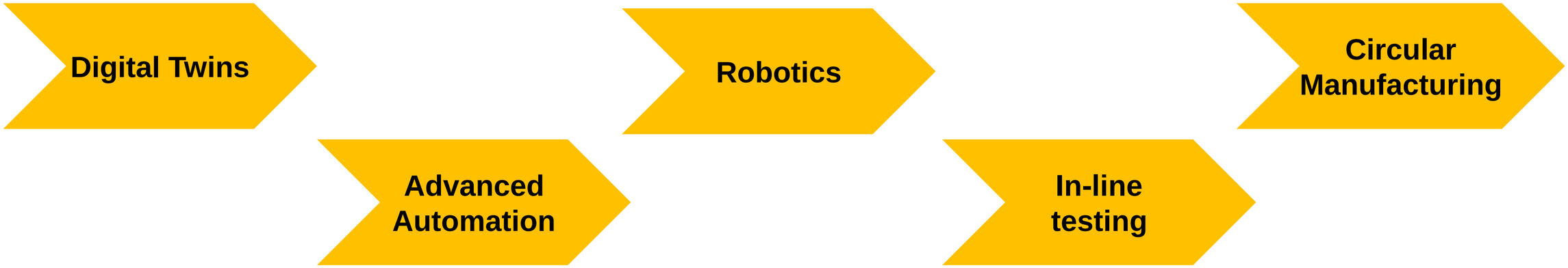
HORIZON-CL4-2027-01-MAT-PROD-02

Advanced manufacturing for key products (IA) (Made in Europe partnership)



HORIZON-CL4-2027-01-MAT-PROD-02

Advanced manufacturing for key products (IA) (Made in Europe partnership)

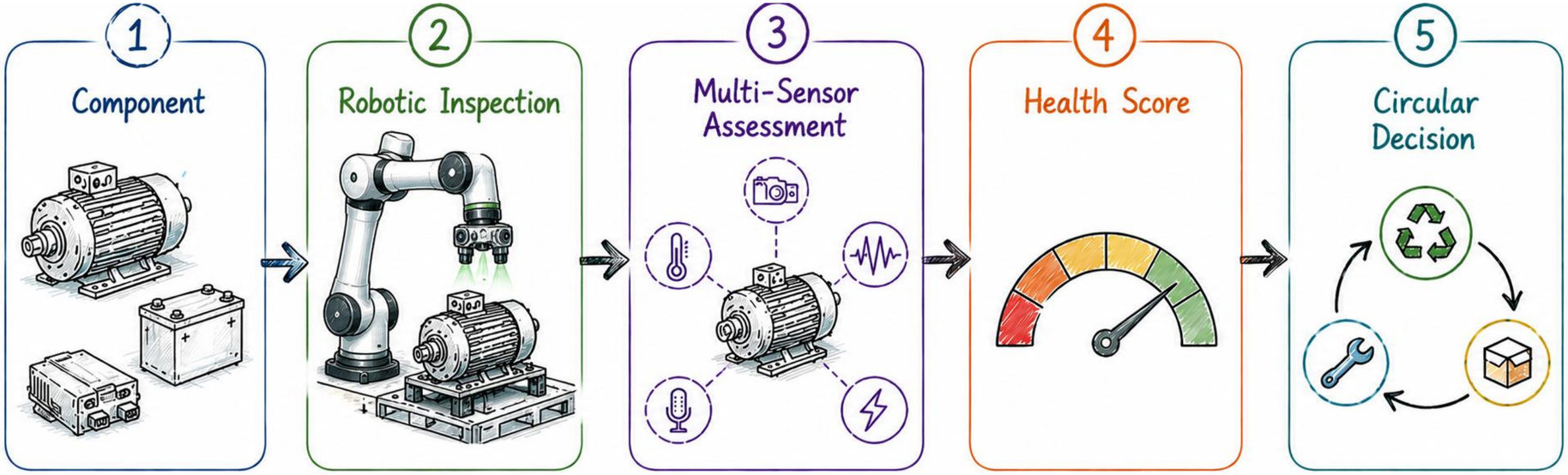


- **Areas of interest**
  - Advanced/optimal **process control** (e.g. 3D printing extrusion process, polymers, concrete, …).
  - Digitization (OT/IT) and monitoring of production lines >>> **data space integration** (e.g. FIWARE)
  - Computer vision for inline continuous testing (e.g. **reflective surfaces analysis, terahertz**)
  - **Digital support systems** (e.g. DPP based) for circularity management
  - Environmental and socio-economic evaluation of new materials and processes.
  - Manufacturing Process Digital Twin (Data-driven, AI driven).

HORIZON-CL4-2027-01-MAT-PROD-03

Factory process and automation for de- and re-manufacturing (RIA)

Project Idea 1: Development of robotic **inspection systems** to automatically assess the condition of **end-of-life electrical components** such as electric motors, industrial drives and power electronics. Combining computer vision, electrical, acoustic, vibration and thermal sensing with AI-based decision support, the system will determine the **most suitable circular pathway**: reuse, repair, remanufacture or recycle.



HORIZON-CL4-2027-01-MAT-PROD-03

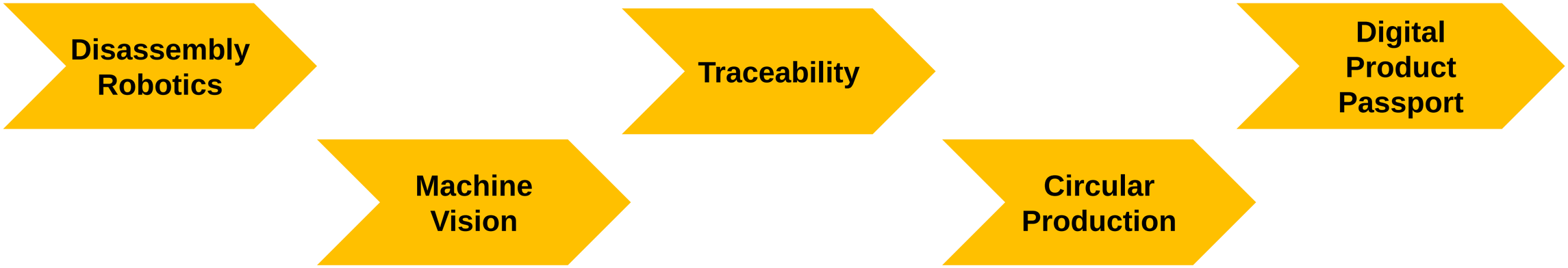
Factory process and automation for de- and re-manufacturing (RIA)

CARTIF as project partner (core)

- Proposal concept development
- Pilot plant for Human-robot Collaboration (CARTIFactory FIWARE iHub)
- WP/task leading
- DfX – Sustainability and Circularity
- Network of OEM manufacturers (WEE equipment)
- Founding member for Circular Intelligence Association

HORIZON-CL4-2027-01-MAT-PROD-03

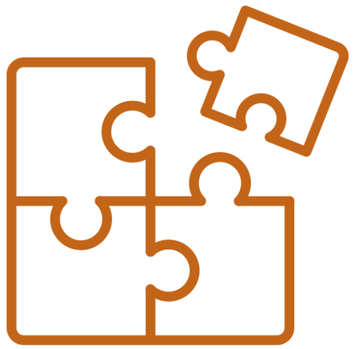
Factory process and automation for de- and re-manufacturing (RIA)



- **Areas of interest**
  - Human-robot **natural collaboration interfaces** for de- re-manufacturing activities.
  - **Multimodal sensing** for health inspection of electrical components (e.g. batteries, motors, …)
  - **Interoperability of robotic cells** with IT/OT factory networks (ARISE project Middleware)
  - Computer vision for inspection and classification of components' health
  - **Custom end-effector design and prototyping** (e.g. oriented to health test)
  - **DfX strategy** design and assessment, LCSA and circularity assessment against ISO standards.

HORIZON-CL4-2027-01-MAT-PROD-06:

Circular innovative advanced materials: facilitating the transition from design to markets (RIA) (Innovative Advanced Materials for the EU and Made in Europe partnerships)



Project Idea 1 - Circular printable geopolymer materials for construction

3D-printable circular advanced geopolymer materials for the construction sector, based on secondary feedstocks. Co-development of material formulation, printability, curing and performance assessment, so that the resulting geopolymer system has controlled functionality and industrial processing potential.

Project Idea 2 - Magnet-to-magnet value chain

Development of circular advanced magnetic materials and secondary reprocessing routes, enabling faster industrial uptake of recycled magnets to strengthen strategic value chains. Combination of CRM recovery, material requalification, design for circularity.

HORIZON-CL4-2027-01-MAT-PROD-06:

Circular innovative advanced materials: facilitating the transition from design to markets

CARTIF as project partner (core)

- Proposal concept development
- SSbD analysis – Environmental, and socioeconomic impacts for compliance with revised framework
- WP/task leading
- Material development and characterisation
- Network of industrial contacts
- **Recycling expertise for circularity assessment of new materials**
  >>> Magnets, composites

HORIZON-CL4-2027-01-MAT-PROD-06

Circular innovative advanced materials: facilitating the transition from design to markets

- **Areas of interest**
  - Recycling and upcycling of magnets for circular management.
  - **Formulation and development** of 3D-printable geopolymer materials for construction.
  - **Design of advanced upcycling routes** for waste to resource strategies (textiles, plastics, CDWs...)
  - Material **characterisation and performance** assessment.
  - **Environmental and socio-economic evaluation** of new materials and processes.
  - Digital tagging and **FAIR data management** for circular materials.

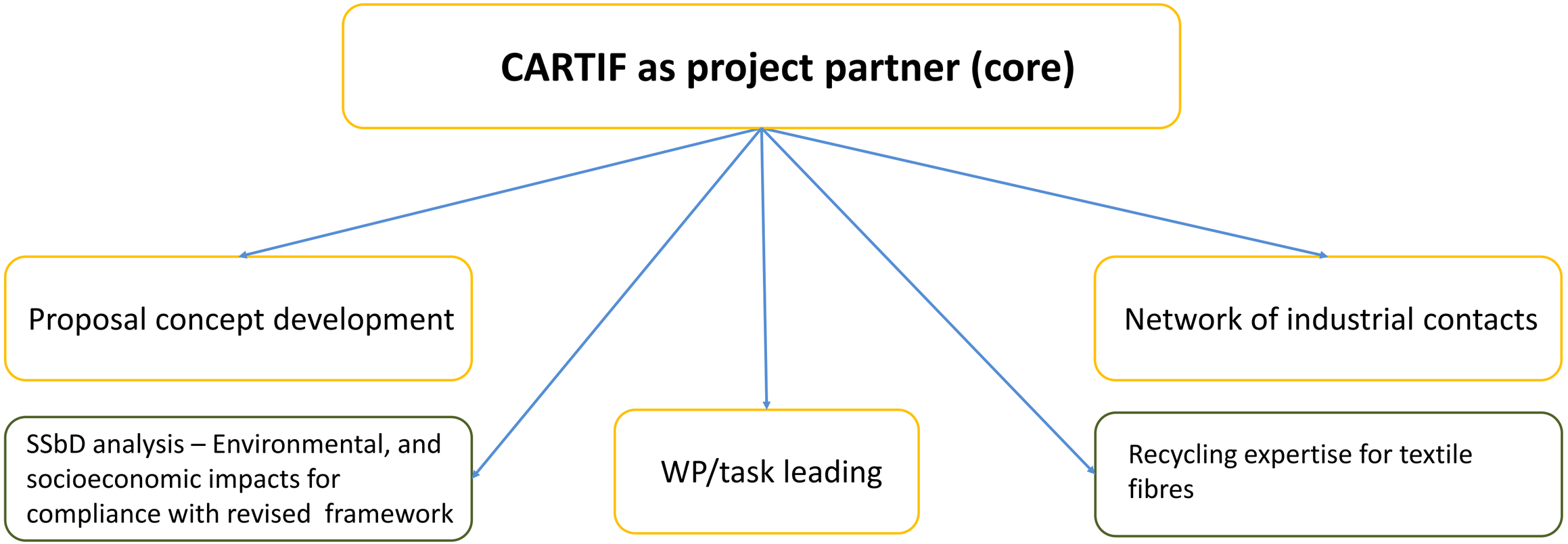
HORIZON-CL4-2027-01-MAT-PROD-08

Textile circularity through advanced processing and manufacturing technologies and system approaches (IA) (Textiles for the Future partnership)

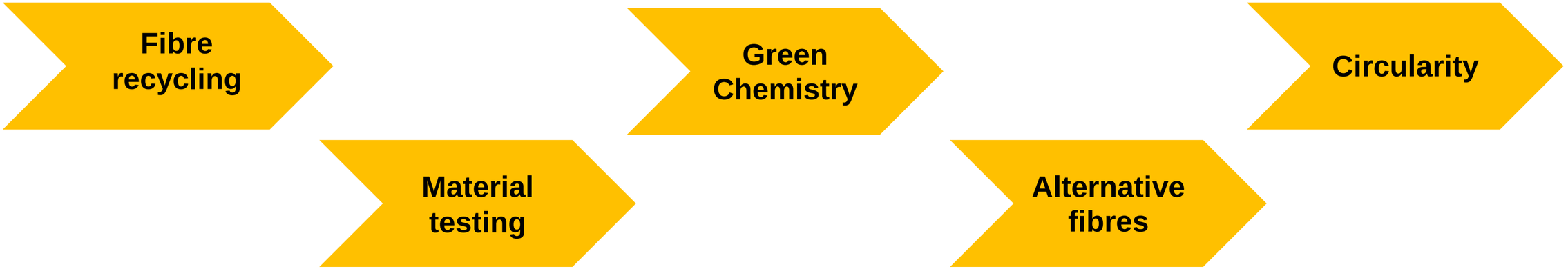
Project Idea 1: Fibre-to-Fibre recycling

Post-industrial and post-consumer textile waste into high-quality recycled fibres ready to re-enter textile manufacturing. Target: delivering fibres with the processability, quality, durability and functionality needed for spinning and downstream textile applications.

HORIZON-CL4-2027-01-MAT-PROD-08:



HORIZON-CL4-2027-01-MAT-PROD-08



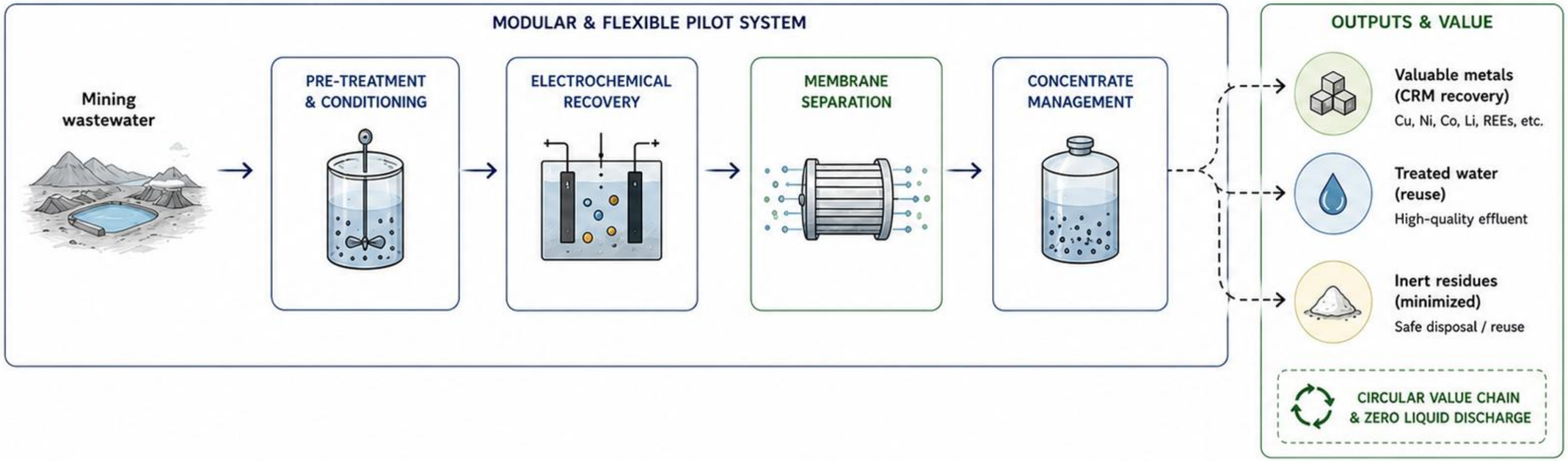
- Areas of interest
  - Fibre characterisation (**physico-chemical analytics, mechanical testing**).
  - Quality assurance and process optimization.
  - Detection of **improper/unwanted materials** in textile recycling (Terahertz technology)
  - Flexible **materials handling** using collaborative robotics.
  - **Pilot-scale validation** of fibre-to-fibre processes.

HORIZON-CL4-2027-01-MAT-PROD-16

Technologies for innovative processing of raw materials (IA)

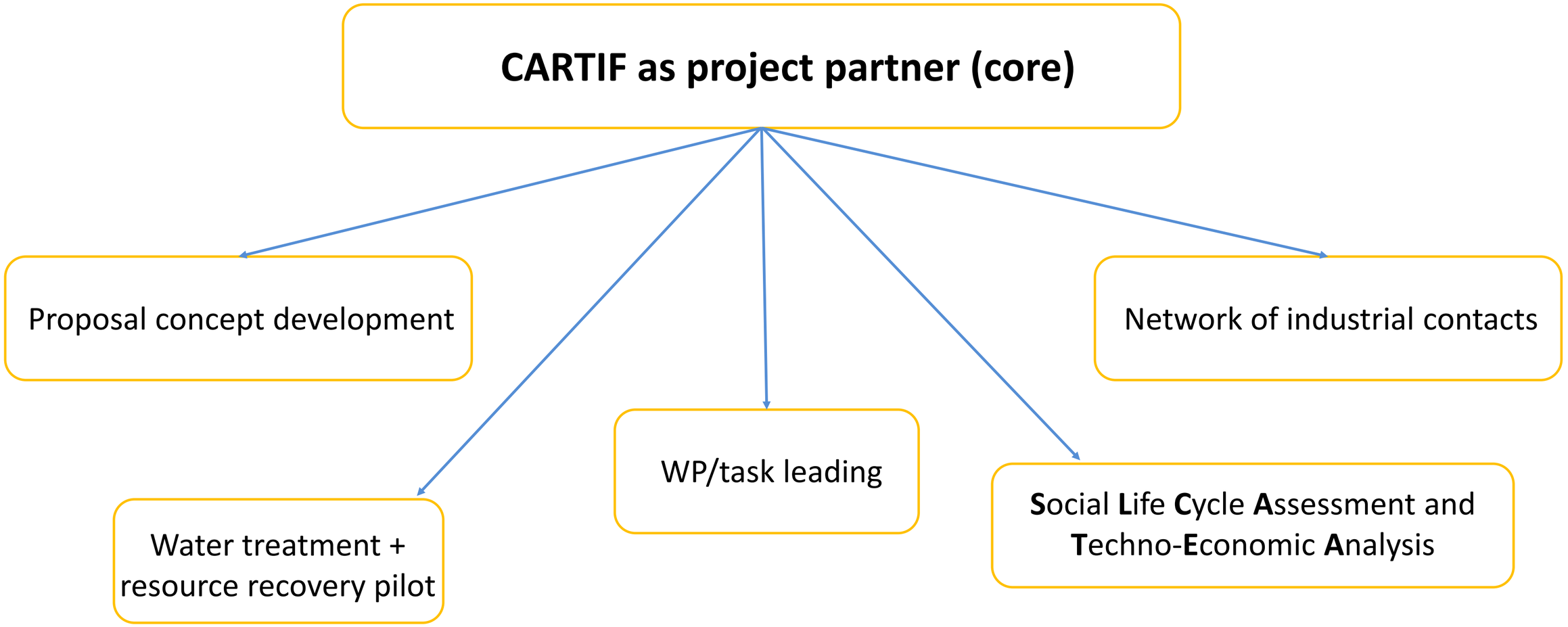
Project Idea 1: Flexible modular pilot for variable mining streams

Modular, hybrid electrochemical and membrane-based recovery system for mining wastewater, enabling selective recovery of valuable metals, water reuse and reduced pollutant discharge. Zero Liquid Discharge (ZLD) + circular value chain.



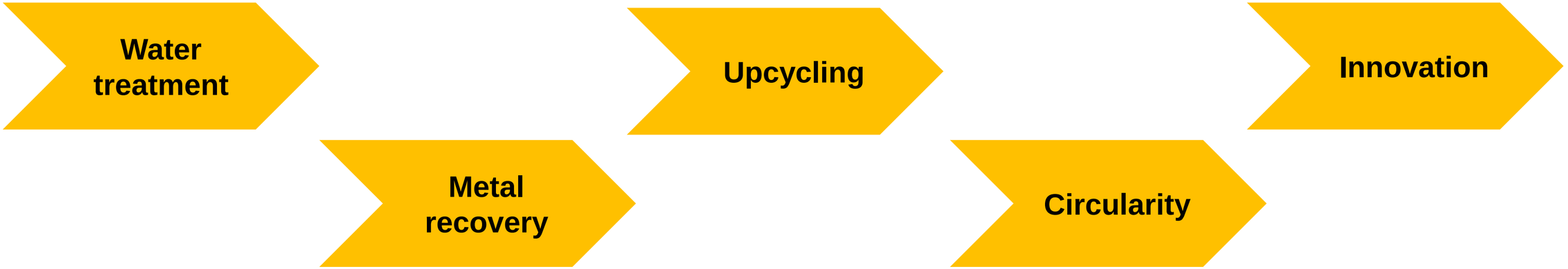
HORIZON-CL4-2027-01-MAT-PROD-16

Technologies for innovative processing of raw materials (IA)



HORIZON-CL4-2027-01-MAT-PROD-16

Technologies for innovative processing of raw materials (IA)



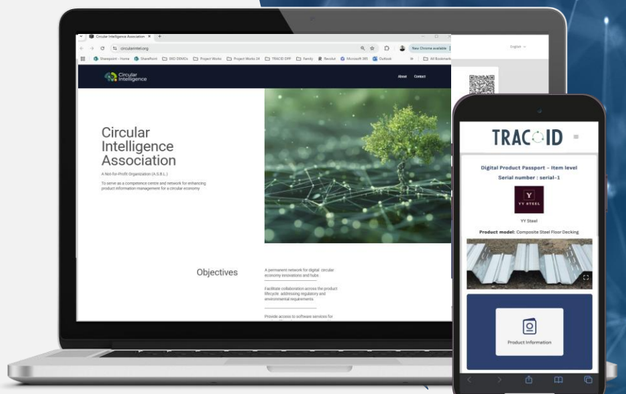
- **Areas of interest**
  - **LCSA** assessment.
  - **Selective recovery of CRMs from wastewater.**
  - **Integrated treatment and valorisation of extractive wastewaters.**
  - Advanced/optimal **process control** of treatment and valorisation processes.
  - Pilot validation of integrated treatment system.

Circular Intelligence

A competence centre and network for enhancing product information management for a circular economy

https://www.circularintel.org/

Circ Thread



About us

Circular Intelligence Association – Core Services

Compliance and Support

- Knowledge sharing on the CE regulatory and other standardised frameworks
- Roadmaps, training and support for sectoral associations (training the trainers)
- DPP Compliance Consultancy services
- Consumer testing services, support and insight management

Verification

- Verification of DPP Service compliance – with respect to ESPR
- Verification to Sectoral DPP or Product data exchange standards / practices (ie. CPR-Steel)
- User verification in a CE network

Certification

- Enabling certification bodies
- White-label consultancy for certifiers
- Product-oriented certification

Circular Data Orchestration

- Circular Intelligence Platform - with User/role/credential management
- Interoperability with other platforms/systems
- Compliance verification scorecards/labels
- Software service integration- SaaS Models

Pilots and Experimentation

- DPP linked data orchestration pilots for CE hubs
- Invitation to use the Circular Intelligence Hub4Circularity framework
- Quantified/verified Impacts/outcomes monitored and reported

China’s Rare Earth Element Export Controls: A Wake-Up Call for Europe’s Circular Economy
(Briefing)