

Technical partners sought for the valorization of IT valuable components and secondary raw materials extraction for commercialization

- **SCHEDA**
- **APPROFONDIMENTI**

Technical partners sought for the valorization of IT valuable components and secondary raw materials extraction for commercialization

Identificativo proposta: TRIT20211019001

RICHIEDI MAGGIORI INFORMAZIONI

An Italian start-up company working in end-of-life management of IT assets and waste electrical and electronic equipment (WEEE) seeks technical partners in the electronic equipment manufacturing, original equipment manufacturer (OEM) and chemical sector for the valorization of valuable components and secondary raw materials extraction. Potential cooperation types: commercial agreement with technical assistance and technical/research cooperation agreement.

The Italian start up, active in the IT asset end-of-life industry, is the new member of a group with a long-standing expertise in strategic business and IT consultancy, company management, auditing and circular economy. The group has a vast network of clients in the IT, Banking, Manufacturing and Automotive sectors. IT assets that reach end-of-life are disposed of as WEEE (waste electric and electronic equipment) or simply surrendered to companies working in the second-hand market. The landscape of such companies in Europe is quite fragmented, with a few actors that have implemented e-commerce sites for high-end/good quality refurbished IT assets and smaller companies that work on an “availability” basis. WEEE is treated in registered facilities that perform operations such as size reduction and materials separation to further sell the output along the value chain for secondary raw materials utilisation. In particular, valuable metals and rare earths/critical elements that are present in WEEE are extracted where possible, in specialised facilities that tread a wide variety of metals. The goal of the Italian company is to set-up an integrated facility that is capable of applying circular economy principles to the treatment end-of-life IT assets and IT-WEEE materials and evaluate the most rewarding pathway for each asset that enters the factory. The assets will be evaluated, separated in categories such as “reconditioning”, “components harvesting” and materials recycling and then subjected to the appropriate treatments. The goal of tailored processing of the incoming materials will be achieved through the implementation of industry 5.0 principles, among which an information system and smart factory approach, coupled with continuous technical and strategic training of employees and the development of an open innovation ecosystem. The company is also developing a R&D project on secondary raw materials extraction from IT-WEEE components, with particular focus on precious metals and rare/earths/critical metals in order to demonstrate and scale-up a green chemistry or biorefinery technology for such extraction and to evaluate its techno-economic feasibility and environmental impact (LCA). The company is developing the reconditioning task of the business which is currently at the commercial stage and is looking for technical partners to develop the features related to components utilization by assembling into new equipment (for example for domotic applications or e-mining). The utilization pathways will have to take into account the inventory of available components and possibly of circular design options, where components can be interchangeable to maximise the utilization of the recycled components stock available and products are designed for durability and reuse. Partners are sought for the definition of re-use strategies for electronic components (central processing unit-CPU, slots, hardware-HD, etc.) in control systems for logistics, warehousing, domotic applications and for extraction of valuable raw materials from electronic waste (precious metals and rare earths).

Riferimento Esterno: TRIT20211019001

Tipo: Technology Request

Paese: Italy

Presentazione: 19/10/2021
Ultimo aggiornamento: 31/10/2021
Scadenza: 01/11/2022