



## PRESS-RELEASE

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## EMBARGOED FOR

Immediate release

## An EU-funded project *PEACOC* aims to unlock the full potential of the precious metals sector to support the European's Green Deal and transition towards circular economy

A team of research, technological and industry professionals from 8 European countries and Turkey has united their efforts to reduce the supply risk of precious metals for the European industries. As of May 2021, the PEACOC project started to develop first-of-its-kind novel low-cost and eco-friendly technologies for efficient recovery of gold, silver and platinum-group metals as precious metals from waste. These technologies are expected to significantly contribute to achieving the ambitious energy and climate targets set in the European Green Deal and diversify the supply chain for precious metals in Europe.

Brussels, Belgium, 23/06/2021 – On 10-11 May 2021, with a two-day online meeting, the **PEACOC** ([Pre-commercial pilot for the efficient recovery of Precious Metals from European end-of-life resources with novel low-cost technologies](#)) project was officially launched. The PEACOC project received €11.2 million from the EU's Horizon 2020 Research and Innovation programme to demonstrate on a pre-commercial pilot scale metallurgical novel process for the recovery of precious metals from a wide variety of end-of-life products.

The project technologies are expected to be economically and environmentally viable and first-of-its-kind across Europe. During the next 4 years the PEACOC project will work towards achieving 7 ambitious goals:

1. **Setting up a new large-and-complete value chain** of 19 partners to produce precious metals from end-of-life products available in Europe that are not recovered yet and estimated at:
  - ~50 t platinum-group metals per year from unrecycled spent autocatalysts,



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- ~30 t gold per year, ~10 t palladium per year, and ~100 t silver per year from unrecycled end-of-life printed circuit board assembly,
  - ~ 720 t of silver expected in 2030 from emerging photovoltaic waste streams in Europe.
2. **Demonstrating new technology** to address the challenge of effectively and efficiently recovering low grade precious metals from complex waste matrices designed with a near zero-waste approach and a true circular economy mindset.
  3. **Developing the first-in-kind pre-commercial compact, mobile and modular refining system at pilot scale** with a production capacity of up to 2 kg of precious metals per week to expand the business of their recycling across the Europe. Thus, allowing SMEs to exploit the recycling of end-of-life products and untapped resources.
  4. **Designing and produce novel equipment** at pre-commercial scale for precious metals refining by European SMEs.
  5. **Easing the decision for investment in new production plants** as potential investors will be able to lease and test the PEACOC solution at pre-commercial scale, without the need for prior large investments.
  6. **Supporting the European Commission in reaching the ambitious energy and climate targets** stated in the Green Deal. By demonstrating the use of recovered precious metals as catalysts for reducing emissions and for clean energy generation, it will minimize environmental impacts and risks, and gain the trust of the European communities in the raw materials sector.
  7. **Promoting Sustainability** by developing valorization and up-cycling strategies for all by-product associated with the recovery of precious metals.

Precious metals such as platinum, palladium, rhodium, gold and silver are irreplaceable industrial goods. They are widely used in a variety of sectors due to their unique properties, such as low corrosiveness, catalytic properties, low electrical resistivity, etc. The European Commission identified some of them as critical raw materials because of their high importance for the EU economy.

In this context, Europe is the world top consumer of platinum group metals and is becoming highly dependent on imports, which are essential for its economy. Gold is mined all over the world, including Europe (principally in Finland, Sweden, Bulgaria, Spain and Greece), but the European production accounts for less than 1% of the global primary production. While the global silver production reached 28,000 t mainly from Central and South America, China and Russia, Europe accounts for only 7% of the global primary production (coming from Poland and Sweden).

Therefore, the PEACOC technologies are expected to drastically reduce the supply risk of precious metals for the European industry. Thus, enabling new business opportunities for SMEs working with recycling of end-of-life products and consolidating the position of large industries (recycling companies, refineries, automotive, metallurgy). The PEACOC technologies are expected to have the following impacts:

- **Significantly improve the economic viability and market potential of recycling of precious metals.** This will be gained through the pilot-scale process, leading to expanding the business across Europe .



- **Increase the health, safety and environment performance of the precious metals' recycling process** aiming to reach *secure-and-sustainable* access and exploitation of precious metals end-of-life- products.
- **Produce precious metals at a profit margin up to 80%** compared to current precious metals market prices.
- **Unlock a significant volume of various secondary raw materials** currently unexploited/underexploited.
- **Create new job opportunities** in raw materials production and equipment manufacturing.

The project concept is based on previously-developed recovery and refining technologies to TRL5 in the frame of another H2020-funded research and innovation project: [PLATIRUS](#). Three of the selected technologies from the PLATIRUS project *Microwave-assisted leaching*, *Gas-diffusion electrocrystallization* and *Deep eutectic solvents* for recycling and recovery of platinum-group metals will be further scaled up to TRL7 in the PEACOC project. They will be combined with other innovative concentration technologies as well as technologies for the valorization of the waste that will be produced aiming at nearly zero-waste process.

The PEACOC project is run by a consortium of 19 partners from 8 European countries and Turkey. They present a whole industrial value chain of precious metals. The project is coordinated by [Tecnalia Research and Innovation \(Spain\)](#) and will run for 4 years starting May 2021.

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#### Consortium members:



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