

**Metallurgy Europe – EUREKA Cluster Program**

**Official Call Text**

**Met-Euro-Call-03-2019**

**Background:**

*Metallurgy Europe* is a seven-year EUREKA Cluster Program ( $\Sigma!$ 9169) and started in 2014, with the ambition of developing and industrializing the next-generation of metallic materials and metallurgical manufacturing routes for the 21<sup>st</sup> century. High-impact, market and economically driven cluster projects are being solicited in a broad range of metallurgical and manufacturing fields, in accordance with the *Metallurgy Europe* Technology Roadmap - 2014.

Interested proposers are kindly asked to use the Project Outline Proposal (POP) template to submit their initial proposal ideas in electronic form to [office@metallurgy-europe.eu](mailto:office@metallurgy-europe.eu). The evaluation criteria can be found in the POP document. After independent peer evaluation, the selected outline proposals will then be invited to submit a full project proposal mid-2019. Projects passing the second stage of peer evaluation will be given the formal *Metallurgy Europe* Cluster Quality Label (M $\Sigma$ ) and handed over to the public authorities for co-funding consideration. Upon contract signature, projects are expected to start end of 2019.

**Timetable:**

1 <sup>st</sup> stage call opening:	25 <sup>th</sup> Jan 2019
Submission deadline for Project Outline Proposals:	17 <sup>th</sup> May 2019 (17:00 CET)
Feedback loop from PAB	June 2019
Peer evaluation of Project Outline Proposals:	June 2019
Information and feedback to proposers:	End-June 2019
2 <sup>nd</sup> stage call opening:	End-June 2019
Submission deadline for Full Project Proposals:	End August 2019
Peer evaluation of Full Project Proposals:	September 2019
<i>Metallurgy Europe</i> Cluster Quality Label $\Sigma!$ :	October 2019
Projects handed over to Public Authorities:	November 2019
Anticipated project kick-off:	End 2019



## **Participating countries:**

Countries that are currently committed to fund projects of Metallurgy Europe are

**Main Country:** Switzerland

**Member Countries:** Czech Republic, Finland, Malta, South Africa, Turkey

Additionally, there are **Interested Countries:** Austria, Belgium, Canada, Hungary, Ireland, Portugal, Spain; where funding could be available through national funding programs, but it is not committed beforehand.

**Not listed countries:** Funding might be possible through local funding programs (Example Germany - ZIM program). Please contact your EUREKA National Project Coordinator to check the specific situation (see <http://www.eurekanetwork.org/eureka-countries>).

The combination of self-funded activity with project consortia from countries receiving funding is also possible via a consortium agreement (CA) (template for a CA can be provided upon request).

For project applicants from **all countries** it is recommended **in all cases** to contact (additionally to the Metallurgy Europe Cluster Office to get support in order to prepare a good proposal) your local EUREKA National Project Coordinator (see <http://www.eurekanetwork.org/eureka-countries>) at a very early stage of the preparation of the project proposal to receive info concerning specific local project requirements and also to understand and confirm the local funding opportunities in detail. While this is proposed for the **Main Country** and the **Participating Countries** it is specifically required for the **Interested and not listed Countries**.

## **Call Text**

The topic of the project proposal should address one or multiple aspects of the 3 topics that are listed below.

### **1 New metallic/metallurgical materials or products**

The project proposal should address an innovative aspect concerning an improved or newly created metallic material or product. Applications falling under this category are for example new alloys/multi-component alloys, high entropy alloys, metal matrix composites, highly effective superconductors, products with a specific metallic microstructure, metal powder, new steel grades, thermo-electrics, metallic components for biomedical implants, embedded metal-based sensors, components from bulk metallic glasses, mono or multi material components created by additive manufacturing, coatings, diamond coatings, to name a number of examples.

### **2 New production processes for metallic/metallurgical applications**

The project proposal should address an improved or new production process for metallic/metallurgical applications. Examples for such processes are additive manufacturing (diverse methods), shape casting (diverse methods), continuous casting (diverse methods), forging, machining, heat-treatment (diverse methods incl.), sintering, hiping, stamping, welding (diverse methods), steel production to name a number of examples. Of interest are also topics



that are covering the value chain of different steps of the manufacturing (Product life cycle management etc..).

Metallurgy is required to be compatible with Industry 4.0. The whole industry including the one that is related to the manufacturing of metals and metallic products is undergoing currently a fundamental and disruptive change. The integration of Information technology in the manufacturing processes need to reach a considerably improved level in comparison with the current situation. As the global competition is developing more and more momentum this is required for the European Industry to compete on a global market. Typical topics in this context are internet of things, virtual process chain, digital twin, hybrid twin, big data analysis, virtual reality, process modelling and how these are related to Metallurgy.

### **3 Ecological challenge of Metallurgy**

Innovations in the domain of metallurgy also carry an important responsibility to support a sustainable industrial development that works in an ecological manner. A lot of potential can be found in this domain by topics like light alloys for light weight design, special alloys for fusion reactors, parts for wind energy, energy efficient production processes, zero waste production (additive manufacturing), recycling or others.

#### **Industry driven**

The projects proposals should be industry near and driven by the idea to lead to the development of products or services that will be available and sustainable on the market. For this reason, project proposals are preferred that either increase the TRL (technical readiness level) of a product or service in a very substantial manner or lead to a TRL corresponding to the introduction in the market. Consortia should assemble partners with complementary expertise and business plan forming a strong value chain from R&D to market implementation.

#### **Cross-border cooperation**

The consortia shall assemble partners from at least two different Metallurgy Europe participating countries. Partners from other countries may also participate in projects but this requires the organization of funding from national innovation promotion agencies in their respective home countries. The projects shall generate an obvious advantage and added value resulting from the cooperation between the participants from the different countries (e.g. increased knowledge base, commercial leads, access to R&D infrastructure etc.). The projects shall also demonstrate balanced contributions of the participants from all countries involved, and they should be significant to all countries involved.

#### **Economic and social value**

The projects should promote economic development and be consistent with the social values of the EUREKA member states. To note that project proposals that are specifically addressed for military applications are not supported by Metallurgy Europe.

