

Metallurgy Europe – EUREKA Cluster Programme

Official Call Text

Met-Euro-Call-02-2017

Background:

Metallurgy Europe is a seven-year EUREKA Cluster Programme (Σ!9169) and started in 2014, with the ambition of developing and industrializing the next-generation of metallic materials and metallurgical manufacturing routes for the 21st 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. 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-2018. Projects passing the second stage of peer evaluation will be given the formal *Metallurgy Europe* Cluster Quality Label (ΜΣ) and handed over to the public authorities for co-funding consideration. Upon contract signature, projects are expected to start end of 2018.

Timetable:

1 st stage call opening:	18 th Dec 2017
Submission deadline for Project Outline Proposals:	30 th April 2018 (17:00 CET)
Feedback loop from PAB	May 2018
Peer evaluation of Project Outline Proposals:	May 2018
Information and feedback to proposers:	Mid-June 2018
2 nd stage call opening:	Mid-June 2018
Submission deadline for Full Project Proposals:	End July 2018
Peer evaluation of Full Project Proposals:	August/September 2018
<i>Metallurgy Europe</i> Cluster Quality Label Σ:	October 2018
Projects handed over to Public Authorities:	November 2018
Anticipated project kick-off:	end 2018

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

Interested Countries: Austria, Belgium, Canada, Hungary, Ireland, Poland, Portugal, Spain

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

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 to contact your local EUREKA National Project Coordinator (see link above) 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 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.

