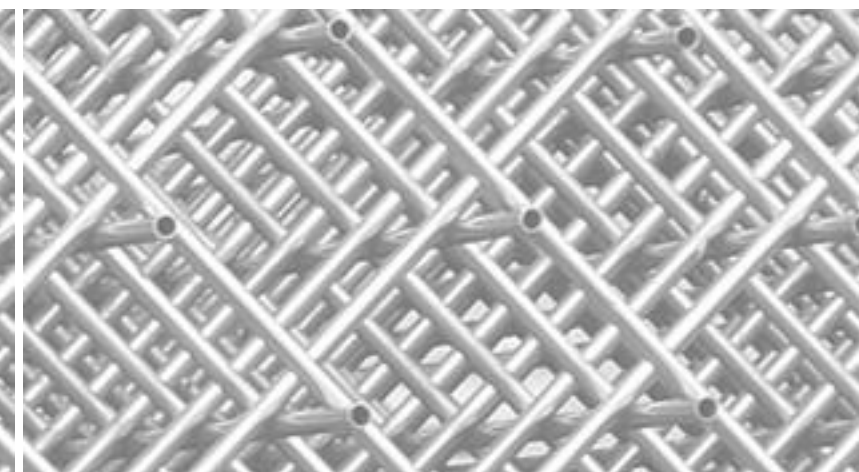
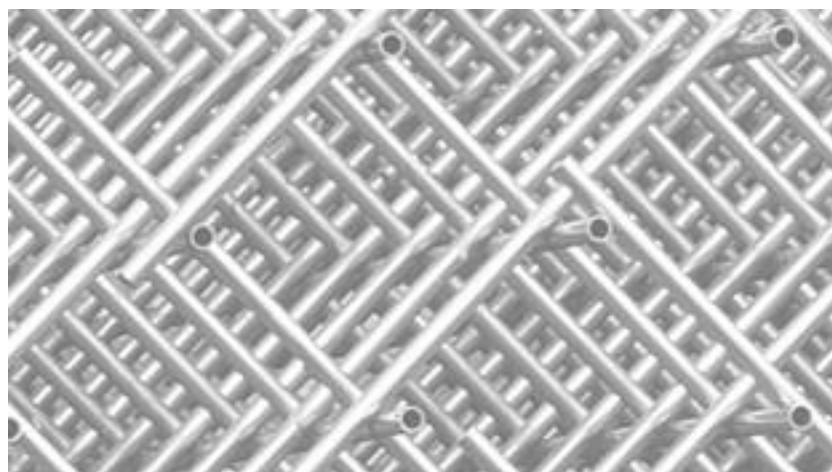
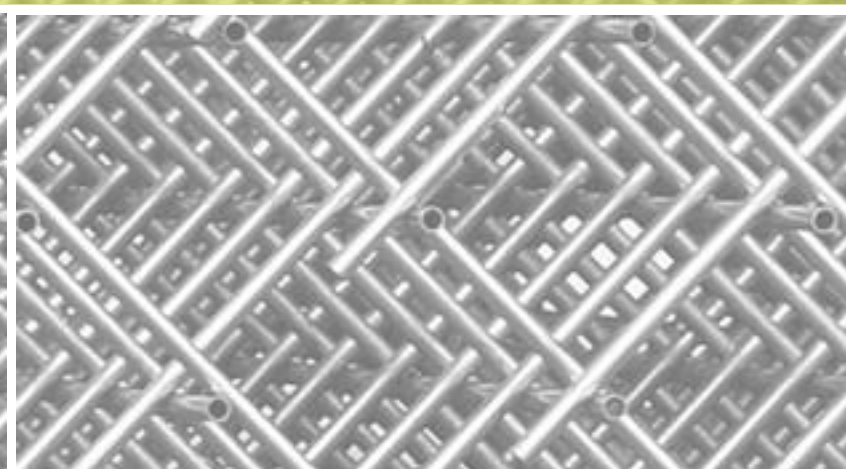
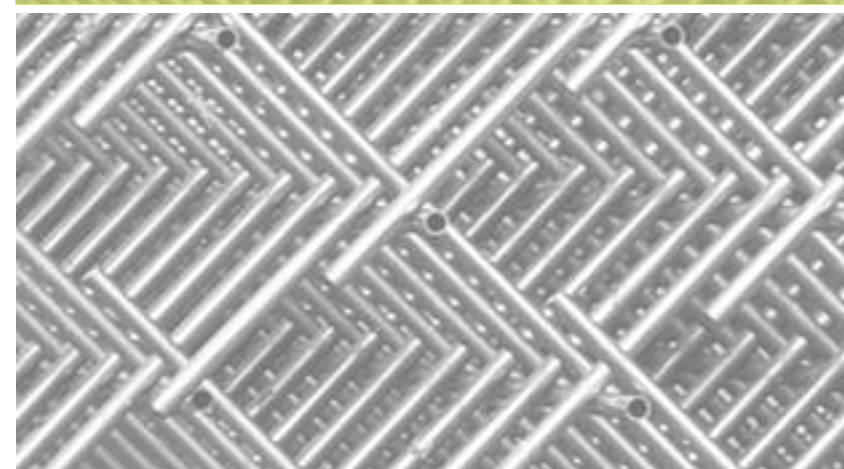
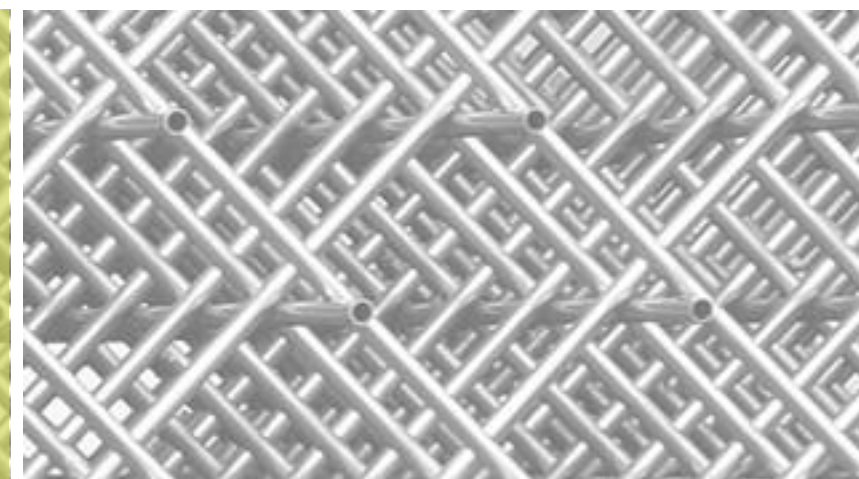


Lightme



LightMe
Event for Open Call
11 February 2021



European
Commission

Horizon 2020
European Union funding
for Research & Innovation



Open Call



Lighttime

LightMe Open Call

Purpose

Lightweight materials have become increasingly critical for producing components for **aircrafts, cars, trains, ships, defense equipment and consumer goods**. Especially, lightweight metals and alloys possess high strength-to-weight ratios and low density. Common applications are met in the automotive, aerospace, manufacturing, railway and other large niche applications.

LightMe project is part of the Open Innovation Test Beds for Lightweight, nano-enabled multifunctional composite materials and components funded under Horizon 2020 and aspires to be a point of reference for boosting innovation in the field of lightweight metal matrix nanocomposites (MMnC).

LightMe Open Call

Aim

Attract and engage SMEs and other stakeholders around Europe operating in the field of lightweight metal alloys and/or metal alloys composites eager to develop novel concepts within the lightweight metal products value chain.

Offer

An open access innovation environment, in which SMEs or other stakeholders will be able to proceed in technological innovation in a fast and low-cost way.

Selected applicants will:

- have **free of charge** access to all services of the ecosystem
- have the opportunity to **innovate and develop** their business idea in a one-stop shop
- receive **mentoring and support** of industry experts for their concept
- be **part of a wide network** establishing long-term relationships with key industry players

LightMe Open Call

Available Services: Access to 6 upgraded Pilot Lines

- High Pressure Die Casting – Brunel University London, UK
- Low Pressure Die Casting – OGI, Austria
- Green Sand Casting - OGI, Austria
- Metal Wire Additive Manufacturing – AIMEN, Spain
- Powder Deposition Additive Manufacturing – Iris, Italy
- Powder Metallurgy – Spark Plasma Sintering – INOP, Poland



Available Services: Other Services

Technical Services:

- Monitoring of Pilot Lines
- Testing and Characterization
- Modelling and process optimization

Non-Technical Services:

- Environmental Impact – LCA/LCC
- H&S – Nanosafety
- Regulation compliance & Standardization
- Innovation management
- Access to Funding

LightMe Open Call

Eligibility Criteria

The following types of entities are eligible to participate in the call:

- SMEs (Small and medium-sized enterprises) as defined in the EU recommendation 2003/361
- LEs (Large enterprises)
- Research & Development organizations

The entity must be:

- legally established in an EU Member state or a third country
- operating in the field of advanced lightweight metal alloys
- interested in the concept of open innovation

LightMe Open Call

Eligibility Criteria

- The Legal Entity should be established in one of Member States of EU or the associated countries. UK partners are eligible for the Open Call
- There should be no conflict of interest which might affect the objectivity of the proposal's evaluation.
- The Legal Entity is not under liquidation or it is not an enterprise under difficulty accordingly to the Commission Regulation No 651/2014 art. 2.18.
- The propose project is based on original works and going forward any foreseen developments are free from third party rights, or they are clearly stated.
- All statements embodied in the Information and Consent Forms, included as annexes, considering the ethical issues that might arise concerning the gathering of personal data, during the application process.

LightMe Open Call - Proposal

- **Application Form** (admin data, basic aspects of the concept and selection of OITB services)
- **10 pages proposal** (technical and market approach and innovation aspects)

LightMe Open Call platform at:
https://www.lightme-oie.eu/en/normal/Open_Call

The screenshot shows the 'LightMe Project Open Call' registration page. It features a green header with the 'lightme' logo and navigation links: Home, About OIE, LightMe Website, News, Open Call, and Contact. The main content area has a green background with the title 'LightMe Project Open Call' and a brief description of the project. Below this is a 'NEW USER REGISTRATION' form with fields for 'Enter your E-mail', 'Enter your desired password', and 'Confirm your password', followed by a 'Register' button. A CAPTCHA section is at the bottom with the text 'Non sono un robot' and the reCAPTCHA logo. A user profile card for 'Polimi Chrysaigi Kostoula' is also visible.

The screenshot displays the 'Open Call Application Form' interface. It includes a search bar, a language selector set to 'English', and a sidebar with 'Open Call Application Form' and 'Help Desk' (email: lightme@rdc.gr). The main content area is titled 'C. Interest In OITB Services' and contains several sections with radio button options:

- C1. Pilot Lines:** High Pressure Die Casting, Low Pressure Die Casting, Green Sand Casting, Metal Wire Additive Manufacturing, Powder Deposition Additive Manufacturing, Powder Metallurgy - Spark Plasma Sintering.
- C2. Monitoring and process control services:** Scanning electron microscopy, Atomic force microscopy, White light Interferometry, Scatterometry, Diffractometry, Confocal microscopy, Process Control, Machine learning.
- C3. Testing and Environmental:** Structural Characterization, Functional properties testing, DNT inspection for additive manufacturing, LCA/LCC.
- C4. Modeling:** Casting processes modelling, Additive Manufacturing processes modelling, SPS processes modelling.
- C5. Market Uptake:** Standardization and Regulatory compliance, Environment and worker's safety services, Consulting services on nanosafety.
- C6. Innovation Management:** Business plan development, Market assessment, Patent search and technology landscape assessment.

LightMe Open Call - Proposal

C1 Pilot Lines:

The LightMe project provides access to 6 pilot lines. More information about the Pilot Lines can be found here: [LIGHTME \(lightme-ecosystem.eu\)](http://LIGHTME.lightme-ecosystem.eu)

- High Pressure Die Casting
- Low Pressure Die Casting
- Green Sand Casting
- Metal Wire Additive Manufacturing
- Powder Deposition Additive Manufacturing
- Powder Metallurgy – Spark Plasma Sintering

C2. Monitoring and process control services

This group of services provides support in the pilot lines and mainly concerns activities related to the ensurance of products' quality and process control. ([LIGHTME \(lightme-ecosystem.eu\)](http://LIGHTME.lightme-ecosystem.eu))

Process Monitoring

- Scanning electron microscopy
- Atomic force microscopy
- White light Interferometry
- Scatterometry
- Diffractometry
- Confocal microscopy
- Process Control
- Machine learning

C3. Testing and Environmental

The services of this group concern the characterization of the produced materials as well as the environmental assessment of the new materials ([LIGHTME \(lightme-ecosystem.eu\)](http://LIGHTME.lightme-ecosystem.eu))

- Structural Characterization
- Functional properties testing
- DNT inspection for additive manufacturing
- LCA/LCC

C4. Modelling

The services of this group support the development phase via process modelling and simulation. Based on the production method you have selected in the Pilot Line you will follow the corresponding modelling service. ([LIGHTME \(lightme-ecosystem.eu\)](http://LIGHTME.lightme-ecosystem.eu))

- Casting processes modelling
- Additive Manufacturing processes modelling
- SPS processes modelling.

C5. Market uptake

These services are important for the compliance of the new materials and products with existing regulatory framework ([LIGHTME \(lightme-ecosystem.eu\)](http://LIGHTME.lightme-ecosystem.eu))

- Standardization and Regulatory compliance
- Environment and worker's safety services
- Consulting services on nanosafety

C6. Innovation management

In this last group a series of services dedicated to innovation management and IPR are offered ([LIGHTME \(lightme-ecosystem.eu\)](http://LIGHTME.lightme-ecosystem.eu))

- Business plan development
- Market assessment
- Patent search and technology landscape assessment

Applicants should select at least one service from each Building Block

LightMe Open Call - Proposal

A. Excellence

- a. Industrial need and challenges to overcome: Describe the motivation for developing the new product/material and the main challenges that need to be overcome for achieving the scale up. (~1 page)
- b. Objectives: Provide the objectives of the project in a quantifiable manner. (~half page)
- c. Background of the concept – technological insight: Provide details on the maturity of the technology and the main milestones that have been achieved so far. Please note the technology should be already in TRL 4-5. (~1,5 page)
- d. Role of LightMe OITB service: Describe the main services of the LightMe OITB that needs to be received for the upscale of the technology as well the desired output. Please note that at least one service from each group of services should be selected. (~1 page)

LightMe Open Call - Proposal

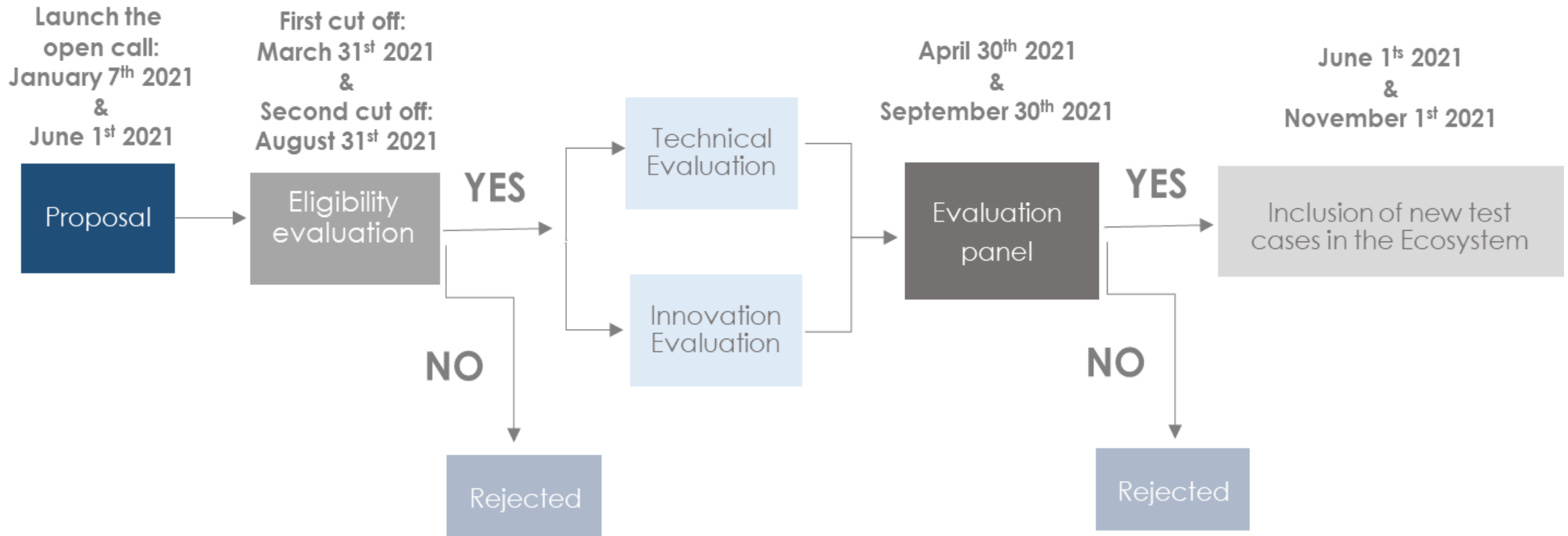
B. Implementation

- a. Technical Workplan: Describe the main steps for the technical upscaling of the product/material in reference to the available services of the OITB. Moreover, describe the necessary tests for the validation of the product/materials (~1,5 pages).
- b. Expertise and resources to be utilized: Mention the main expertise and background knowledge required for the development of the project as well as briefly the resources (e.g. materials, equipment etc). (~1 page)
- c. Risk management: Provide the main risks for the proper implementation of the project (~half page).

C. Impact

- d. Key Exploitable Results: Describe the main expected results of the projects that can be exploited (~half page).
- e. Market positioning: Briefly provide the unique selling points of the new products/materials, the addressed markets and the market expectations. (~1,5 page)
- f. Other expected impacts: Describe other social, environmental, and technological impact of the new product/material. (~half page).

LightMe Open Call - Evaluation Process



LightMe Open Call

Evaluation Criteria

- Technical advance
- Relevance on the call objectives
- Feasibility of the project to progress in the TRL scale from 4-5 to TRL 6-7
- Feasibility to be carried out by the LightMe Ecosystem alone or with external contribution from other Ecosystems clustered under Lightweight, nano-enabled multifunctional composite materials and components
- Feasibility regarding research and development and innovation (R&D&I)
- Business viability
- Expertise and resources

LightMe Open Call - Implementation

What we will offer

- Access to the selected pilot line(s) and upscaling of the product
- Support with technical services (e.g. modelling, testing & characterization)
- Consultancy and mentoring in non-technical services
- Networking in the framework of OITB Ecosystem
- Success story promotion

What we don't offer

- No cascading funding from the project
- Cost and origin of raw materials should be analyzed in the proposal

Cost Estimation of Services: 80.000 – 150.000€

LightMe Open Call – IPR

Intellectual Property Rights (IPR) – Confidentiality

- All parties (including both the LightMe OITB partners and the Open Call applicants) will exhaustively identify their background knowledge assets that will bring to the project and will provide access rights for the cooperative implementation of the project.
- Ownership of project results (including joint results generated by two or more partners) will belong to the parties having generated them.
- Successful applicants will sign an NDA with the LightMe OITB partners covering all aspects of confidentiality.

LightMe Open Call

Important dates

- **7th January 2021:** Announcement of the Open Call.
- **31st March 2021:** First cut off
- **30th April 2021:** Evaluation and Selection of 4 new test cases
- **1st June 2021:** Inclusion of 4 new test cases in the Ecosystem
- **31st August 2021:** Second cut off
- **30th September 2021:** Evaluation and Selection of 4 additional new test cases
- **1st November 2021:** Inclusion of 4 additional new test cases in the Ecosystem