FIT-4-NMP

Strategic and targeted support
to incentivise talented newcomers
to NMP projects under Horizon Europe

FIT-4-NMP Training on M-ERA.NET 2022 call, 10 May 2022

How to write a successful M-ERA.Net proposal

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WRITING THE PROPOSAL

1. SUMMARY

Project title, coordinator info, budget, topic

Project Summary, including: *specific innovation objectives and results, needs addressed, impact and potential benefits (up to 4000 characters recommended). Whenever appropriate, indicate the TRL position in the beginning of the project and after the project is finished (not mandatory).*

Relevance to funding programmes
(for each of the involved national/regional funding programme)

Up to 2 pages – Refer the National programmes, topics and funds

https://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-g-trl_en.pd

1. SUMMARY

Project Acronym				
Project Long Title				
Project Coordinator	Name:			
	E-mail:			
Coordinator Organisation (full name in original language / name in English)	Original Language:		Country / Region	
	English:			
Address			Tel:	
	Postal code (CEDEX)		Fax:	
	City		www:	
Total Project Costs (Euro)		**Requested Funding (Euro)**		
Planned starting date		Duration (in months)		Total person months	
Call Topic	☐	Materials for energy		
	☐	Innovative surfaces, coatings and interfaces		
	☐	High performance composites		
	☐	Functional materials		
	☐	New strategies for advanced material-based technologies in health applications		
	☐	Materials for electronics		

MOTIVATION

- ❑ Appropriate and familiar topics
- ❑ Be sure that you have previous experience in the topic you propose
- ❑ Motivation is not “I need money”, I need a project for advancing in the career” but
- ❑ I have a disruptive / beyond the state of the art idea, I have the necessary expertise and also infrastructure, I have clear objectives and I am sure that I can fully implement them, I have the appropriate partners to ensure the full development from the design, fabrication, testing, validation, etc, with reasonable risks or no risks.

Be critic: Is my idea good enough to produce a breakthrough, generate a product, entering the market, making a change in people life? If I would have “X money” would I invest in this idea?

- Read carefully the call topics. There are differences compared with the previous years.
- Don’t reuse unsuccessful proposals. If it is the case, try to rethink and to rewrite with a clear mind, taking into consideration all indications of the current call.

TOPICS

Annex 1: Thematic priorities for the M-ERA.NET Call 2022

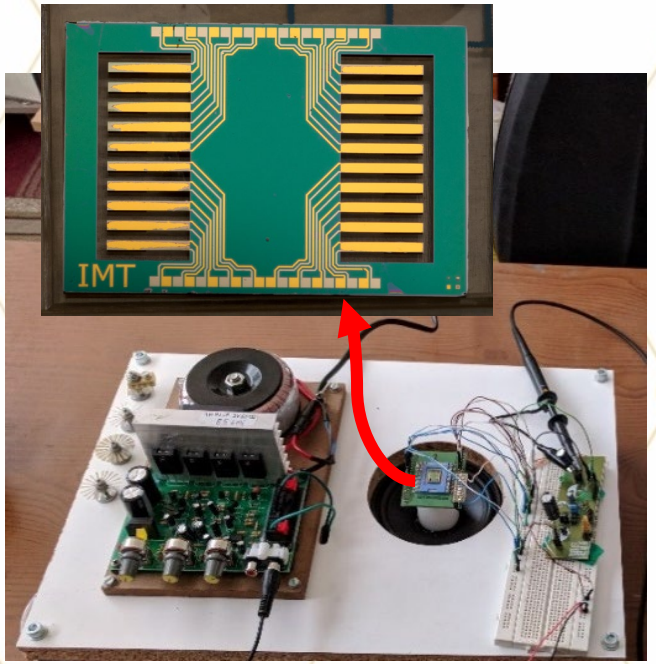
- **Topic 1: Materials for energy - New**
- **Topic 2: Innovative surfaces, coatings and interfaces**
- **Topic 3: High performance composites**
- **Topic 4: Functional materials**
- **Topic 5: New strategies for advanced material-based technologies in health applications**
- **Topic 6: Materials for electronics – New**

https://m-era.net/joint-calls/joint-call-2022/call2022-guideforproposers_v1-3.pdf

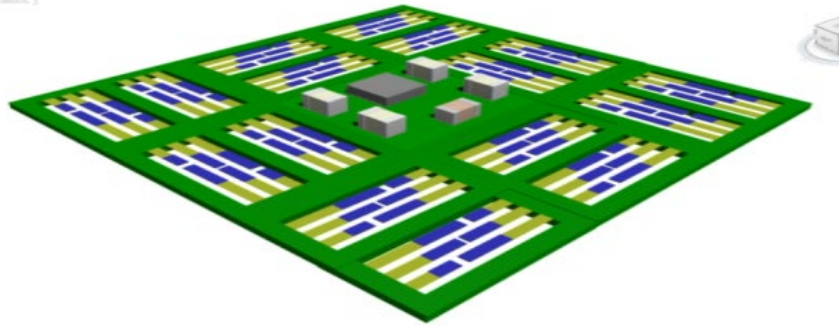
TOPIC 1: MATERIALS FOR ENERGY;

OBJECTIVES selection

- Improved active materials and electrolytes for next generation batteries for mobility (i.e. solid state Li-ion batteries and beyond Li-ion batteries) and for stationary applications (i.e. flow batteries).
- Materials ensuring fire safety in energy storage and conversion devices, i.e. batteries, fuel cells and electrolysers.
- Development of new catalysts to improve fuel cell and electrolyser efficiency based on computation and experiments.
- Photovoltaics: new concepts and architectures for solar cell materials and efficient photovoltaic cells.
- Materials operating at high temperatures in heat-to-power processes.
- Materials for short, medium and long-term thermal storage over a wide temperature range.
- Energy harvesting materials for piezoelectric and triboelectric applications.



NEW TOPICS



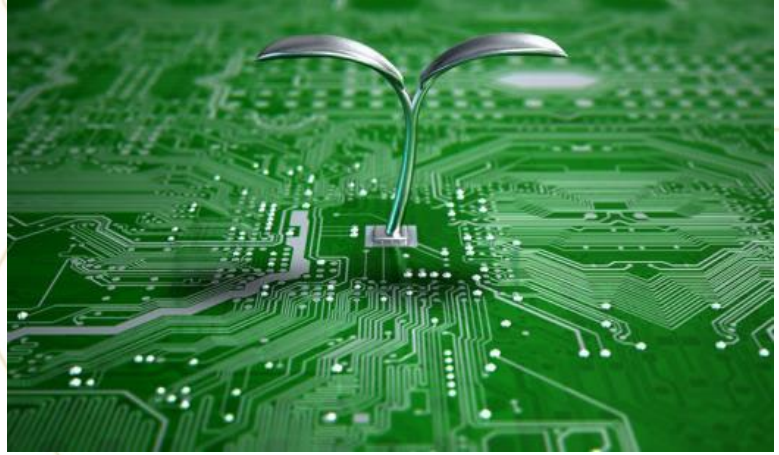
Topic 1: Materials for energy;

"Affordable and clean energy"

New and cleaner energy production, storage, conversion and utilisation. To be effective, materials development should take into account the following aspects including: circularity, sustainability, end of life treatment, recyclability, social impact, Life Cycle Assessment (LCA), Techno-Economic Analysis (TEA) and RRI.

- **Target groups**: disruptive research, applied research, industrial research and development.
- **Keywords :** Multiscale modelling; artificial intelligence; materials processing; efficient electrodes for batteries electrolysers and fuel cells; thermochemical materials; photovoltaic materials; piezoelectric materials; triboelectric materials; thermoelectric materials; light-weighting, photovoltaics, energy storage, fire safety, inactive materials and components for battery systems
- **Indicative targeted TRL range: 1-5**
- **Impact:** Proposals should emphasise how they support the Green Deal and the achievements of Sustainable Development Goals as described in the horizontal objectives
- Establishing an industrial advisory board or the participation of one or more companies in the project consortium is encouraged. In proposals targeting TRL 5, industrial partners and at least one project partner specialised on customer or end-user demands should be involved in the project consortium.

NEW TOPICS



Topic 6: Materials for electronics

- **Advanced materials** provide solutions for tomorrow's challenges of **micro/nano electronics** because of its cross-cutting and presence in every tangible form of our daily life working as an accelerator for the challenges we have concerning the Internet of Things (IoT), Industry 4.0 and the need for digital interconnectivity.
- research needs to be carried out on multifunctional materials for sensing and electronics, chip-less integrated systems, beyond silicon, ultra-low power sensing electronic systems, flexible and/or printed electronics and Quantum Devices
- **Keywords** wearable materials, flexible and stretchable materials, smart packaging, 2D materials, optoelectronics, supercapacitors, multifunctional materials, transparent electronics, spintronics, quantum technology, sensors, transducers, actuators, low cost electronics, printed electronics, moulded interconnect devices. **Indicative targeted TRL: 1-5**
- **High correlation with EU strategies and workprogramme – HORIZON EUROPE;**

ChipACT Chips are strategic assets for key industrial value chains. With the digital transformation, new markets for the chip industry are emerging such as highly automated cars, cloud, Internet of Things, connectivity, space, defense and supercomputers.

EU TOPICS CORELATION

https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-chips-act_en

The European Chips Act will bolster Europe's competitiveness and resilience in semiconductor technologies and applications, and help achieve both the digital and green transition. It will do this by strengthening Europe's technological leadership in the field.

The Chips for Europe Initiative will reinforce semiconductor technologies and innovation capabilities, ensuring EU leadership in this field in the mid to long term. It will mainly be implemented through the **Chips Joint Undertaking — previously known as the Key Digital Technologies Joint Undertaking.**

you know?

European Chips Act

The European Chips Act will bolster Europe's competitiveness and resilience in semiconductor technologies and applications, and help achieve both the digital and green transition. It will do this by strengthening Europe's technological leadership in the field.

PAGE CONTENTS

- The need for EU action
- Strengthening Europe's technological leadership
- Investments to support the Chips Act
- Short video introducing the European Chips Act
- Next steps
- Documents

The need for EU action

Chips are strategic assets for key industrial value chains. With the digital transformation, new markets for the chip industry are emerging such as highly automated cars, cloud, Internet of Things, connectivity, space, defence and supercomputers.

1 trillion
microchips were manufactured around the world in 2020

10%
EU's share of the global microchips market

Recent global semiconductor shortages forced factory closures in a range of sectors, from cars to healthcare devices. This made more evident the extreme global dependency of the semiconductor value chain on a very limited number of actors in a complex geopolitical context. It also illustrated the importance of semiconductors for the entire European industry and society.

In her 2021 State of the Union speech, Commission President Ursula von der Leyen set the vision for Europe's chip strategy, to jointly create a state-of-the-art European chip ecosystem.This will include production, as well as connecting the EU's world-class research, design and testing capacities.

Strengthening Europe's technological leadership

THE HORIZONTAL OBJECTIVES

- Support the European Green Deal by increasing attention to clean energy technologies and future batteries
- Support the achievement of Sustainable Development Goals
- Socio-ecological benefits in the context of Responsible Research and Innovation (RRI)
- Support for the Innovation chain
- Strengthen interdisciplinarity

https://www.nmp-partnersearch.eu/

2. CONSORTIUM OVERVIEW ATTENTION: PIC IS MANDATORY

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ATTENTION: PIC IS MANDATORY

CONSORTIUM OVERVIEW						
	Partner name (Full name)	**Coordinator (P1)**	**Partner 2:**	**Partner 3:**	**Partner 4:**	**Partner 5:**
	Participation Identification Code (PIC) [2]					
Organisation	TRL[3] at project start					
	TRL[3] at project end					
	Organisation Type[4]					
	Website (http:…)					
	Region / Country					
	Organisation registration number[5]					
	Size (Employees)[6]					
	Turnover (K€)[5]					
Contact Person	Title / Name					
	Telephone					
	E-mail					
Funding Organisation (FO)	Name of FO +Contact person in in FO [7]					
	Funding Programme (full name[8])					

[2] Insert Participant Identification Code (PIC) of your organisation as used for participating on Horizon 2020. Further information on how to find / get your PIC see FAQs
[3] Technology Readiness Level (see Annex 2 in the Guide for Proposers)
[4] HE-University, RES-Research organisation, SME-Small Medium sized Enterprise, IND-Large Company, OTH-Others. (according to national rules)
[5] VAT number or other Registration number
[6] Only for companies

3. PROJECT DESCRIPTION- EXCELLENCE

Describe the innovation of the project outcome(s), the originality of the proposed approach and the market needs (if applicable) addressed by the project. Please indicate the TRL at the beginning and at the end of the project.

- 3.1 Excellence
- 3.1.1. Objectives of the project and expected results - Clear, concise, ambitious and feasible
- 3.1.2 Relevance of the objectives to the call text (topic) - The project is in scope - Very important
- 3.1.3 Concept and approach - *Overall concept; Start and target TRL – Clear assessment of TRL (initial and final)*
- 3.1.4 Ambition

  Current state of art and progress beyond the state-of-the-art

  Originality and/or innovation of the proposed approach
- 3.1.5 Responsible Research & Innovation (RRI)

Explain how the project will engage with the ethical, social, political, environmental or cultural dimensions of the proposed research (see Guide for Proposers Call, Annex 5 for more information)

3. PROJECT DESCRIPTION

Resposible Research & Innovation (RRI)

M-ERA.NET's approach to RRI highlights the need to address the social, ethical, political, environmental or cultural dimensions of the proposed research and offers four dimensions that researchers, funders and technologists should engage with to maintain focus on the social context of their work: anticipation, inclusion, reflectivity, Responsiveness

RRI components will therefore be evaluated by experts as integral components within the scope of all evaluation criteria (Excellence, Impact, and Implementation). RRI does not detract from the overall scoring but contributes to it

IMPACT AND IMPLEMENTATION

- **3.2. Impact**
- **3.2.1 Contribution at the European or international level to the expected impacts listed under the selected topic of the call - clearly address all impacts of your proposal**
- **3.3 Implementation**
- **3.3.1. Work plan:** *Work package description: Title of each WP and short description*

  Timing of the different work packages and their components (Gantt chart or similar)
- **3.3.2 Consortium description**
- **3.3.3. Inter- and transdisciplinarity**
- **3.3.4. Benefit of transnational cooperation for the consortium as a whole**

  Explain the added value provided by the transnational cooperation (for the consortium and for each partner).
- **3.3.5. Cost Calculation**

CHECKLIST AND SUBMISSION

- **4. ETHICAL ISSUES**
- **4.1. Environment, health and safety issues (EHS)**
- **4.2. Gender relevance**
- **5. CHECKLIST FOR PROPOSERS**
- Please go https://www.m-era.net/joint-call-2022 to submit the: **1.** Pre-Proposal form online. Deadline for submission: **15 June 2022,** 12:00 noon Brussels time

2. Full-Proposal form + Annex 1 to the Full-Proposal form online. **Deadline for submission: 17 November 2022, 12:**00 noon Brussels time

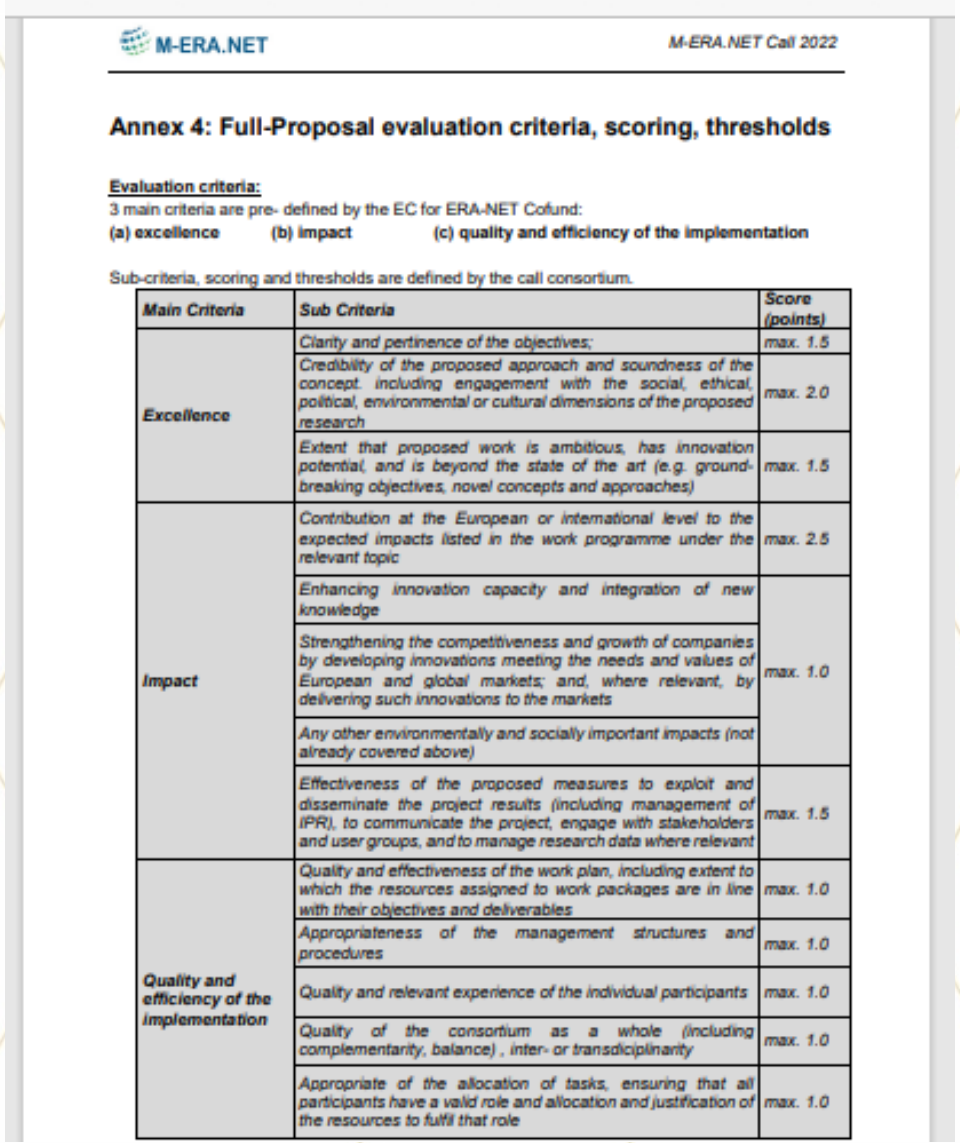
- For further information on M-ERA.NET : http://www.m-era.net/ joint-call-2022

Take time to read and correct several times your proposal. If possible, external readers are welcome.

EVALUATION

Pre-proposal - At national/regional level:

- presence of requested national/regional Pre-Proposal forms (if applicable)
- minimum number of eligible, independent applicants (if applicable, criteria of involved funding programmes apply)
- relevance to funding programme (if applicable, criteria of involved funding programmes apply) addressing the horizontal objectives of M-ERA.NET
- financial status of applicants, especially industrial applicant



M-ERA.NET — M-ERA.NET Call 2022

Annex 4: Full-Proposal evaluation criteria, scoring, thresholds

Evaluation criteria:

3 main criteria are pre- defined by the EC for ERA-NET Cofund:

(a) excellence **(b) impact** **(c) quality and efficiency of the implementation**

Sub-criteria, scoring and thresholds are defined by the call consortium.

Main Criteria	Sub Criteria	Score (points)
Excellence	Clarity and pertinence of the objectives;	max. 1.5
	Credibility of the proposed approach and soundness of the concept, including engagement with the social, ethical, political, environmental or cultural dimensions of the proposed research	max. 2.0
	Extent that proposed work is ambitious, has innovation potential, and is beyond the state of the art (e.g. ground-breaking objectives, novel concepts and approaches)	max. 1.5
Impact	Contribution at the European or international level to the expected impacts listed in the work programme under the relevant topic	max. 2.5
	Enhancing innovation capacity and integration of new knowledge	max. 1.0
	Strengthening the competitiveness and growth of companies by developing innovations meeting the needs and values of European and global markets; and, where relevant, by delivering such innovations to the markets	
	Any other environmentally and socially important impacts (not already covered above)	
	Effectiveness of the proposed measures to exploit and disseminate the project results (including management of IPR), to communicate the project, engage with stakeholders and user groups, and to manage research data where relevant	max. 1.5
Quality and efficiency of the implementation	Quality and effectiveness of the work plan, including extent to which the resources assigned to work packages are in line with their objectives and deliverables	max. 1.0
	Appropriateness of the management structures and procedures	max. 1.0
	Quality and relevant experience of the individual participants	max. 1.0
	Quality of the consortium as a whole (including complementarity, balance) , inter- or transdisciplinarity	max. 1.0
	Appropriate of the allocation of tasks, ensuring that all participants have a valid role and allocation and justification of the resources to fulfil that role	max. 1.0

CHANGES FROM PRE- TO FULL-PROPOSAL

► Project objectives stated in the Pre-Proposal cannot be changed.

► Changes in the consortium should be avoided. Modifications of the consortium are restricted to applicants from countries already part of the pre-proposal consortium. It is not accepted to introduce new countries into the existing consortium.

► Changes from Pre- to Full-Proposal should be avoided but it is the case, they need to be coordinated by the consortium leader with all involved funding organisations. ⟹ major changes regarding content, project duration, costs, funding or consortium have to be communicated and approved by all involved funding organisations at least 2 weeks before Full-Proposal deadline. The consortium leader is responsible to coordinate and ensure the acceptance of these changes by all involved project partners, funding organisations and the call secretariat.

www.fit-4-nmp.eu

Contact Details

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