



M-ERA.NET Transnational Call 2013

Guide for Proposers

10 July 2013

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1. What is M-ERA.NET

M-ERA.NET is an EU funded network which has been established to support and increase the coordination of European research programmes and related funding in materials science and engineering. Between 2012 and 2016, the M-ERA.NET consortium will contribute to the restructuring of the European Research Area (ERA) by operating as a single innovative and flexible network of funding organizations.

M-ERA.NET will complement existing instruments and contribute to EU policies whilst supporting the exploitation of knowledge along the whole innovation chain from basic research to applied research and innovation.

By stimulating scientific excellence and the creation of a new innovation oriented economy, M-ERA.NET will deliver lasting impact and significant breakthroughs. It aims to develop a long-term cooperation between funding organizations across the EU.

What we offer:

M-ERA.NET will provide a central forum where substantial pan-European funding and research programmes can be aligned.

The consortium aims to address societal challenges and technological needs with an interdisciplinary approach, creating a flexible umbrella structure to allow coverage of topics in materials science and engineering. As a core activity, a series of joint calls for transnational RTD projects will be implemented. These calls will provide the European RTD community the opportunity to access coordinated funding across Europe and gain access to leading knowledge world-wide. Over four years, the M-ERA.NET consortium will mobilise substantial national and regional budgets in the range of €150M, to support the European RTD community. Cooperation with partners outside Europe is targeted to build a global network of public funding programmes.

Why?

Materials science has become one of the most dynamic engineering disciplines, impacting modern society with applications ranging from domestic appliances to electronics and energy production. In recent years, significant efforts have been made to ensure industry can meet the challenges it currently faces, in terms of the new materials being introduced and the stronger integration of products and processes required.

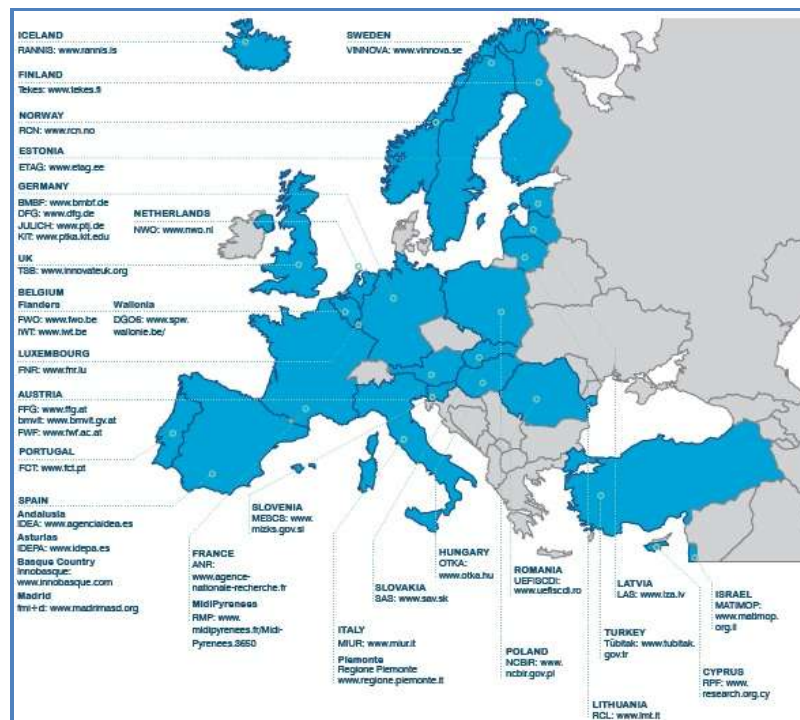
Europe has a wealth of academic and industrial expertise and to ensure it stays at the forefront of developments it is crucial that a strategic programme is established that will help develop projects with impact on a global scale.

Strategic impact

Improving the coordination and cooperation of research funding programmes will reduce the fragmentation across Europe and align programme strategies for transnational collaboration, eliminating cross-European programme duplication. M-ERA.NET will enable easy access to collaboration between leading research partners and industry across and also outside Europe and create a powerful network to tackle European and global challenges. Increasing interdisciplinary cooperation with a series of joint calls and activities will enable EU researchers and industry to access previously inaccessible new markets, creating a new innovation oriented economy. The annual joint calls and other joint activities will encourage key players as well as newcomers in transnational projects and SMEs to develop a pan-European partnership. This increased interdisciplinary cooperation and exploitation of European and international roadmaps will create a new dynamism in the field of materials science and engineering whilst stimulating the generation of leading knowledge along the innovation chain.

The M-ERA.NET Consortium

M-ERA.NET started, in February 2012, as a network of 37 public funding organizations, of which 29 are national and 8 regional, from 25 European countries. M-ERA.NET aims to identify further relevant European programmes and develop links with partners outside Europe. Funding organisations decide individually about their participation in transnational calls; see Annex 2 for funding organisations in the Call 2013.



2. Structure of the M-ERA.NET Call 2013

The objective of the M-ERA.NET call is to enable transnational R&D projects to be by partners receiving funding from the regional/national programmes.

Figure 1 shows the schematic workflow of the coordinated call. Benefits are combined in one approach: On the one hand the regional/national funding organizations apply their own well-established funding rules and procedures known to their applicants, and on the other hand the M-ERA.NET provides transnational coordination expertise:

- The announcement and dissemination activities of the call are performed by the M-ERA.NET network;
- The eligibility of funding applications will be checked by national/regional funding organizations according to the rules defined by their respective funding programmes;
- There will be a centralized evaluation performed by independent international evaluators;
- The funding decision will be made by the national Funding Organisations.
- The coordination of the evaluation and funding decisions is performed by a M-ERA.NET Steering Board at the Selection Meeting.

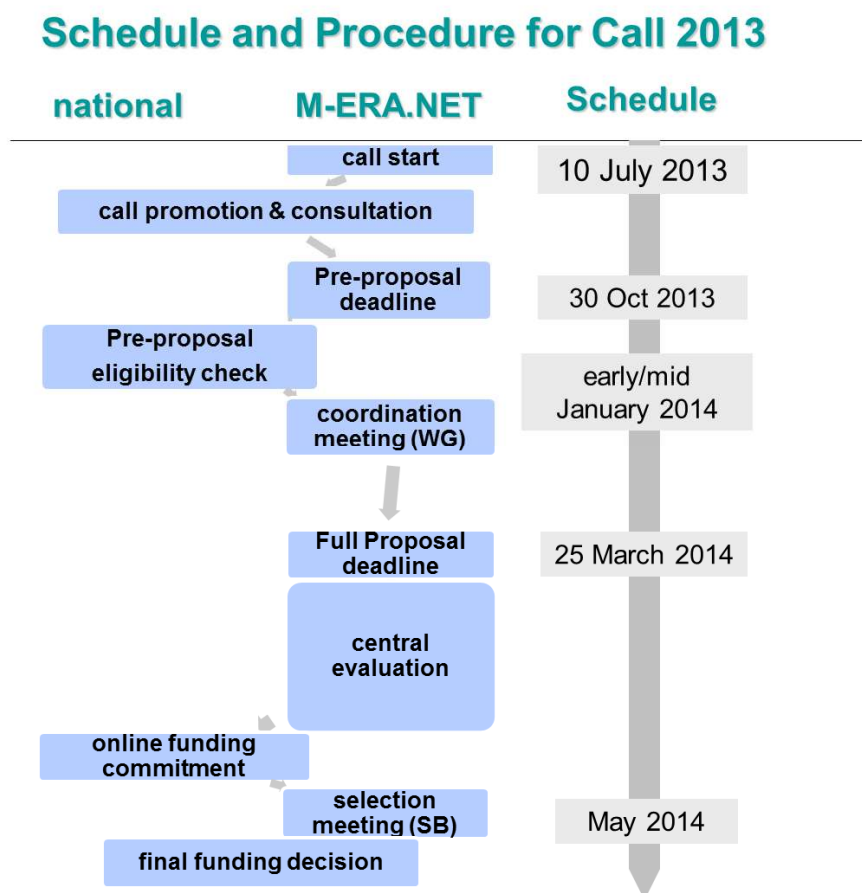


Figure 1 - Workflow of the call

3. Call Announcement

3.1. Objectives and Topics

The aim is to fund transnational high risk R&D projects addressing Materials Science and Engineering including micro and nano technologies, production processes and technologies. The specific objectives for Call 2013 are increasing synergy, support for innovation chain, international cooperation, multidisciplinary and socio-ecological benefits. Proposals will typically be smaller than proposals submitted to the EU Framework Programme.

This call supports the following topics:

1. Integrated Computational Materials Engineering
2. Interfaces, Surfaces and Coatings
3. Composite Technology
4. Materials for Health
5. Materials for Sustainable and Affordable Low Carbon Energy Technologies

As horizontal themes, cooperation between industry and academia (exchange of researchers) and international cooperation are highlighted. International cooperation is recommended for cases where a clear benefit is evident or expected for the European parties involved. International cooperation needs to be compatible with the M-ERA.NET objectives and IPR prerequisites.

A more detailed description of the topics is available in Annex 1.

The individual regional/national thematic programme focus (e.g. basic research or applied research) and funding rules (3.2.) must be taken into account.

3.2. Funding rules

Each project partner has to apply individually for regional/national funding. For each project partner the funding rules of the respective regional/national programmes apply. This means that depending on the respective national/regional funding rules some project partners have to submit additional national/regional proposals or information on national/regional level.

To obtain detailed information about the specific funding rules and programme priorities we strongly recommend contacting the respective regional/national funding organizations (see Annex 2 for details).

3.3. Eligible project structure

- Project consortia consisting of at least 3 parties from 2 different countries participating in the M-ERA.NET call 2013 (see Annex 2 for details) can apply for

funding; at least one partner must be from Europe. The consortia may involve as many partners as necessary.

- Proposal is recommended by a minimum of 2 funding organizations from 2 different countries participating in the M-ERA.NET call 2013.
- Proposal is recommended for Full Proposal submission by M-ERA.NET after Pre-proposal stage.
- SMEs, Large companies, Academic research groups, universities, public research organizations or other research organizations may also participate according to their regional/national financing regulations.

Small to medium projects (4 or 5 partners) are expected. The roles of each partner within the consortium should clearly add value to the objectives of the proposed project.

Depending on the nature of the project the consortium must demonstrate how it will exploit (for each partner) the expected results.

National/regional funding rules apply; therefore in some cases only certain topics or types of organizations are eligible (e.g. some national/regional programmes fund only industrial but no academic partners, basic and/or applied research).

A consortium agreement between the project partners is required for funding (after final funding decision), although the principles of agreement should be clear from the application form. The purpose of the consortium agreement is to clarify:

- the responsibilities of the partners
- decision processes inside the project
- management of any change of partners
- how to exploit and/or commercialise the results (for each partner)
- IPR issues

A template for the consortium agreement can be found at: www.iprhelpdesk.eu

3.4. Project budget

No overall limits have been defined on M-ERA.NET level but national/regional limits regarding the available funding will apply.

3.5. Project duration

The maximum project duration may not exceed 36 months. National/regional limits regarding the duration of projects will apply.

3.6. Dates and deadlines

Date	Step	Place
10 July 2013	Publication of the joint call	
30 October 2013 12:00 noon Brussels time	Deadline for submission of Pre-Proposals a) Pre-Proposals and b) National/regional Funding Applications, if necessary*	a) Online (via IT tool) b) regional/national funding organistaions
December 2013/ January 2014	Feedback to applicants	
25 March 2014 12:00 noon Brussels time	Deadline for submission of: a) Full Proposals and b) National/regional Funding Applications, if necessary*	a) Online (via IT tool) b) regional/national funding organisation
June 2014	M-ERA.NET feedback to applicants	
summer 2014	Contract negotiations for selected proposals on national/regional level	regional/national funding organisations
summer/autumn 2014	Start of funded projects	

** contact your national/regional funding organization*

4. Application process

The M-ERA.NET application process will be a 2-step procedure: pre-proposal and full proposal.

1. Before submitting a proposal, all project partners must contact their respective regional/national programme funding organizations in order to discuss the project line-up and the funding conditions.
2. A pre-proposal is mandatory. It has to be submitted by the coordinator through an online application form available at www.m-era.net. At the same time regional/national funding applications must be submitted to each of the involved funding organization according to their specific rules.
3. The regional/national organizations will carry out their own eligibility check (or evaluation) based on the pre-proposal and the respective regional/national funding application. Applicants will be provided with feedback after the review of their pre-proposal, including a recommendation to submit (or not) a full proposal.
4. The proposal has to be recommended for Full Proposal submission by M-ERA.NET after Pre-proposal stage to be eligible.
5. The full proposal must be submitted by the project coordinator through an online application form available at www.m-era.net. At the same time regional/national funding applications must be submitted to each of the involved funding organization according to their specific rules.
6. The regional/national funding organisations might carry out their own evaluation based on the full project proposal and the respective regional/national funding application. There will be a centralized evaluation performed by independent international evaluators which will result in a ranking list. At the M-ERA.NET selection meeting parties will agree on the projects that are going to be financed based on the ranking list and the availability of finance resources.
7. M-ERA.NET recommends the funding of projects to the respective funding organizations. The regional/national organizations make the final funding decision.

4.1. Stage 1: M-ERA.NET Pre-Proposal

The pre-proposal gives an overview on the whole project. It is mandatory and has to be submitted in English by the project coordinator through an online application form available at www.m-era.net. In addition to the pre-proposal (on-line submission) the corresponding regional/national funding application form may be requested by the respective funding organization according to their respective programme rules.

After eligibility check/evaluation of pre-proposals M-ERA.NET gives advice to the project coordinators and recommends/does not recommend the submission of full proposals.

4.2. Stage 2: M-ERA.NET Full Proposal and regional/national funding applications

The full proposal gives an overview of the whole project and describes all national project parts. In addition to the full proposal (on-line submission) the corresponding regional/national funding application form may be requested by the respective funding organization according to their respective programme rules. To receive funding, the national parts of the project must fulfil their national/regional criteria. This will create different submission and financing situations for partners from different countries.

- ▶ *Project objectives stated in the Pre-proposal cannot be changed in order to allow the identification of evaluators based on the Pre-proposal.*
- ▶ *Other changes from Pre- to Full Proposal should be avoided. In any case, changes from Pre- to Full Proposal stage have to be coordinated with all involved funding organizations by the consortium leader!*

This means that changes regarding partners, content, costs, funding or consortium have to be communicated to all involved funding organisations. The consortium leader is responsible to coordinate and ensure the acceptance of these changes by the involved funding organisations.

4.3. Confidentiality

Proposals and any information relating to them (including the names of the evaluators) will be kept confidential and only be accessible to the organizations involved in the funding. Proposals will not be used for any purpose other than the evaluation of the applications, making funding decisions and monitoring of the project. International experts are required to sign a confidentiality agreement prior to evaluating proposals.

5. Evaluation

M-ERA.NET aims at providing a transparent, fast and straight forward assessment of the submitted project proposals. Thus, the regional/national evaluation will be carried out in cooperation with M-ERA.NET.

5.1. Pre-Proposal:

5.1.1 Eligibility check and evaluation criteria:

At M-ERA.NET level:

- Date and time of receipt of Pre-proposal on or before deadline
- Presence of requested M-ERA.NET Pre-Proposal form
- Minimum of 3 partners from 2 different participating countries participating the call 2013 (min. 1 European Partner involved)
- Pre-proposal is recommended for submission for a full proposal by all the funding organizations from the countries involved

At National/regional level:

- Eligibility of the applicants
- Programme regulations observed if applicable (e.g. presence of requested national/regional Proposal forms, ...)
- Funding budget available
- Assessment of relevance to the national/regional funding programme

5.1.2. Result of Pre-Proposal assessment:

At national/ regional level the assessment of Pre-Proposal results in one of the Recommendations, to be communicated to the applicants:

- *Recommended for submitting the Full-Proposal(including requirements and/or potential comments for improvement)*
- *Not recommended (motivated - mandatory comments)*

5.2. Full Proposal:

5.2.1 Eligibility check:

At M-ERA.NET level:

- Date and time of receipt of proposal on or before deadline
- Presence of requested M-ERA.NET Full Proposal form
- Minimum of 3 partners from 2 different countries participating in the M-ERA.NET Call 2013 (min. 1 European partner involved)

- Proposal is recommended for submission for a full proposal by all the funding organizations from the countries/regions involved after the pre-proposal assessment

At National/regional level:

- Funding budget available
- Recommendations given in the pre-proposal stage are fulfilled.

5.2.2. Result of Full Proposal Eligibility check:

At Full Proposal stage only in exceptional and very well justified cases proposals recommended for funding by M-ERA.NET central peer review can be rejected by individual funding organizations. Eligibility check of Full Proposal is done in parallel to the central evaluation.

5.2.3. Evaluation of Full Proposal:

The Full proposal evaluation is carried out as a central evaluation by independent experts.

The M-ERA.NET Call 2013 Evaluation Procedure:

- *Individual written assessments: 3 individual and independent written assessments including scoring for each Full Proposal provided by selected and agreed experts*
- *Compilation of individual assessments: 3 individual assessments are compiled by one of the 3 experts (= rapporteur). The compilation consists of peer review report and scoring. All experts who provided individual written assessments confirm the compilation and consistency of peer review report and scoring.*
- *Ranking list of recommended projects is based on the scoring*
- *Involved funding organizations meet for a selection meeting to assemble and commit themselves to the final list of selected proposals (= selection list); feedback to applicants is agreed (peer review report, national comments if applicable, ...)*
- *If there are big differences in the full proposal compared to the recommended pre-proposal and/or the eligibility criteria are not fulfilled the full proposal may be rejected without evaluation*
- *The names of the independent experts will be kept confidential*

The M-ERA.NET Call 2013 Evaluation Criteria for Full Proposal:

The full proposals will be evaluated according to the following criteria:

- Scientific and technical quality
- Implementation
- Impact

Evaluation criteria, scoring and thresholds are described in Annex 3.

6. Decision

6.1. Decision process

The final funding decision for the projects will be taken by the involved funding organizations. After the selection meeting M-ERA.NET informs the project co-ordinator (applicants) about the funding recommendation.

6.2. Funding

6.2.1. Contract

Funding contracts are signed directly between the project partners and their national/regional funding organizations.

6.2.2. Payments and Start of projects

Depending on the national/regional regulations, a pre-condition for transferring the first funding instalments might be the existence of a consortium agreement that also includes IPR related issues.

It is highly recommended that the project starting and finishing dates are the same for all project parties. As the national funding contracts may not all become effective at the same time, the project parties

- usually do not receive the instalments,
- usually are not reviewed/monitored on national/regional level

at exactly the same time. However, the M-ERA.NET consortium will help to minimise these gaps.

7. Monitoring

7.1. National/regional project review

The progress of each individual contract will be monitored by the respective regional/national funding organization through specific project review processes.

7.2. M-ERA.NET Reporting

Apart from the regional/national project review, the transnational cooperation aspects will be monitored on M-ERA.NET level, e.g. by using online questionnaires.

7.3. Change in active projects

Any substantial change in an on-going project must be reported immediately to the involved funding organizations. The project partners should be aware that changes might have effects on funding.

8. Dissemination

A reference to M-ERA.NET is requested in publications, exhibitions, lectures and press information concerning results of the projects.

9. Support

Frequently Asked Questions (FAQ) are listed in the website (www.m-era.net). In addition, all Funding Organizations participating in the Call will provide assistance to project proposers in case of questions.

Annex 1: Thematic priorities for Call 2013

1) Integrated Computational Materials Engineering (ICME)

Technical content/scope

Current developments in combinatorial synthesis and multi scale modelling together with high throughput or multi scale experimentation allow for a faster development of materials targeted to both enhanced performance and processability. A skilful combination of these approaches in terms of Integrated Computational Materials Engineering (ICME) will lead to significant improvements in our ability to design new materials or to assess materials performance already in the product development stage.

The proposals should focus on either of the following model-driven schemes:

- a) Design of new (compositionally defined) materials with target properties, or
- b) Tailoring microstructural changes of known materials during processing to obtain improved properties.

The proposals should address each of the following items:

1) modelling and simulation

use of materials physics based design principles

2) target properties

in case of both, scheme a) and scheme b) specification of materials properties to be reached

3) experimental validation

in case of scheme a) of the predicted properties, on appropriate length scales and based on the model constituents

in case of scheme b) of the expected performance in manufacturing and processing.

The proposals should clearly present the approach taken for coupling these items.

Expected impact

- Building and strengthening a common European research community in the area of Integrated Computational Materials Engineering.

- Improved predictive power of materials properties and applications.
- Establishment of resource efficient and well-targeted materials design and processing concepts.
- Increased competitiveness of the European industry by cost saving in materials design and processing and a shortened time-to-market for new materials with advanced properties.

The particular subject of the proposals can deal with concept- driven research or need-driven research or a combination thereof.

Concept-driven proposals should intend to boost the current state of knowledge in topics that are fundamental in nature and that simultaneously constitute key bottlenecks for materials improvements, processing and manufacturing in a wide range of application areas. To cover this aspect the proposals should clearly address the following items that are additional evaluation criteria:

- the key bottleneck to be addressed
- the model system chosen for the study
- the methodology to generalise the approach taken.

Pure concept-driven proposals do not need to have a short-term implementation, but should hold enough promise for future industrialisation.

Need-driven proposals should reflect demands of society that are anticipated to require solutions. To cover this aspect the proposals should clearly address the following items that are additional evaluation criteria:

- the rationale and societal need for research in the area
- the specific application and design conditions
- the expected leverage effect of the approach taken
- the contribution to increase resource efficiency in materials design, manufacturing or product design.

Mixed proposals should address both sets of additional evaluation criteria.

Target groups

This topic is targeted to two steps in the innovation chain: basic research and applied research. Project consortia focusing only on basic research or only on applied research

are also eligible. The establishment of a strong collaboration between research entities and further networking is strongly encouraged.

2) Interfaces, Surfaces and Coatings

Technical content/scope

Europe is still keeping an outstanding position in surface and coating technology which is a key technology in a large variety of industrial production. A broad dissemination of progress in this field affects numerous sectors all over Europe. Typical technical application areas address fields such as tribology, micro galvanofarming, chemical and corrosion resistance, biocompatibility, thermal barriers and (multi)functional properties such as optical, electromagnetic, (anti)-adhesive, (electro)catalytic, chemical sensitivity.

The objective is to develop new or significantly improved solutions and processes for surface modification in terms of structural or functional properties (including multifunctionality) by acting at the level of the materials surface. The call aims to promote more advanced use of modified surface properties and modified surface structures with improved and diverse characteristics.

The project proposals should address new solutions, consider new processing routes or new concepts for coating and surface treatment. Project proposals should also address interdisciplinary process combinations and new materials/materials combinations e.g. nanomaterials, material compounds or multilayers. Consideration should be given to basic understanding of the mechanisms, experimental assessment, prototyping, manufacturing and/or validation. The proposals should consider the processing aspect of the new technology aiming for flexible and energy-efficient approaches in production with a smart use of materials (saving resources and tailoring applications) in an environmentally friendly manner. In order to ensure relevance for different partners in the value chain the proposal should state clear concepts for application(s) and sector(s).

Expected impact

- New and improved components/products with tailored properties or functionalities created by functional surfaces.
- In addition to the enlarged functionality, the focus has to be laid on a clear ecological impact in terms of avoidance of hazardous materials and compounds and aspects of sustainability in interface design, coating material and technology and life time cycles.

- The project should present a clear value chain, even basic research should give a strategy for transfer to industry including a roadmap of valorization.
- The project should emphasize on new products by functionalized surfaces and interfaces that might have strong societal impact, on e.g. safety, economics and health, and are expected to create synergies between industry and research.

Target groups

This topic is targeted to all groups in the innovation chain: basic research, applied research, industrial R&D. The particular subject of the proposal deals with the establishment of a strong collaboration between research entities and SMEs. Interdisciplinary projects are encouraged and should enable a broader cross sectorial use.

Participation of large industry is encouraged e.g. as potential end user of the technology proposed. Cooperation/joint activities between different consortia are encouraged.

3) Composite Technology

Technical content/scope

Composites are combinations of two or more materials complementing each other to have super-functions or new functions which component materials do not possess. Composite structures enable new properties and functionalities in bulk, coating or intermediate products and include all the materials solutions used when a single monolithic material cannot fulfil all the requirements necessary for use in a product. Novelty in properties such as electrical, optical and mechanical properties, or light weight, can enhance the performance of devices and machines in many challenging applications for the future covering e.g. smart grids, electronics, telecommunication, security, transportation and mobility as well as heavy mechanical engineering.

The research proposals should address

- designed and processed areal coatings, smart substrates which enable mechanical or electrical performance like abrasion resistance, dielectric/magnetic properties
- process technology, which reduce afterwork and/or decreases the energy demand of the manufacturing
- new material designs which allow environmentally optimized and energy efficient processes and products
- new design and dimensioning concepts for the efficient and safe use of new composites
- reduction of cycle time by automated manufacturing

Novel and unique knowledge in molecular design, functionalization and characterization of wide range of materials and their combinations should be addressed as well as novel processing technologies and methods of joining and assembling.

The proposal is expected to concentrate on one of the following areas:

- materials
- processes
- applications of composites.

To strengthen the whole innovation chain it is strongly recommended to cover the other areas by showing proposed composite oriented solutions.

International cooperation is very welcome especially related to novel matrix and filler materials of composites.

Expected impact

- More competitive industrial products with advanced materials design and manufacturing including concepts for increasing the difficulty of copying.
- Socio-ecological benefits provided by products with higher integration level of functionality, lighter products to transport, lighter vehicles to decrease energy consumption.
- Networks of the scattered players, including SME manufacturers and equipment suppliers, inside Europe improving the sharing of knowledge and reinforcing both technological and scientific platform.

Target groups

This topic is targeted to all groups in the innovation chain: basic research, applied research, industrial R&D. The particular subject of the proposal deals with the establishment of a strong collaboration between research entities, SMEs and large industry. Cooperation/joint activities between different consortia are encouraged.

4) Materials for Health

Technical content/scope

Wellness and healthy ageing of the European population will require new or improved solutions to health related problems. Many of those solutions will involve the development of new materials as key part of diagnostics and therapeutics products as well as in implants, in tissue regeneration and in advanced therapies. The objective of this call is to provide opportunities to advance application-driven, material-based technologies closer to the market. This action is aligned with the European Commission policies on technologies for health as stated in the Innovation Union document and its future implementation on Horizon 2020.

Despite the many projects already funded in this area there are still many challenges to be overcome in order to translate the generated knowledge into reliable solutions.

Expected proposals should address development, improvement or functionalization of materials and/or materials based micro-nano devices for in-vivo applications that can be applied in one or several of the following areas, namely:

- materials for therapeutics (i.e., drug delivery, theranostics, etc.)
- implants and prostheses

The proposals are expected to address the following issues:

- Any fabrication or synthesis method proposed should take into account the scaling up of the process and the possible industrialization of a final product.
- Biocompatibility studies for novel or chemically modified materials should be included in the proposal. In particular, interaction of materials with appropriate body tissues or fluids should be considered where applicable, as well as absorption, distribution, excretion and metabolism studies.
- Potential market for the proposed technical solutions should be identified as well as relevant regulatory hurdles.
- Efforts should also be made to position the project's starting and estimate the expected end points on the Technology Readiness Level (TRL) scale as well as an estimation of the time needed to reach the market.

The proposals are strongly encouraged to consider the following issues:

- Pre-clinical proof of concept
- Cross collaboration between medical groups and technical groups
- Involvement of SMEs and/or industrial partners

Expected impact

- New or improved materials delivering superior performance and/or cost reduction in the target areas.
- Improved competitiveness of the European Health industry through a clear increase of the Technology Readiness Level for the proposed technologies.
- Generation of a robust dialogue between RTD performers and industrial and medical stakeholders of the Health Sector.
- Alignment of RTD activities at national and European level laying the foundations for future contributions to H2020 activities.

Target group

Universities and research organizations, SMEs and industries.

NOTE 1:

Explicitly excluded of the scope of the call are: the development of materials for in vitro diagnostics, and R&D on materials for medical instrumentation.

NOTE 2:

As preliminary information, in M-ERA.NET call 2014 it is planned to include a thematic topic on Materials for Health focusing on:
new materials for contrast agents for medical imaging
tissue regeneration materials and advanced cell therapies.

5) Materials for sustainable and affordable low carbon energy technologies

Technical content/scope

The advanced materials sector is an important economic and employment generator in Europe. Maintaining a perspective on the innovation potential of individual research and development projects will reinforce the economic value of this sector.

New and advanced materials are essential to achieving the goals of a low carbon economy. Materials are an integral part of the solution for addressing the Energy and Climate Change Challenges. Currently over 80 % of Europe's energy use is based on oil, gas and coal. [The European Strategic Energy Technology Plan \(SET Plan\)](#) recognises this situation and emphasises the growing need for new more efficient and cost-competitive low carbon energy technologies. **The SET Plan Materials Road Map** emphasises the pivotal enabling role of advanced materials and clearly outlines the medium to long term strategy for the coming years.

The scope of this call is to develop new and improved material systems for the following topics:

- 1) Renewable energy sources & energy harvesting (for example: wind energy, ocean energy, photovoltaic energy, concentrating solar power, geothermal energy, thermoelectric energy.....)
- 2) Energy storage (for example: electro-chemical energy storage, chemical energy storage, "solar" fuels, mechanical energy storage....)
- 3) Energy efficiency (for example: materials for high efficiency / high brightness lighting (LEDs / OLEDs), fuel cells, materials for energy efficient buildings, materials for high power electronics for converters.....)

The research proposals should focus on novel and advanced materials with improved physical, chemical and mechanical properties leading to a better cost/benefit ratio. Sufficient attention should be given to reliability, lifetime and full life cycle analysis (LCA).

A proposal must consider, demonstrate and clarify its added value and impact and where appropriate its alignment with the SET Plan materials Roadmap and in particular the Key Performance Indicators (KPIs) therein.

Efforts should also be made to position the project's starting and estimate the expected end points on the [Technology Readiness Level \(TRL\)](#) scale as well as an estimation of the time needed to reach a full industrial demonstration phase.

Integration of industrial partners who manufacture or use the material is strongly recommended to ensure the relevance of the research. Alternatively, for basic research programmes, the establishment of an industrial advisory board is highly recommended.

These emerging technologies are also among the main drivers for use of critical and potentially scarce raw materials - see critical raw materials for EU¹⁾. Hence, in case the research proposal intends to make use of such critical raw materials the applicants are requested to present a justification for this choice. Projects may also address substitution of such critical or scarce materials.

Expected impact

- Support to meet the European strategic policy targets in terms of CO₂ reduction and developing affordable sustainable energy usage.
- Improved competitiveness and strengthened industrial leadership, scientific excellence of the European academia and research institutes.
- The M-ERA.NET process should result in establishing a more coherent pan-European Research, Development and Innovation capability and move away from the current fragmented context.

Target groups

This topic is targeted to all groups in the innovation chain: fundamental research, applied research, industrial R&D. The particular subject of the proposal deals with the establishment of a strong collaboration between research entities, SMEs and large industry. Consortia focusing only on fundamental research or industrial R&D are also eligible with the provisos mentioned above. Cooperation/joint activities between different consortia are encouraged.

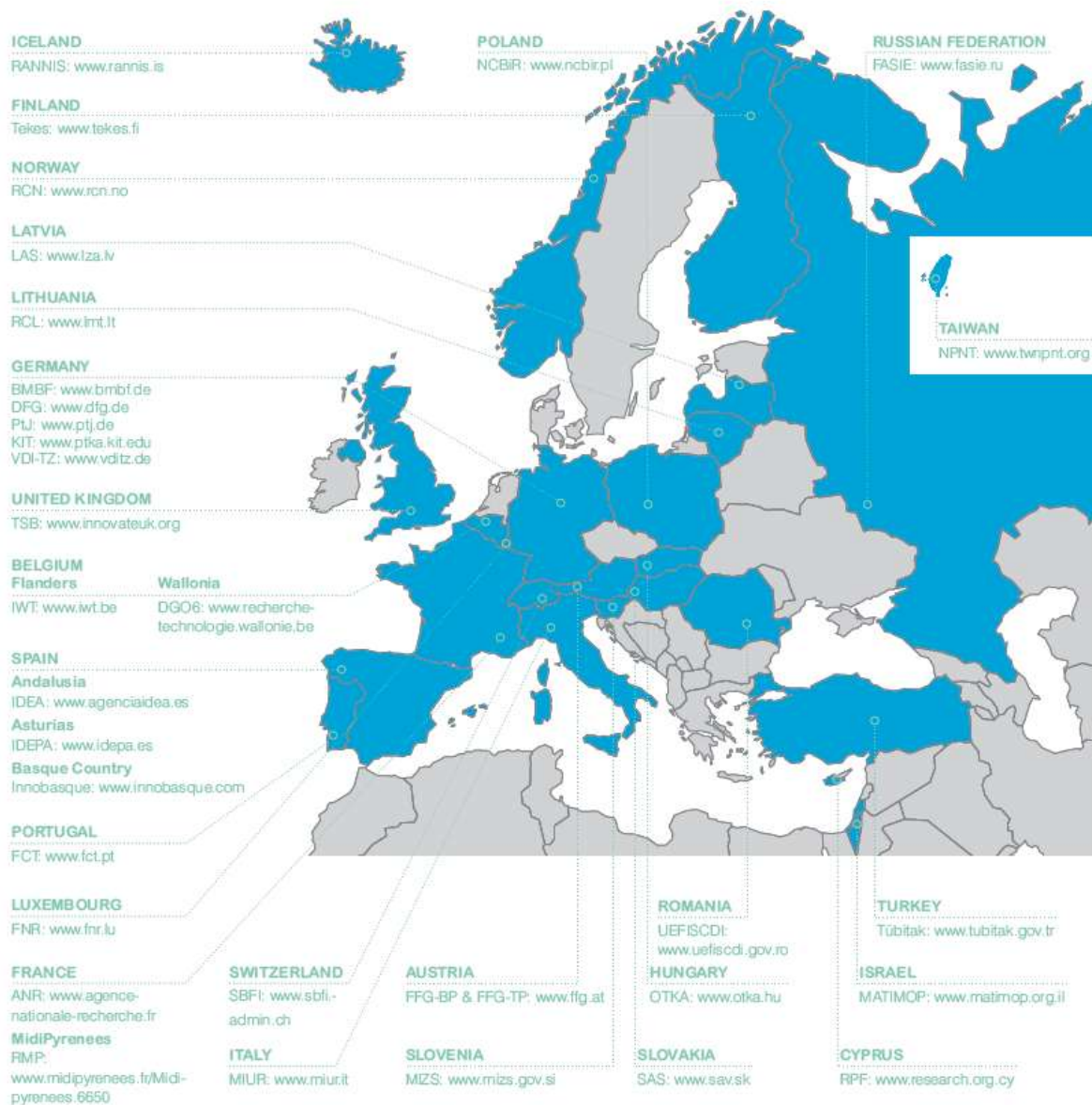
¹⁾ http://ec.europa.eu/enterprise/policies/raw-materials/critical/index_en.htm

Annex 2: Funding organizations participating in the M-ERA.NET Call 2013

Country	Funding organization involved	Contact person:
Austria	FFG Austrian Research Promotion Agency	FFG-TP: Name: Katharina GUGLER Phone: +43 57755 5081 e-mail: katharina.gugler@ffg.at
		FFG-BP: Name: Manuela JERETIC Phone: +43 57755 1215 e-mail: manuela.jeretic@ffg.at
Belgium	Flanders: IWT Agency for Innovation by Science and Technology	Name: Corien STRUIJK Phone: +32 2 432 42 87 e-mail: cs@iwt.be
		Name: Lieve De DONCKER Phone: +32 2 432 42 79 e-mail: ldd@iwt.be
	Walloon Region: DGo6 Service public de Wallonie	Name: Cedric VOLCKE Phone: +32 81 334548 (office), +32 479 670131 (mobile) e-mail: cedric.volcke@spw.wallonie.be
Cyprus	RPF Research Promotion Foundation	Name: Maria ANDREOU Phone: +357 22205063 e-mail: mandreou@research.org.cy
Finland	Tekes Finnish Funding Agency for Technology and Innovation	Name: Sisko SIPILÄ Phone: +358 50 5577845 e-mail: sisko.sipila@tekes.fi
France	ANR Agence Nationale de la Recherche	Name: Bernard BONELLO Phone: +33 1 4427 42 12 e-mail: bernard.bonello@agencerecherche.fr
	Midi-Pyrenees: RMP Region Midi-Pyrénées	Name: Stephane BEYRAND Phone: +33 5 61 39 67 02 e-mail: stephane.beyrandt@cr-mip.fr
Germany	DFG Deutsche Forschungsgemeinschaft	Name: Burkhard JAHNEN Phone: +49 (228) 885-2487 e-mail: burkhard.jahnen@dfg.de
	VDI-TZ VDI Technologiezentrum	Name: Sebastian KRUG Phone: +49 (0) 2116214 -472 e-mail: krug@vdi.de
	PtJ Projektträger Jülich	Name: Katharina SCHUMACHER Phone: +49 246161 4879 e-mail: ka.schumacher@fz-juelich.de
	PTKA Projektträger Karlsruhe	Name: Stefan SCHERR Phone +49 721 608 25286 e-mail: stefan.scherr@kit.edu

Country	Funding organization involved	Contact person:
Hungary	OTKA Hungarian Scientific Research Fund	Name: Elod NEMERKENYI Phone: +36-1-219-8757 e-mail: nemerkenyi.elod@otka.hu
Iceland	RANNIS The Icelandic Centre for Research	Name: Ingolfur THORBJORNSSON Phone: +3548918795 e-mail: ingo@nmi.is
Italy	MIUR Ministry of Education, University and Research	Name: Luigi LOMBARDI Phone: +39 06 9772 6469 e-mail: luigi.lombardi@miur.it
Israel	MATIMOP-ISERD Israeli Industry Center for R&D	Name: Nili MANDELBLIT Phone: +972-35118120, +972-35118122 e-mail: nili@iserd.org.il
Latvia	LAS The Latvian Academy of Sciences	Name: Maija BUNDULE Phone: +371 67227790 e-mail: maija.bundule@lza.lv
Lithuania	RCL Research Council of Lithuania	Name: Jurgita STONYTE Phone: +370 5 2618530 e-mail: jurgita.stonyte@lmt.lt
Luxembourg	FNR National Research Fund	Name: Christiane KAELL Phone: +352 261925-34 e-mail: christiane.kaell@fnr.lu
Norway	RCN The Research Council of Norway	Name: Aase Marie HUNDERE Phone: +47 41422058; +47 22 03 73 05 e-mail: amh@forskningsradet.no amh@rcn.no
Poland	NCBiR The National Centre for Research and Development	Name: Katarzyna SAMSEL Phone: +48 22 39 07 156 e-mail: katarzyna.samsel@ncbr.gov.pl
Portugal	FCT Foundation for Science and Technology	Name: Dina CARRILHO Phone: +351 21 213911543 e-mail: Dina.carrilho@fct.pt
Romania	UEFISCDI Executive Agency for Higher Education, Research, Development and Innovation Funding	Name: Andreea DIMITRIU Phone: +4-021 302 38 52 e-mail: andreea.dimitriu@uefiscdi.ro
Russia	Foundation for Assistance to Small Innovative Enterprises (FASIE)	Name: Olga LEVCHENKO Phone: +7 495 231 38 51 e-mail: levchenko@fasie.ru
Slovenia	MIZS Ministrstvo za izobraževanje, znanost in šport	Name: Doroteja ZLOBEC Phone: +386 (0)1 478 46 24 e-mail: Doroteja.Zlobec@gov.si
Slovakia	SAS Slovak Academy of Sciences	Name: Jan BARANCIK Phone: +421 2 577510 137 e-mail: barancik@up.upsav.sk
Spain	Asturias: IDEPA Instituto de Desarrollo Económico del Principado de Asturias	Name: Ana Elena FERNÁNDEZ MONZÓN Phone: +34 985 98 00 20 e-mail: anae@idepa.es
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Country	Funding organization involved	Contact person:
		Phone: +34 985 98 00 20 e-mail: paz@idepa.es
	BasqueCountry: Innobasque Basque Innovation Agency	Name: Leire ARRIOLA Phone: +34 944 20 94 88 e-mail: larriola@innobasque.com
	AGENCIA IDEA. Agencia de Innovación y Desarrollo de Andalucía.	Name: Víctor LÓPEZ MIELGO Phone: +34 951 042 929 e-mail: vlopez@agenciaidea.es Name: José Antonio PASCUAL SÁNCHEZ e-mail: jpascual@agenciaidea.es
Switzerland	SERI State Secretariat for Education, Research and Innovation	Name: Roland BÜHLER Phone: +41 31 324 71 41 e-mail: roland.buehler@sbfi.admin.ch
Taiwan	National Science Council & National Programme on Nano Technology	Name: Peter (Chung-Yu) WU Phone: +886-988-173-889 (mobile); +886-3-5165728 (office) e-mail: peterwu@mail.nctu.edu.tw
Turkey	Tübitak The Scientific and Technological Research Council of Turkey	Name: Burcu KOC HASKILIC Phone: +904685300 e-mail: burcu.haskilic@tubitak.gov.tr
UK	TSB Technology Strategy Board	Technical/Scope Criteria Name: John MORLIDGE Phone: +01 793442700 e-mail: john.morlidge@tsb.gov.uk Operations/Eligibility Criteria Name: Graham MOBBS Phone: +01 793442700 e-mail: graham.mobbs@tsb.gov.uk



Map of participating countries 2013

Commitment per funding organisation 2013:

Legend:
 A applied research
 B basic research

◦ focus on graphene only
 ◦◦ photonic materials and/
 or photonic technologies only
 ◦◦◦ only companies eligible
 ◦◦◦◦ only R&D institutions eligible
 ◦◦◦◦◦ max. project duration 24 month

* flexible budget
 ** budget not defined
 *** participation to be confirmed

M-ERA.NET Call 2013		Integrated Computational Materials Engineering	Interfaces, Surfaces and Coatings	Composite Technology	Materials for Health	Materials for Sustainable and Affordable Low Carbon Energy Technology	Estimated Call Budget
							M €
Austria	FFG-BP	A	A	A	A	A	1*
Austria	FFG-TP	A	A	A	A	A	1
Belgium Flanders	IWT	A	A	A	A	A	1,5
Belgium Wallonia	DGO6	A	A	A	A	A	1
Cyprus	RPF	A	A	A	A	A	0,2
Finland	Teles	A	A	A	A	A	1
France	ANR	B					1,5
France MidiPyrenees	RMP	A	A	A	A	A	0,75
Germany	BMBF/PLJ/PTKA		A°	A°		A°	5
Germany	DFG	B					2,5
Germany	VDI-TZ		A°◦	A°◦	A°◦		*
Hungary	OTKA	B	B	B	B	B	0,3
Iceland	RANNIS	A	A	A	A	A	**
Israel	MATMOP	A	A	A	A	A	0,25
Italy	MIUR	A	A	A	A	A	0,5
Lithuania	RCL				A+B◦◦◦		0,1
Latvia	LAS	A+B	A+B	A+B	A+B	A+B	0,43
Luxembourg	FNR	A+B	A+B	A+B	A+B	A+B	1*
Norway	RCN	A+B	A+B	A+B		A+B	2
Poland	NCBIR	A	A	A	A	A	1,5
Portugal	FCT	***	***	***	***	***	***
Romania	UEFISCDI	A	A	A	A	A	1
Russian Federation	FASIE	A	A	A	A	A	1
Slovakia	SAS	A+B	A+B	A+B	A+B	A+B	0,23
Slovenia	MIZS	A+B	A+B	A+B	A+B	A+B	1,2
Spain Andalusia	IDEA	A+B	A+B	A+B	A+B	A+B	1
Spain Asturias	IDEPA	A◦◦◦◦	A◦◦◦◦	A◦◦◦◦	A◦◦◦◦	A◦◦◦◦	0,4
Spain BasqueCountry	Innobasque	A	A	A	A	A	1
Switzerland	SBFI	A	A	A	A	A	1*
Turkey	Tubitak	A◦◦	A◦◦	A◦◦	A◦◦	A◦◦	1,5
Taiwan	NPNT	A+B	A+B	A+B	A+B	A+B	1
United Kingdom	TSB		A		A		0,74

Annex 3: M-ERA.NET Full Proposal Evaluation Criteria

Evaluation Criteria, Scoring, Thresholds

- **1. Scientific and technical quality (max. 5.0 points)**
 - 1.1 Soundness of concept and quality of objectives (max. 1.5 points)
 - 1.2 Progress beyond the state-of-the-art (max. 1.5 points)
 - 1.3 Quality and effectiveness of the S & T methodology and associated work plan (max. 2.0 points)
- **2. Implementation (max. 5.0 points)**
 - 2.1 Appropriateness of the management structures and procedures (max. 1.0 points)
 - 2.2 Quality and relevant experience of the individual participants (max. 1.0 points)
 - 2.3 Quality of the consortium as a whole (including complementarity, balance) (max. 1.0 points)
 - 2.4 Appropriate allocation and justification of the resources to be committed (budget, staff, equipment) (max. 2.0 points)
- **3. Impact (max. 5.0 points)**
 - 3.1 Contribution at the European or international level to the expected impacts listed in the work programme under the relevant topic (max. 2.5 points)
 - 3.2 Appropriateness of measures for the dissemination and/or exploitation of project results and management of intellectual property (max. 2.5 points)
- **Ethical issues**

Ethical issues: Full Proposal includes FP7 “Ethical Issues Table”. In case ethical issues apply (applicants mark respective issues in the table) M-ERA.NET recommends that the national/regional organizations observe these issues (e.g. post-evaluation review) for their respective funded projects.

Additional Information

- Sub criteria have individual maximum scores with a resolution of 1 decimal point. There are no thresholds for sub criteria. The awarded scores for each sub criterion have to be justified with written statements by the evaluators.

- Each criterion will be scored between 0 and 5 representing the sum of the scoring of the individual sub criteria. The threshold for individual criteria will be 3.
- The overall threshold, applying to the sum of the individual scores will be 10.0.

In case of equal scoring of proposals the scores of the individual criteria and sub-criteria will be compared as follows for the elaboration of M-ERA.NET ranking list: compare scoring of criterion 1, if still equal compare scoring of criterion 2, if still equal compare scoring of criterion 3, if still equal sub-criteria are compared (1.1, 1.2,3.2)

Annex 4: Checklist for Proposers*

The proposal conforms to the call guidelines.	<input type="checkbox"/>
Every project partner has been in direct contact with his/her national or regional funding organization and has checked that their collaboration and their project contribution is eligible for funding.	<input type="checkbox"/>
All partners who are not eligible for 100% funding are able to provide financial resources for their own contribution.	<input type="checkbox"/>
The consortium is aware of the necessity to have a consortium agreement, including amongst others the agreements on intellectual property rights (IPR) and publication rules for a funded project (to be signed before the first payment)	<input type="checkbox"/>
The national/regional applications have been submitted by all consortium partners to their local funding bodies.	<input type="checkbox"/>

Please go <https://www.m-era.net/joint-call-2013> to submit the:

1. Pre-proposal form on-line.
Deadline for submission: 30 October 2013, 12:00 noon Brussels time
2. Full-Proposal form on-line.
Deadline for submission: 25 March 2014, 12:00 noon Brussels time

For further information on M-ERA.NET: please go to <http://www.m-era.net>