



## **TABLE OF CONTENT**

| Executive summary                            | 3  |
|----------------------------------------------|----|
| 1. Objectives                                | 4  |
| 2. Process and Methods                       | 5  |
| 3. Statistics and results                    | 6  |
| 3.1 General                                  | 6  |
| 3.2 Innovation oriented results              | 8  |
| 3.3 Scientific results                       | 11 |
| 3.4 Economic effect                          | 14 |
| 3.5 Transnational effect                     | 16 |
| 4. Conclusions                               | 23 |
| Annex 1: questionnaire                       | 24 |
| Annex 2 : Call 2013 -list of funded projects | 28 |

## **Executive summary**

M-ERA.NET is a network of 43 public funding organisations from 32 European and non-European countries. M-ERA.NET has been implementing annual joint calls for transnational RTD proposals since its start in 2012.

So far the M-ERA.NET network has selected a total of 186 transnational projects for funding with more than 858 participating research groups and companies from 33 countries. 28% of the funded organisations are research organisations, 31% universities, 30% SMEs and 11% large industries. Public funding of around 118 million Euro was mobilised.

In order to follow up on the success of these investments M-ERA.NET has established a systematic synapproach to monitoring and assessing the impact of its joint transnational calls on an annual basis. This joint analysis complements the routine efforts carried out by the national and regional funding organisations at national and regional level.

This pilot report covers the results of the assessment of the projects funded from the M-ERA.NET Call 2013. M-ERA.NET selected 25 full proposals for funding, corresponding to requested funding of 22.9 Mio EUR. Projects started in 2014 or 2015 and ended between 2016 and 2019.

The funded projects were assessed through an online questionnaire, covering assessment of scientific results, technical results, economic effects and transnational effects. The survey addressed 124 research groups in 25 projects.

The analysis shows that most of the projects were completed according to plan with no or minor changes related to consortium, budget and timeframe. The projects usually started at TRL levels between 1 to 3 and ended at TRL levels 4 to 7. In many cases the innovation-related results comprised new methods, products and/or new processes. The tentative time frame for commercialisation of the results (year to market) was usually between 3 and 5 or more than 5 years. Creating new knowledge (62 %) rather than exploring existing knowledge (37%) reflects the main scientific results. The number of publications in peer reviewed scientific journals and the number of oral presentations is relatively high, indicating a good dissemination of results and a good scientific level of the projects. The projects resulted in at least 34 master degrees and 29 PhD. Access to new international partners and/or access to new know-how were reported as the most common economic effect for the beneficiaries. None of respondents answered that the results will not be utilised any further. Respondents reported that the main added value of M-ERA.NET compared to other transnational funding included simpler rules and procedures and features that were more attractive to newcomers. 86% of respondents reported that the project would not have been realised without M-ERA.NET and in almost all cases the cooperation in the consortium will continue. The report concludes that the assessed projects are found to have a high impact at scientific and innovation levels as well as positive economic and transnational effects for the involved beneficiaries.

## 1. Objectives

M-ERA.NET is a network of 43 public funding organisations from 32 European and non-European countries. M-ERA.NET aims to identify further research programmes for materials research and innovation and to consolidate the cooperation with relevant funding organisations from Europe and beyond. M-ERA.NET started in 2012 under the FP7 scheme and continues from 2016 to 2021 under the Horizon 2020 scheme.

M-ERA.NET has been implementing annual calls since its start in 2012. Calls 2012-2015 were implemented under the FP7 ERA-NET scheme whereas Calls 2016-2018 have been implemented under the H2020 ERA-NET COFUND scheme. Further calls are foreseen.

So far the M-ERA.NET network has selected a total of 186 transnational projects for funding with more than 858 participating research groups and companies from 33 countries. 28% of the funded organisations are research organisations, 31% universities, 30% SMEs and 11% large industries. Public funding of around 118 million Euro was mobilised.

In order to follow up on the success of these investments M-ERA.NET has established a systematic approach to monitoring and assessing the impact of its joint transnational calls on an annual basis. This joint analysis complements the routine efforts carried out by the national and regional funding organisations.

This report covers the results of the assessment of the projects funded from the M-ERA.NET Call 2013. M-ERA.NET selected 25 full proposals for funding, corresponding to requested funding of 22.9 Mio EUR.

## 2. Process and Methods

The funded projects were assessed through an online questionnaire. The questionnaire was provided to all funded consortia in late 2018. Data were collected from all parties soon after the completion of the projects. The questionnaire covered the following areas: Scientific results; Technical results; Economic effects; Transnational effects.

The survey addressed 124 research groups active in 25 funded projects. A total of 45 responses were received, including 13 from coordinators. These responses covered 21 projects. Thus, the response rates were 84% for projects and 36% for individual beneficiaries. 28% of the responses came from universities, 44% from research organisations, and 28% from industry. The profile of organisations types for the whole Call 2013 is shown in figure on the left side. Since the questionnaire did not distinguish between SME and Large industry, both categories are covered by the category "company".

Note: all statistics and graphs presented in this report are related to individual answers from individual beneficiaries not to projects as a whole.

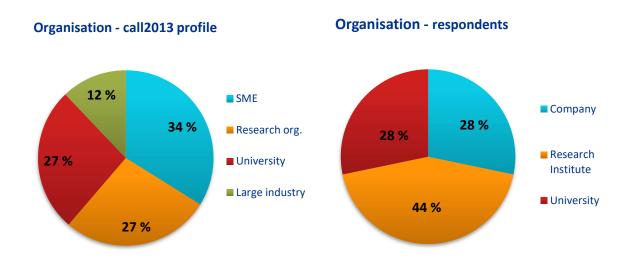
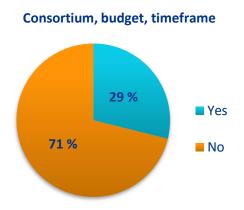


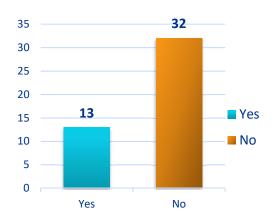
Figure 1: a) beneficiaries of the Call 2013 per organisation type; b) respondents per organisation type

## 3. Statistics and results

## 3.1 General

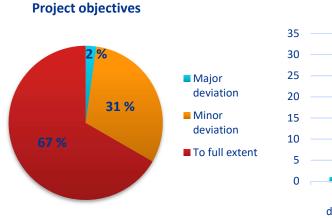
#### Q1. Have there been major changes since the project started (consortium, budget, timeframe etc.)?





71% of the beneficiaries reported no changes with respect to consortium, budget and/or timeframe whereas 29% of the beneficiaries reported that there have been major changes since the project started. Similar results were observed in the assessment of projects funded in the Call 2012.

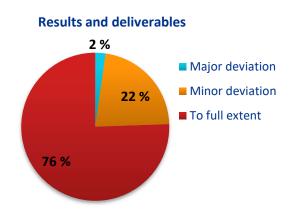
## Q2. To which extent have the project objectives been accomplished?

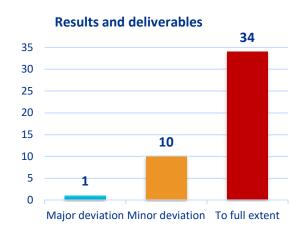




67% of the beneficiaries reported that the project objectives have been accomplished to full extent whereas 31% of the beneficiaries reported minor changes. Only one of the participants reported major changes in the project objectives. The change in this project objective is connected to difficulties in theoretical calculations which were not possible to do as planned.

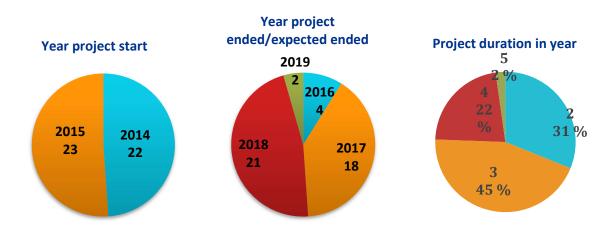
#### Q3. To which extent have the expected results and planned deliverables been accomplished?





A similar profile is received for the question related to accomplishing of the expected results and deliverables. 76% of the respondents report that the results and deliverables have been fully accomplished whereas 22% report minor and 2% (1 partner) report major changes. The major change is due to problems with the demonstration of results on a larger scale.

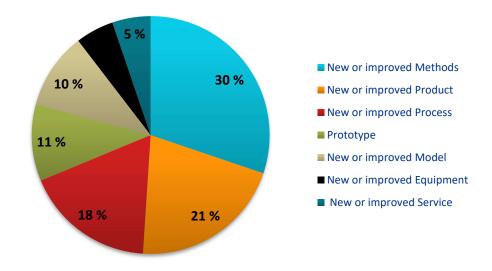
## Q4. What is the project timeline?

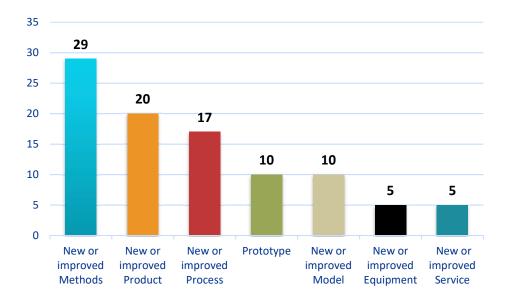


Approximately half of the respondents started their projects in 2014 and the rest in 2015. 4 respondents finished their projects in 2016, 18 in 2017, 21 in 2018 and 2 respondents reported an expected project end in 2019. In most cases, the project period was 2-4 years, with most usually 3 years. Similar results were observed for the projects funded in the Call 2012.

## 3.2 Innovation oriented results

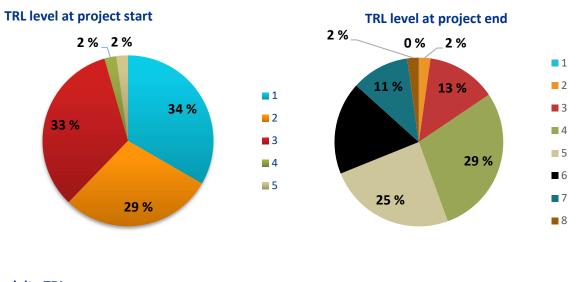
## Q5. What type of results have you achieved in this M-ERA.NET project? (multiple answers possible)

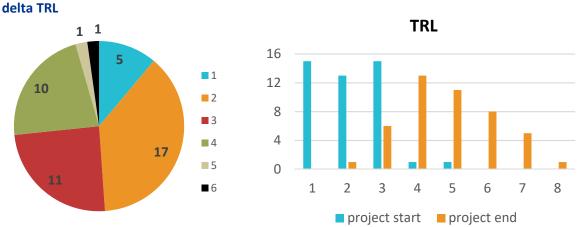




The type of result most frequently achieved is a new or improved method (30%), process (21%) or product (18%). Prototypes and new and improved models each represent 10% of the achieved results, followed by equipment (5%) or services (5%). Similar results were observed in the assessment of the projects funded in the Call 2012.

## Q6. Please indicate the technology readiness level-(TRL) when the project started and ended?



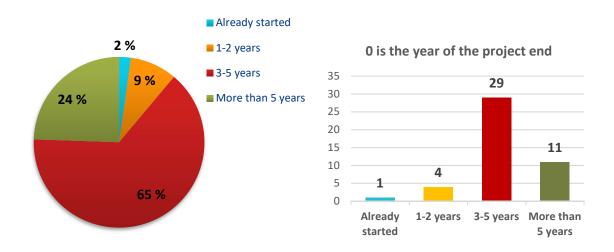


The beneficiaries reported that most projects started at TRL 1-3 and ended at TRL level 4-7. The delta TRL (difference between TRL at the project start and TRL at the project end) was usually in the range of 2-4. Compared to the Call 2012, both the TRL level at the end of the project and delta TRL was higher for projects funded in the Call 2013.

## **Technology Readiness Level – definition:**

- TRL 1. basic principles observed
- TRL 2. technology concept formulated
- TRL 3. experimental proof of concept
- TRL 4. technology validated in lab
- TRL 5. technology validated in relevant environment
- TRL 6. technology demonstrated in relevant environment
- TRL 7. system prototype demonstration in operational environment
- TRL 8. system complete and qualified
- TRL 9. actual system proven in operational environment

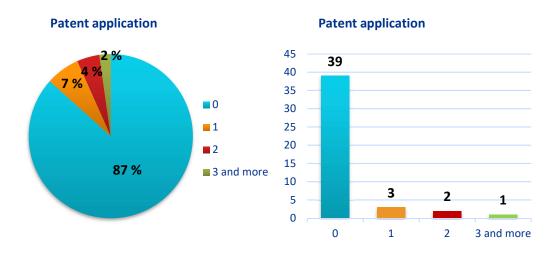
# Q7. What is the tentative time frame for commercialisation of the results from this project (year to market), where 0 is the end date of the project?



The tentative timeframe for commercialisation of the results (year to market) is usually 3-5 years (63%). One partner reported that commercialisation of the results already started and 9% expect commercialisation to start within 1-2 years, whereas 24% expect that more than 5 years are needed. This is less than reported for the projects in the Call 2012 (38%). The shorter timeframe for commercialisation of results from the projects funded in the Call 2013 can be connected to the higher TRL level at the end of the projects.

The timeframe from the call announcement to a commercialisation of the results is typically at least 7 years (consisting of: 1.5 - 2 years between the call announcement and the project start; 3-4 years project life time; 3-5 years to market).

Q8: Please specify the number of approved patents/patent applications and licenses corresponding to results from the project for your organisation?

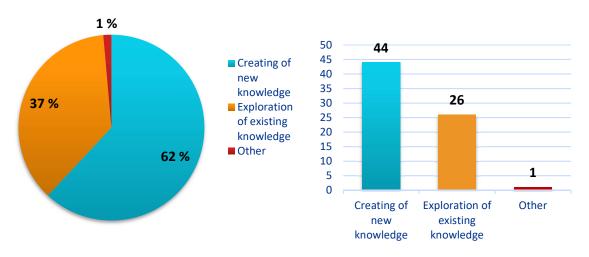


6 respondents have reported patent applications and 1 respondent has reported licenses as a result of the research in the assessed projects. In total at least 10 patent applications and 1 license have been submitted.

Most often the respondents did not submit any patent application.

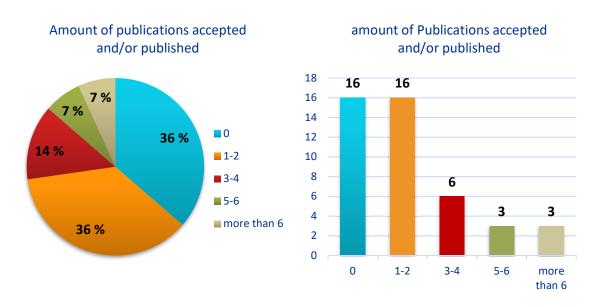
## 3.3 Scientific results

#### Q9. What are the results achieved? (multiple answers possible)



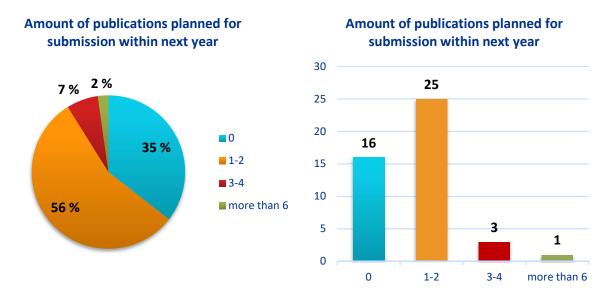
The scientific results most usually achieved are the creation of new knowledge (62%), while 37% of the results represent exploration of existing knowledge. The multiple answers were possible for this question and 49% of the respondents answered both creation of new knowledge and exploration of the existing knowledge. This is an increase in answer "exploration of existing knowledge" by 13% compared to the Call2012.

Q10. Please specify number of publications in peer reviewed scientific journals corresponding to results from this project for your organisation (first author)



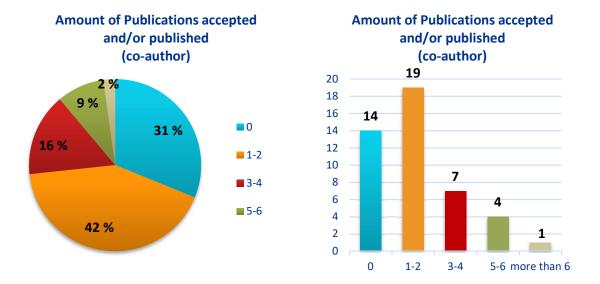
In total, 64% of the respondents published in peer reviewed scientific journals. The number of publications was between 1-2 in 36% of the cases, between 3-4 in 14%, between 5-6 in 7% and more than 6 in 7%. The results from the assessed projects were published in at least 67 publications in peer reviewed scientific journals. The number of the partners without publications was higher as compared to Call 2012 (36% vs 27%).

Q11. Please specify the number of publications in peer reviewed scientific journals corresponding to results from this project for your organisation planned for submission within next year (corresponding author)



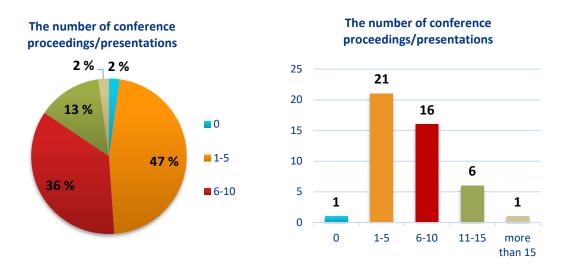
65% of respondents reported scientific publications under preparation/planned for publication during the first year after the project end. In most cases (56%) one or two publications are reported.

Q12 . Please specify the number of publications in peer reviewed scientific journals corresponding to results from this project for your organisation as co-author



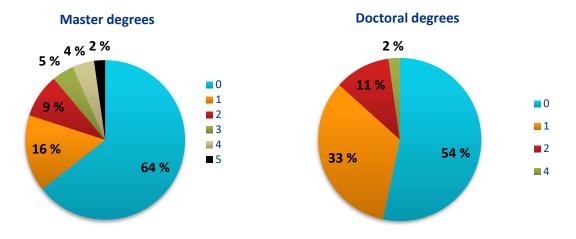
61% reported publication in peer reviewed scientific journals together with other project partner(s) in at least 67 publications. Only 1 partner reported no published or planned publications as corresponding or co-author.

Q13. Please specify the number of conference proceedings/presentations (from this project for your organisation)

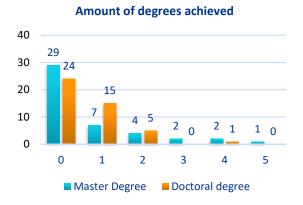


In 47% of the answers, the number of conference proceedings/presentations is between 1 and 5 and 36% reported between 6 and 10. In total between 199 and 371 presentations have been made as a result of the projects.

Q14. How many degrees have been achieved as a result of this project (for your organisation)?



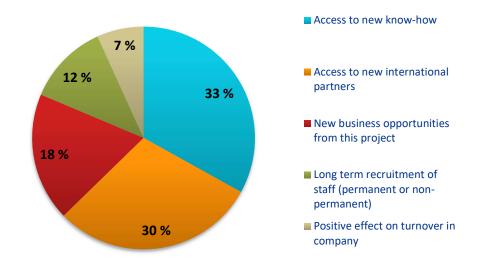
36% of the respondents reported at least 1 or more master degrees and 46 % that at least 1 or more doctoral degrees (PhD) have been achieved.

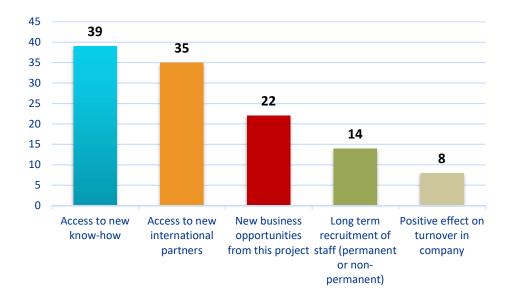


In total, 34 master degrees and 29 PhD degrees have been achieved as a result of the assessed projects.

## 3.4 Economic effect

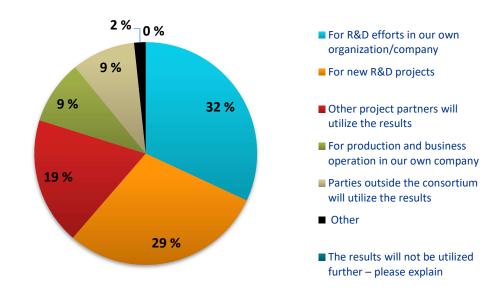
## Q15. Please indicate the effect(s) on your institution/company originating from this project (multiple answers possible)

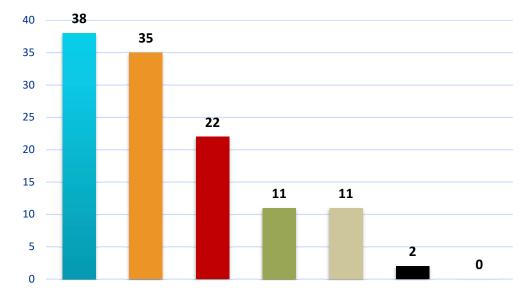




For 33% of respondents the effect was access to new international partners and for 30% access to new know-how.18% answered a new business opportunity from this project. Multiple answers were possible, and the most common combination was "access to new international partners", "access to new know-how" and "new business opportunities from this project".

## Q16. How will the results of the project be used (multiple answers possible)?





Typically, the research results will be used for R&D efforts in the same organisation or company (32%) and for new R&D projects (29%). 19% answered that other project partners will utilise the results. 2 respondents answered "other", in both cases a new knowledge in a new research field was generated from the project.

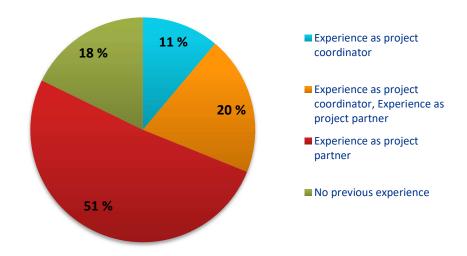
Multiple answers were possible, and the most common combination of the answers was:

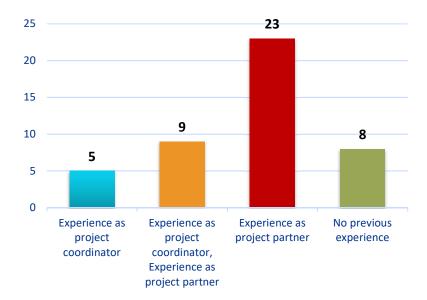
- For R&D efforts in our own organisation/company and for new R&D projects (10)
- For R&D efforts in our own organisation/company, other project partners will utilise the results and for new R&D projects (10)

None of respondents answered that the results will not be utilised further. Similar results were observed for the Call 2012.

## 3.5 Transnational effect

## Q17. Please indicate previous experiences in transnational projects? (multiple answers possible)

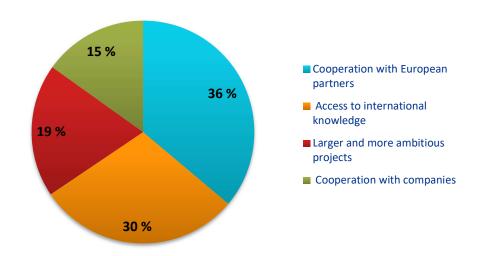


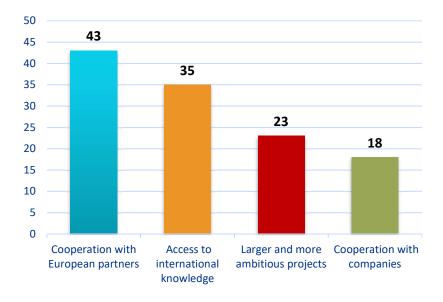


82% of the respondents had previous experiences in transnational projects, where 11% as project coordinator, 51% as project partner and 20% as both coordinator and partner.

18% are newcomers to transnational cooperation. This is less than reported for the Call 2012, where 30% were newcomers.

Q18. What are the main added values of M-era.NET compared to national funding? (multiple answers possible)

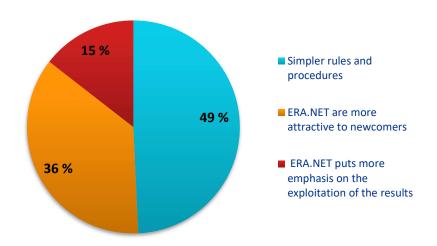


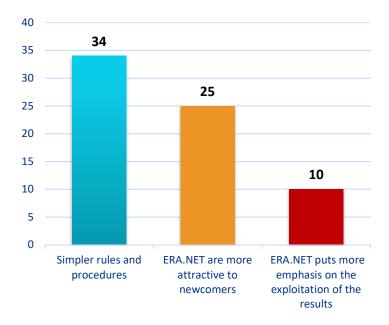


The main added value of M-ERA.NET compared to national funding is the cooperation with European partners (36%); access to international knowledge (30%) is almost equally important.

The combination of all 4 possible answers *Cooperation with European partners, Access to international knowledge, Larger and more ambitious projects, Cooperation with companies* is the most common multiple answer.

# Q19. What is the added value of M-era.NET compared to other transnational funding e.g. EU framework program (multiple answer possible)?

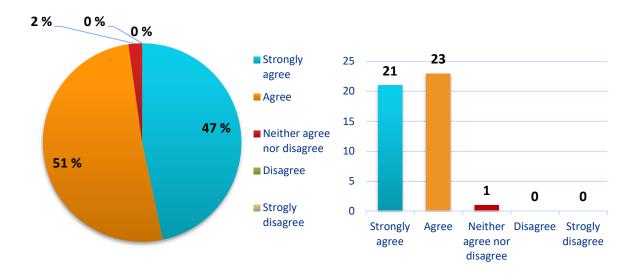




The main benefits of M-ERA.NET compared to other transnational funding are a *simpler rules and procedures* (49%) and *more attractive features for newcomers* (36%). Almost the same result was found in the evaluation of project funded in Call 2012.

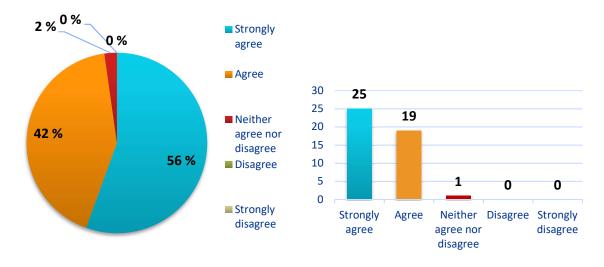
#### Q20. Experiences regarding implementation of the project

## a) Were all project partners committed to the project?



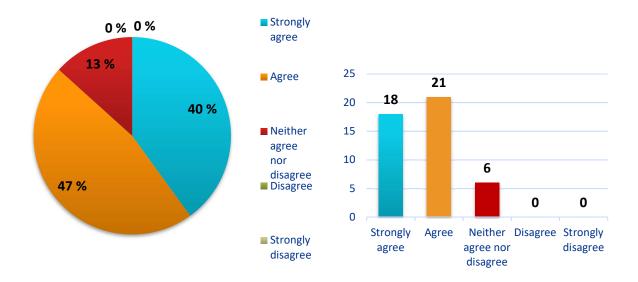
98% of the respondents answered from fully agree to agree. Only one partner answered "neither agree or disagree" on the question if all project partners were committed to the project. None of the partners answered disagree or strongly disagree.

#### b) Was the consortium stable during the project implementation?



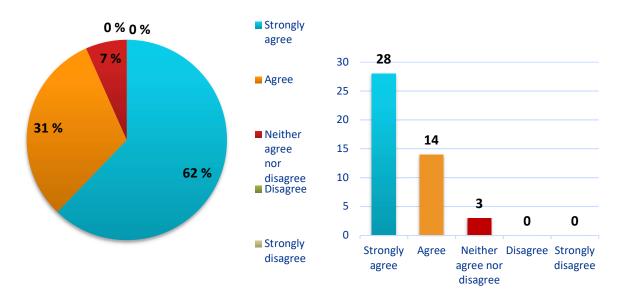
98% reported that the consortium was stable during the project implementation. Only 1 partner answered, "neither agree nor disagree". None of the partners answered disagree or strongly disagree.

## c) Were the project's objectives are realistic (i.e. budget, effort, time)?



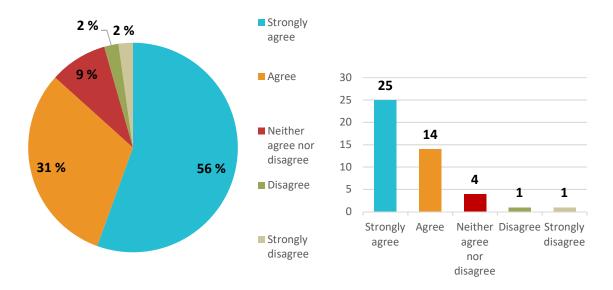
87% answered strongly agree or agree that the project's objectives (i.e. budget, effort, time) were realistic. 13% (6 partners) answered "neither agree nor disagree". None of the partners answered disagree or strongly disagree.

## d) Was the project management effective?



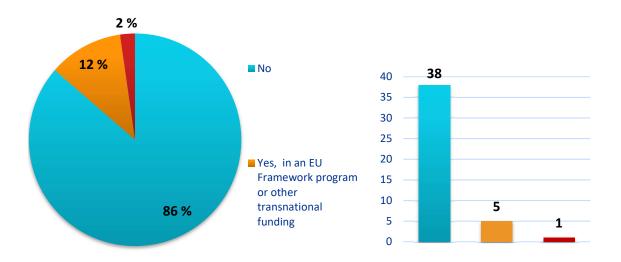
The project management was effective in 93%. 7% of the respondents (3) answered "neither agree nor disagree". None of the partners answered disagree or strongly disagree.

# e) Was the interaction with the national/regional funding agency supportive during the project implementation?



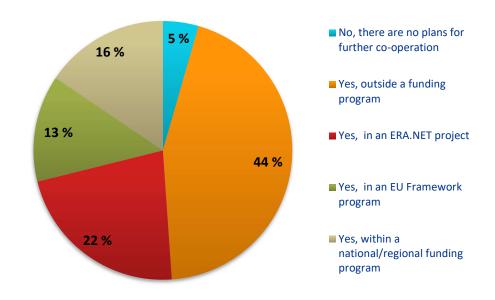
The national regional agency was supportive during the project implementation in 86% of the respondents. 4 respondents answered "neither agree nor disagree" on this question. 2 respondents did not find the national/regional funding agency supportive, where 1 answered disagree and 1 strongly disagree. These 2 respondents were partners in the same project and they answered positive on all the other questions regarding experiences implementation of the project.

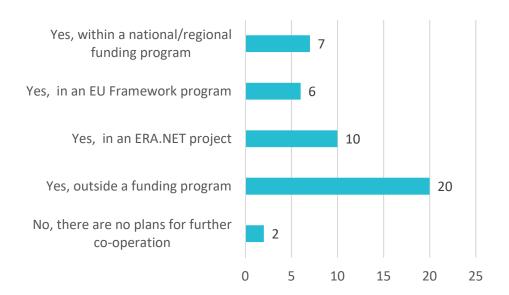
#### Q21. Would the project have been realised without M-ERA.Net?



For 86% respondents the project would not have been realised without M-ERA.NET. Only 6 respondents answered that the project would have been realised either within a national/regional funding or in a EU framework or other transnational funding.

## Q22. Will the co-operation in the consortium continue?





In 95% of the reported cases the co-operation in the consortium will continue. Most usually the cooperation will continue outside a funding programme (44%) and in an ERA.NET project (22%). Only 2 respondents answered that there are no plans for further cooperation.

## 4. Conclusions

#### General

- The responses to the questionnaire cover **21 out of 25 projects** funded in Call 2013 giving a good background for assessing the impact of the Call 2013.
- Most of the beneficiaries (approximately 70%) reported there have been no changes in consortium, budget and/or timeframe during project duration.

#### Innovation results

- The most frequently reported results are **new methods**, **products** and/or **new processes** rather than prototypes, models, equipment or services.
- The tentative time frame for **commercialisation** of the results (year to market) are usually **3-5 years.**
- The projects usually started at **TRL level 1-3** and ended at TRL level **4 -7**. The delta TRL was usually between 2 and 4.
- In total **10 patent** applications and **1 license** have been submitted. The majority of the respondents did not submit any patent or license application.

#### Scientific results

- Reported scientific results are **creating new knowledge (62 %)** and exploration of existing knowledge (37%).
- The number of publications in peer reviewed scientific journals and the number of oral presentations is relatively high (at least 134), indicating a **good dissemination** of results and a good scientific level of the projects
- Significant numbers of publications are planned for submission within one year after project end.
- At least 34 master degrees and 29 PhD have been achieved as a result of funded projects

#### **Economic effect**

- The effects on the institution/company originating from the project is usually access to new international partners and/or access to new know-how
- Typically, the research results will be used for R&D efforts in the same organisation or company and for new R&D projects
- None of respondents answered that the results will not be utilised further.

#### **Transnational effects**

- **82%** of the respondents had previous **experience** in transnational projects while 18% are newcomers to transnational cooperation.
- The main added value of M-ERA.NET compared to other transnational funding schemes are simpler rules and procedures and more attractive features to newcomers.
- **86%** of the respondents report that the project would **not have been realised** without M-ERA.NET.
- The majority (more than 90%) of the respondents fully agree/agree on a good implementation of the project. 98% fully agree/agree on the questions if all project partners committed to the project and if the consortium is stable during the project implementation.
- **In 95%** the **co-operation** in the consortium **will continue**. Most usually the cooperation will continue outside a funding program and in an ERA.NET project

## Annex 1: questionnaire

Assessment of funded projects from the joint calls by the previous M-ERA.NET (2012-2016) and from additional joint calls by M-ERA.NET 2.

#### **General Information**

- Project acronym
- Name of organisation
- Category organisation
  - University
  - o Research Institute
  - o Company
  - o Other
- Category project partner
  - o Coordinator
  - o Partner
- Country
- Financing agency
- Year project start
- Year project end (expected end)

#### 1. General

- Have there been major changes since the project started (consortium, budget, timeframe etc.)?
  - o Y/N
  - o if Y please explain
- To which extent have the project objectives been accomplished?
  - o To full extent
  - o Minor deviation please explain
  - o Major deviation please explain
- To which extent have the expected results and deliverables been accomplished?
  - o To full extent
  - o Minor deviation please explain
  - o Major deviation please explain

#### 2. Results

#### 2.1 Innovation oriented results

- What type of the results have you achieved in this M-ERA.NET project (multiple answers possible)?
  - New or improved product
  - New or improved method
  - New or improved model
  - New or improved process
  - o New or improved service
  - New or improved equipment
  - Prototype
  - Other, please specify
- Please indicate the technology readiness level (TRL) at project start and project end?
  - o TRL level project start (1-9)
  - o TRL level project end (1-9)

#### **Technology Readiness Level – definition:**

- TRL 1. basic principles observed
- TRL 2. technology concept formulated
- TRL 3. experimental proof of concept
- TRL 4. technology validated in lab
- TRL 5. technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies)
- TRL 6. technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies)
- TRL 7. system prototype demonstration in operational environment
- TRL 8. system complete and qualified
- TRL 9. actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space)
  - What is the tentative time frame for commercialisation of the results from this project (year to market), where 0 is the end date of the project
    - Already started
    - o 1-2 years
    - o 3-5 years
    - More than 5 years
  - Please specify the number of approved patents, patent applications and licenses corresponding to results from the project for your organisation
    - Patent applications

0 1-2-3 and more

o Licenses

0 1-2-3 and more

#### 2.2 Scientific results

- What are the results achieved?
  - Creating of new knowledge
  - Exploration of existing knowledge
  - o Other
- Please specify the number of publications in per review scientific journals corresponding to the results from this project for your organisation (corresponding author)
  - Publications accepted and/or published

0 1-2 3-4 5-6 more than 6

- o Publications planned for submission within next year 0 1-2 3-4 5-6 more than 6
- Please specify the number of publications in per review scientific journals corresponding to the results from this project for your organisation (co-author)
  - Publications accepted and/or published

0 1-2 3-4 5-6 more than 6

- o Publications planned for submission within next year 0 1-2 3-4 5-6 more than 6
- Please specify number of conference proceedings/presentations
  - o 0 1-5 6-10 10-15 more than 15
  - Other dissemination activity specify
- How many degrees have been achieved as a result of this project (for your organisation)?

 Master degrees 0 1 2 3 5 6 more than 6

0 1 2 3 5 6 more than 6 Doctoral degrees

#### Comments:

#### 3. Economic effects

- Please indicate the effect(s) on your institution/company originating from this project (multiple answers possible)
  - Positive effect on turnover in company
  - New business opportunities
  - o Long term recruitment of staff (permanent or non-permanent)
  - Access to new know-how
  - o Access to new international partners
- How will the results of the project be used (multiple answers possible)?
  - o For R&D efforts in our own organisation/company
  - o For production and business operation in our own company
  - o Other project partners will utiliseutilise the results
  - o Parties outside the consortium will utiliseutilise the results
  - o For new R&D projects
  - o The results will not be utiliseutilised further please explain
  - o Other, please explain

#### Comments:

#### 4. Transnational effects

- Please indicate your previous experience in transnational projects (multiple answers possible)
  - No previous experience
  - Experience as project coordinator
  - Experience as project partner
- What is the main added value of M-ERA.NET compared to national funding? (multiple answers possible)
  - Larger and more ambitious projects
  - Cooperation with European partners
  - Access to international knowledge
  - Cooperation with companies
  - Other , please specify
- What is the added value of M-ERA.NET compared to other transnational funding e.g. EU framework programme?
  - Simpler rules and procedures
  - M-era.NET is more attractive to newcomers
  - M-era.NET puts more emphasis on the exploitation of the results
- Would the project have been realised without M-ERA.Net?
  - o No
  - Yes outside a funding program
  - Yes, within a national/regional funding program
  - o Yes, in an EU Framework program or other transnational funding
- Experiences regarding implementation of the project

Scale: "strongly agree- agree- neither agree nor disagree- disagree- strongly disagree"

- All project partners are committed to the project
- The consortium is stable during the project implementation
- The project's objectives are realistic (i.e. budget, effort, time)
- Project management is effective
- Interaction with the national/regional funding agency is supportive during the project implementation
- Outcomes will be shared fair among the partners according to their inputs.
- Will the co-operation in the consortium continue?
  - Yes outside a funding program
  - Yes, within a national/regional funding program
  - Yes, in an ERA.NET project
  - Yes, in an EU Framework program
  - No, there are no plans for further co-operation

## Annex 2 : Call 2013 -list of funded projects

## M-ERA.NET Call 2013: Funded projects

| Call topic                                           | Call topic Acronym Full |                                                                                                                                                 | Nr.<br>Partners |
|------------------------------------------------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Integrated<br>Computational<br>Materials Engineering | HeuMem                  | Heusler compounds for future magnetic memory and logic                                                                                          | 4               |
| Integrated Computational<br>Materials Engineering    | ANPHASES                | Anisotropy of interphase boundaries in multiscale composite growth structures                                                                   | 4               |
| Integrated Computational<br>Materials Engineering    | ICENAP                  | Integrated Computational Engineering,<br>Characterization and Validation of<br>Semiconductor Colloidal Nanocrystals<br>with Advanced Properties | 4               |
| Integrated Computational<br>Materials Engineering    | ICETS                   | Integrated Combinatorial control of Electrical and Thermal transport properties in Silicides                                                    | 4               |
| Interfaces, Surfaces and<br>Coating                  | NanoGraM                | Graphene Fabrication, Integration and Metrology for Nanoelectromechanical Systems                                                               | 5               |
| Interfaces, Surfaces and<br>Coating                  | NOPYDET                 | Novel generation of pyroelectric detectors based on polar semiconductors                                                                        | 4               |
| Interfaces, Surfaces and<br>Coating                  | Ecofurn                 | Decorative functional coating and/or printing of natural fibre/wood-based lightweight composites used for ecofriendly furniture applications    | 8               |
| Interfaces, Surfaces and<br>Coating                  | INTCERSEN               | Integrated sensors with microfluidic features using LTCC technology                                                                             | 7               |
| Interfaces, Surfaces and<br>Coating                  | METABIO                 | METhod to elaborate bio- inspired stable<br>Antibacterial surface on metallic<br>BIOmaterials for dental implants.                              | 5               |
| Interfaces, Surfaces and<br>Coating                  | COATELY                 | High performance coatings for PEM eletrolyser metallic bipolar plates                                                                           | 4               |
| Interfaces, Surfaces and<br>Coating                  | B-IMPACT                | Bronze-IMproved non-hazardous PAtina<br>CoaTings                                                                                                | 8               |

| Interfaces, Surfaces and<br>Coating          | BIOGRAPHY  | High resolution roll-to-roll printing of biocompatible graphene/protein multilayers for biomedical applications                                | 5 |
|----------------------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------|---|
| Interfaces, Surfaces and<br>Coating          | СМОТ       | Investigation and tuning of graphene electrodes for solution-processable metal oxide thin-film transistors in the area of low-cost electronics | 7 |
| Interfaces, Surfaces and<br>Coating          | GRAFAT     | Graphene for Functionalization of Advanced Textiles                                                                                            | 5 |
| Interfaces, Surfaces and<br>Coating          | ExploGuard | Novel explosive welded corrosion resistant clad materials for geothermal plants                                                                | 4 |
| Interfaces, Surfaces and<br>Coating          | ENPIEZO    | Enabling technology for high- quality piezoMEMS                                                                                                | 4 |
| Interfaces, Surfaces and<br>Coating          | SurLas     | SurLas: Surface functionalization using innovative and cost-effective picosecond fibre Laser sources                                           | 4 |
| Interfaces, Surfaces and<br>Coating          | GRAPHICA   | Graphene for Integrated Circuit Applications                                                                                                   | 4 |
| Interfaces, Surfaces and<br>Coating          | NANOPTICSS | Nanocoatings for Optical Sensor Systems<br>Improvement                                                                                         | 4 |
| Composite Technology                         | GRACE      | Graphene-ceramic composites for tribological application in aqueous environments                                                               | 6 |
| Composite Technology                         | HieroComp  | Functional hierarchical composites for structural applications                                                                                 | 5 |
| Composite Technology                         | COSiFlex   | Composite organic and silicon technologies on flexible substrates                                                                              | 5 |
| Materials for Health                         | M2Neural   | Multifunctional Materials for advanced<br>Neural interfaces                                                                                    | 3 |
| Materials for Health                         | CERACELL   | Feasability study: Development of 3-D patient-tailored bone pieces combining scaffold and bone cells for the repair of bone defects            | 3 |
| Materials for low carbon energy technologies | MOLFIL-CNM | Gas Separation by tailored<br>molecular filters made from Carbon<br>Nanomembranes (CNMs) and<br>Graphene                                       | 5 |
| Materials for low carbon energy technologies | PiezoMEMS  | Piezoelectric MEMS for efficient energy harvesting                                                                                             | 7 |

Note: information on the results of the Call 2013 and the funded projects is also available here:  $\underline{ https://m-era.net/joint-calls/joint-call-2013/results-of-2013-120714.pd}$