



European Energy Research Alliance, EERA MOBILITY TASK FORCE

Deliverable D2.1

Report on available funding instruments at EU level for students/researchers mobility and results from a questionnaire about Mobility in Europe.

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1 Summary

The mobility of researchers in Europe is a key issue toward a better coordination and alignment of Research, Technology, and Development within the European Research Area (ERA). European interested parties, including research centres, universities and agencies underline the importance of an increased mobilization, starting from the university student level up to Managers. The Task Force (TF) setup by the European Research Alliance, EERA, Executive Committee, *ExCo*, in April 2016, received the mandate to deliver a recommended proposal for an operational student and researcher mobility scheme for EERA Joint Programmes members.

This document reports the first study of the EERA TF. It presents the overview, analysis, and comparisons of existing research and industrial mobility programmes within the EU. This includes specific mobility programmes such as the Marie Skłodowska-Curie Actions, Erasmus+, and mobility schemes ongoing in different EU funded projects within EERA members i.e. the Integrated Research Programme in Wind Energy *IRPWind*, and the European Liason on Electricity Committed Towards long-term Research Activity Integrated Research Programme *ELECTRA IRP*, and the, Marine Renewables Infrastructure Network for Emerging Energy Technology, *MaRINET2*.

A questionnaire has been created and distributed on Survey Monkey in order to gain direct knowledge of the mobility actions in different institutions. 76 scientists provided their feedback, allowing having an indication of the effectiveness of each mobility program in mobilizing scientists, their strength and weakness points, and how they can be improved. A major highlight is the unanimous appreciations of the mobility opportunities in providing a large International network and personal development; consequently, there is need of more funding to answer the demand.

2 Introduction

The mobility of researchers in Europe is a key issue to a better coordination and alignment of Research, Technology, and Development within the European Research Area (ERA).

The Energy Union, the SET-Plan, EERA's own strategy implementation plan and the dialogue between EERA and the EC underline the importance of increased mobilization. Researcher mobility is a shared challenge by Universities and Research Institutes and involves the exchange of students and personnel between these institutions and between the institutions and industry.

In April 2016, the EERA ExCo decided to create a Task Force (TF) mandated to deliver a complete recommended proposal for an operational student and researcher mobility scheme for EERA members active within its different Joint Programmes.

The TF includes also two members of the EERA SEC to ensure a good interaction with other relevant EERA activities.

The expected contents of the delivery of the Task Force have been defined as follows:

- Give an overview of existing EU and national instruments in support of student and researcher mobility relevant to objectives, a number of exchanges, duration of exchange

and degree of support or other relevant criteria, including existing EERA instruments (IRP, possibly ECRIA).

- Report on the effectiveness of the existing instruments in terms of exchanges and suggest adjustments to make them more efficient. The focus should be energy related, with best practice from other areas inspiring applications within EERA.
- Propose a set of objectives for European student and researcher exchange within the Energy Union, SET-Plan and national renewable energy areas. The TF will form a clear opinion on the level of exchange to achieve and set objectives will easy to meter and monitor.
- Propose new instruments, based on the lesson learned from existing ones, that meet the proposed objectives to ensure efficient use of resources and estimate the resources needed

The work is developed involving all EERA JPs but cooperation with European University Association (EUA) and a dialogue with all relevant SET Plan stakeholders like member states (MS), COM and industry (through ETIP's or other appropriate fora) will represent a key asset for the Mobility TF.

It is also expected that:

The TF leader shall handle these relations in line with EERA strategies and interests.

The TF reported on progress to the ExCo on the following occasions:

- At the beginning, specific work plan and first discussion on approach with ExCo and JPCs at the summer strategy meeting in Trondheim 28-29th June 2016.
- First findings and discussion on progress in ExCo meeting in fall 2016.
- Presentation of the questionnaire in ExCo Meeting in spring 2017.

The TF is not funded by EERA as such but can seek EU or national funding as an EERA TF as appropriate.

The Work Plan of the Taskforce is split into five Work Packages (WP)

- WP1 – Management
- WP2 – Review of and report on existing mobility schemes/best practices
- WP3 – Development and reporting of an EERA mobility scheme
- WP4 – Relationship with EERA and external stakeholders
- WP5 – Internal and external communication

The goal of WP 2 is to review of and report on existing mobility schemes/best practices by two steps:

1. To collect and report all relevant information about existing funding instruments for mobility of students/researchers at National and EU level
2. To collect and report on relevant information about existing successful best practices at EERA, National and EU level

This report describes the results from step 1, where a desk analysis of existing EU instruments and related requirements have been used as a base to create a questionnaire, step 2. The result of the questionnaire will be used as a reference guideline by the EERA JPs for future implementation of an EERA mobility scheme.

National programmes have been set aside due to the large variety of similar scheme that are often more restrictive than the main EU programmes and do not bring any added value to our goal.

3 Existing Mobility Programmes

3.1 Categories of mobility

3.1.1 Type of exchange

- Inter-academia
- Academia ↔ Public Research Institutions
- Public ↔ Private

3.1.2 Length

- Short-term (< 3 months)
- Long-term (>3months)

3.1.3 Experience

- University Students
- Early Stage Researcher, ESR

Definition of ESR from the European Charter and Code for Researchers¹ -

Early-Stage Researcher refers to researchers in the first four years (full-time equivalent) of their research activity, including the period of research training.

- Experienced Researcher, ER

Definition of ER from the European Charter and Code for Researchers¹ –

Experienced Researchers are defined as researchers having at least four years of research experience (full-time equivalent) since gaining a university diploma giving them access to doctoral studies, in the country in which the degree/diploma was obtained or researchers already in possession of a doctoral degree, regardless of the time taken to acquire it.

¹ <http://ec.europa.eu/euraxess/index.cfm/rights/definitions>

3.2 European Commission Programmes

3.2.1 Marie Skłodowska-Curie actions - Research Fellowship Programme²

“The Marie Skłodowska-Curie Actions, MSCA, named after the double Nobel-Prize-winning Polish-French scientist, support researchers at all stages of their careers, irrespective of nationality.

Researchers working across all disciplines, from life-saving healthcare to 'blue-sky' science, are eligible for funding. The MSCA also support industrial doctorates, combining academic research study with work in companies, and other innovative training that enhances employability and career development.

In addition to generous research funding, scientists have the possibility to gain experience abroad and in the private sector, and to complete their training with competences or disciplines useful for their careers”.

There are three target groups: Early Stage Researchers ESRs, Experienced researchers ERs, and Staff.

The following section summarizes the most important European Mobility schemes. Funding schemes are reported in Appendix II and are extracted from the Horizon 2020. Marie Skłodowska-Curie Actions Work Programme 2016 – 2017.³

3.2.1.1 Individual Fellowships (IF)

This action is meant to support the best, most promising individual researchers from anywhere in the world.

- European Fellowships (EF)

European Fellowships are held in the EU Member States or Associated Countries and are open to researchers either coming to Europe from any country in the world or moving within Europe³.

- Global Fellowships (GF)

Global Fellowships are like the EF but a secondment to a third country is required together with a mandatory 12-month return period to a European host³.

Target groups

- Experienced Researcher (3.1.3) at least four years' full-time research experience by the time of the call deadline thinking about next career move.

Period and conditions

EF: recruitment/fellowship duration: 12-24 months

IF Global Fellowships (GF): recruitment/fellowship duration: 24-36 months (12-24 months for the outgoing phase plus 12-month return phase in Europe)

² <http://ec.europa.eu/research/mariecurieactions/>

³ http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-msca_en.pdf

3.2.1.2 Research and Innovation Staff Exchange (RISE)

Research and Innovation Staff Exchange (RISE) funds short-term exchanges for staff to develop careers combining scientific excellence with exposure to other countries and sectors.

RISE enables more interaction between academia and non-academic organizations within Europe and worldwide.

At least three partners

Target groups

- Staff. exchange to gain experience in a different work environment (academic, private sector) or in another country.

Period and conditions

- Secondment of staff members for one month to one year. They must be engaged in or linked to research and innovation activities for at least six months prior to the secondment. They return to the sending organization after the secondment, to pass on their knowledge.
- Funding for a RISE project can last up to four years.

3.2.1.3 Innovative Training Networks, ITN

ITN supports partnerships of universities, research institutions, research infrastructures, businesses, SMEs, and other socio-economic actors from different countries across Europe and beyond committed to implementing research training and/or doctoral programmes, to ESRs.

Partnerships are competitively selected and take the form of collaborative European Training Networks (ETN), European Industrial Doctorates (EID) or European Joint Doctorates (EJD):

- European Training Networks (ETN)
- European Industrial Doctorates (EID)
- European Joint Doctorates (EJD)

Target groups

ESRs

Period and conditions

ETN Recruitment/fellowship duration: 3-36 months. Secondment at other participating organizations is possible for up to 30% of the fellowship duration.

EID. Duration 36 months. Secondment at other participating organizations has no limitations as in the ETN.

EID, Duration 36 months. Researchers must spend at least 50% of their time in the non-academic sector. The inter-sectoral mobility has to be among participating organizations located in different countries.

3.2.1.4 Co-funding of regional, national and international programmes (COFUND) Organizations level.

“The COFUND scheme aims to stimulate regional, national or international programmes to foster excellence in researchers' training, mobility, and career development, spreading the best practices of the Marie Skłodowska-Curie Actions.



This will be achieved by co-funding new or existing regional, national, and international programmes to open up to, and provide for, international, inter-sectoral and interdisciplinary research training, as well as transnational and cross-sectoral mobility of researchers at all stages of their career”.

COFUND can take the form of:

- Doctoral programmes.
- Fellowship programmes for experienced researchers.

For programmes where the fellowship is outside an EU Member State or a Horizon 2020 associated country, the return phase to a Member State/associated country may not be longer than 50% of the total duration of the research training activity.

Target group

Mixed scheme ESRs ERs.

Period and conditions

Conditions: as for the other instruments. In COFUND, applicants cannot be permanent employees at organizations.

Duration: minimum 3 months to 36 months

3.3 Erasmus+

“Erasmus+⁴ is the EU Programme in the fields of education, training, youth, and sport for the period 2014-2020. Education, training, youth, and sport can make a major contribution to help tackle socio-economic changes, the key challenges that Europe will be facing until the end of the decade and to support the implementation of the European policy agenda for growth, jobs, equity and social inclusion.

The Erasmus+ is the result of the integration of different previous European programmes as Tempus, Alfa, Edulink, Erasmus Mundus, etc. It aims at promoting synergies and cross-fertilization throughout the different fields of education, training, and research, stimulating new forms of cooperation. It is intended to improve the level of key competencies and skills of young people and to enhance cooperation between organizations and disseminate good practices.”

Target groups:

The Key Action 1, (KA1) is intended for mobility purposes. It is called “Learning mobility of individuals” with opportunities for:

- Higher education students and staff: organizations send or receive students (master or doctoral) to study or do a traineeship and staff to teach or train
- Vocational education and training (VET) learners and staff: identical but for VET learners or staff
- School education staff: identical but for staff (only) of schools
- Adult education staff: identical but for adult education organizations
- Young people and youth workers: this allows groups of young people to work together on a project (during 3 weeks)
- Erasmus Mundus Joint Master Degrees (with each time three annual selections)

⁴ https://ec.europa.eu/programmes/erasmus-plus/sites/erasmusplus/files/files/resources/erasmus-plus-programme-guide_en.pdf

- Erasmus+ Master loans.

Periods and conditions:

- Between 3 and 12 months for the study and trainee programmes and
- Between 1 week and 3 months for staff mobility.

The grant covers:

- Organisational support (travel and subsistence)
- Special support (for participants with disabilities) and
- Exceptional costs (as a financial guarantee in some cases).

Funding received by the mobility person depends on the receiving country.

The diagrams in Figure 1 shows the type of mobility schemes available in Europe in dedicated Mobility programmes and in EU Funded projects.

4 OTHER European Short-Term Mobility

4.1 Exchange of researchers in R&D projects within FP7 and H2020 projects

4.1.1 Integrated Research Programme IRPWind and ELECTRA IRP

The two EERA Integrated Research Programmes IRP, IRPWind, and IRPELECTRA, funded within FP7, include a Work Package dedicated to the Mobility of researchers.

Table 1 shows the comparison between the mobility programmes in IRPWind and IRP Electra in both funding and target group strategy.

Table 1: Comparison between IRPWind and IRP Electra

| IRPWind, WP Mobility: 750 K€ | IRP ELECTRA, WP Mobility: 400 K€ |
|--|--|
| <ul style="list-style-type: none"> • Only experienced staff - no Ph.D. | <ul style="list-style-type: none"> • Ph.D. and staff |
| <ul style="list-style-type: none"> • Intra IRPWind exchange | <ul style="list-style-type: none"> • Intra Electra exchange |
| <ul style="list-style-type: none"> • Within the EERA JPWind partners | <ul style="list-style-type: none"> • European exchange |
| <ul style="list-style-type: none"> • Only Europe | <ul style="list-style-type: none"> • Global exchange |
| <ul style="list-style-type: none"> • Different schemes were tested: <ul style="list-style-type: none"> - 1 month, 3 and 6 months (1st year) - From 4 weeks to 26 weeks - From 2 weeks to 4 weeks (only for Managers) | <ul style="list-style-type: none"> • From 2 weeks to 12 weeks |
| <ul style="list-style-type: none"> • No max limit for funding | <ul style="list-style-type: none"> • No max limit for funding but co-funding invited for longer exchanges |



- | | |
|--|---|
| <ul style="list-style-type: none"> • Freedom of topics (bottom-up) • Call open twice a year (1st year) • Continuous call | <ul style="list-style-type: none"> • Topic calls (Top down) and self-defined • Call open twice a year |
|--|---|

Exchange workshops organized as annual conference sessions

The initial IRPWind mobility programme was set very ambitious with the goal to mobilize researchers with seniority from scientist or higher. The idea behind was that European Ph.Ds ESRs have programmes that support their mobility, e.g. the Marie Curie Network Programme and often own National funding. Although the IRPWind mobility programme received a great deal of attention, it has been hampered by the lack of flexibility needed to cater for the working conditions and/or family life of experienced researchers. However, reflecting on how to boost mobility, synergy has been found with the very successful *Infrastructures programme* that was further supported with funding for additional joint experiments. This change in the work programme is based on the affinity of the two WPs in mobilizing scientists: the joint experiment mobilizing groups of scientists through joint experimental activities, the mobility by mobilizing individual scientists.

4.2 Mobility in large Infrastructure Projects (MARINET2)

Projects giving access to large infrastructures, e.g. Marinet2, provide free access to a world-leading network of test facilities. This allows technology developers to validate concepts and generate the additional investment needed to move towards the marketplace. There will be yearly calls for applications where individuals or groups can apply.

This is also a type of Mobility that could link organizations and some time could bring in contact groups working in border sectors e.g. offshore wind and marine energy such as waves and currents, or naval and wind engineers.

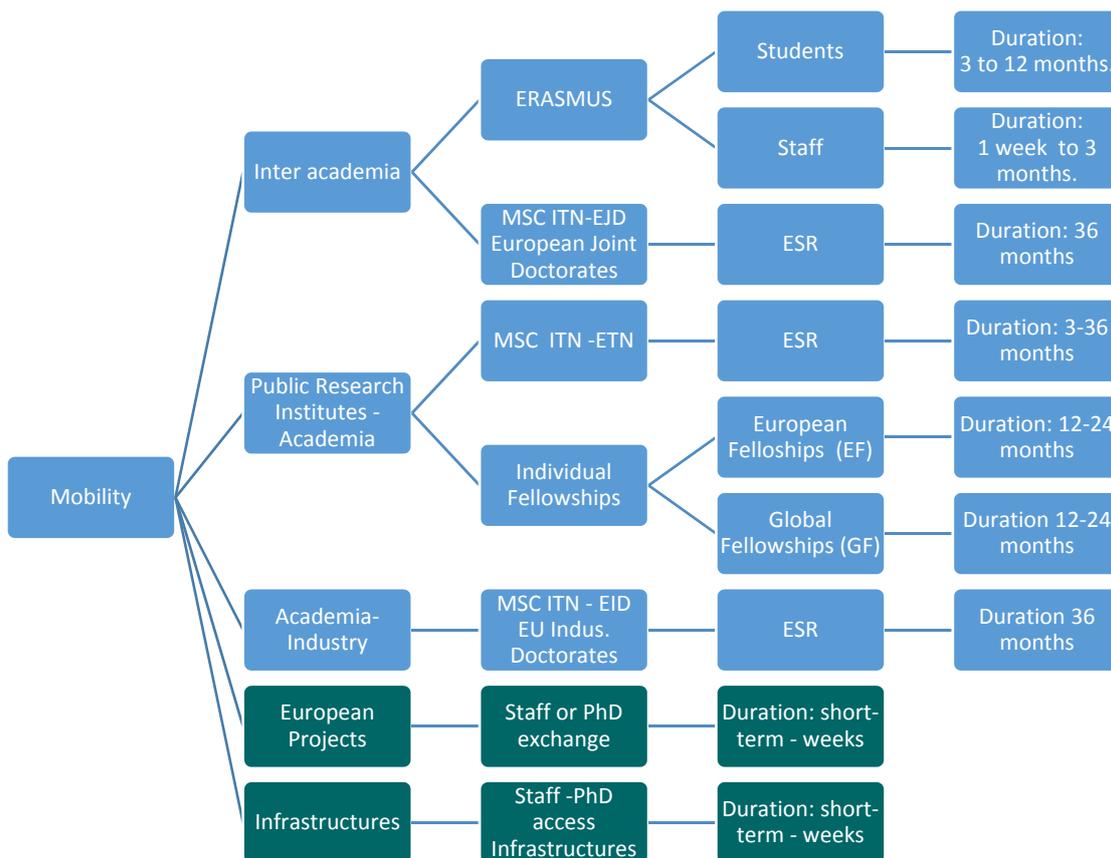


Figure 1: Diagrams summarizing the mobility schemes available in Europe in dedicated Mobility programmes and in EU Funded projects. Schemes are catalogued according to types of host organizations.

5 EERA Mobility Scheme Questionnaire

5.1 Why the questionnaire

After the review of the existing schemes, one of the key activities in the workplan is the collection of relevant experiences at EU and National level and the subsequent analysis of them. This will enable the determination of inspiring and innovative best practices to be used in the development of an EERA mobility scheme and support its testing across the Energy sector.

The EERA Task Force thus developed a questionnaire with the purpose of collecting relevant information and experience concerning available national and international instruments, supporting researcher (academic or industrial) and student mobility in any thematic area within the energy domain. The combination of scheme information and participant experience provides a useful insight for the recognition and discernment of best practice.

The following sections describe the formation of the questionnaire and the analysis of the results. This piece of work is complemented by the reviews and analysis conducted within projects themselves e.g. [1], [2] and [3].

5.2 Process to create the questionnaire

The questionnaire was firstly drafted, building on the experience within the mobility activities of the aforementioned IRPs. The wording and content were reviewed within the Task Force,



and subsequently disseminated and discussed with a broader set of researchers from across the energy domain.

In order to support this, a special dissemination and review session was organized at the First European Energy Research Alliance Conference, 2016. The event held in Birmingham in November 2016 attracted over two hundred participants to a varied and interdisciplinary programme, all of which learned of the ELECTRA REX mobility programme and the opportunities for interdisciplinary research collaboration by way of an EERA success story case study (see figure below). In one of the special sessions an audience of around thirty researchers from different strands of energy research heard a joint presentation from the ELECTRA REX Coordinator and Mobility Task Force Coordinator, and then proceeded into a dedicated discussion forum that allowed the participants from a number of differing EERA JPs and backgrounds to consider the nature and needs of effective mobility programmes. The group considered the draft task force questionnaire, offering suggested changes and additions for inclusion in the questionnaire.

The questionnaire was subsequently updated, posted to “Survey Monkey” and circulated to a wide range of stakeholders including:

- University groups including EUA (European University Association), CESAER (Conference of European Schools for Advanced Engineering Education and Research), N5T (Nordic Five Tech, EUROTECH UNIVERSITIES, THE GUILD, LERU (League of European Research Universities), YERUN (Young European Research University Network)
- Industry groups including BUSINESS EUROPE, ENERGY RELATED TECHNOLOGY PLATFORMS, Biofuels ETP, Photovoltaic ETP, Ocean energy Europe, Renewable Heating and Cooling, European Technology and Innovation Platform for Smart Network for Energy Transition, SNETP, ETP Wind, ZEP
- RTOs including EARTO, EERA JPs, ERRIN, IGLO

The questionnaire as hosted on Survey Monkey is summarised in Appendix I.

The slide features the EERA logo and the title "The ELECTRA REX mobility programme for smart grid researchers". It includes a photograph of a woman looking at a tablet. The text on the slide describes the programme as a mobility scheme for smart grid researchers, launched in November 2014, and mentions that it has promoted 25 exchanges so far. A quote from Susanna Marini, JP Smart Grids Coordinator, is also included.

EERA success stories

The ELECTRA REX mobility programme for smart grid researchers

Over 25 exchanges involving research organizations and industry to help Europe progress in the development of grid technologies

The ELECTRA REX's Researcher Exchange (REX) Programme is a mobility scheme for smart grid researchers. It is developed under the ELECTRA Integrated Research Programme (IRP) on Smart Grids, an EU funded project which brings together the partners of the EERA Joint Programme on Smart Grids (JP SG) to reinforce and accelerate Europe's medium to long-term research cooperation in this area and to support integration of research programmes. ELECTRA REX offers international and European operators and researchers the opportunity to work closely with EERA & ELECTRA partners through an exchange of staff or research students. The scheme is open to participants from research organisations and industry, including SMEs.

Launched in November 2014 with a first call, and now in its fifth edition, the ELECTRA-REX Programme has promoted 25 exchanges so far: fourteen within Europe, involving ELECTRA Partners, JP Smart Grid members and other European organisations ("European exchanges") or solely ELECTRA or JP Smart Grids partners ("intra-ELECTRA exchanges"), the remaining nine involving organisations from non-EU countries ("Global exchanges").

"The ELECTRA REX mobility programme has attracted significant interest, as well as providing excellent opportunities for in-depth research collaboration between industry and research organisations. From an EERA point of view, it has also supported the Joint Programme in European coordination and international engagement."

Susanna Marini, JP Smart Grids Coordinator

Main achievements of ELECTRA REX are not only the results in terms of exchanges, but also the innovativeness of the overall scheme, based on a well-defined procedure for the whole process: call, selection, execution of the exchange, exploitation and dissemination of results, the latter being one of the most innovative features.

The results of the exchange programmes are exploited and disseminated through collaborative peer-

5.3 Analysis of the questionnaire.

The questionnaire attracted a total of 74 respondents from 16 countries. The following charts describe the nature of the individuals and organizations who took part in the survey:

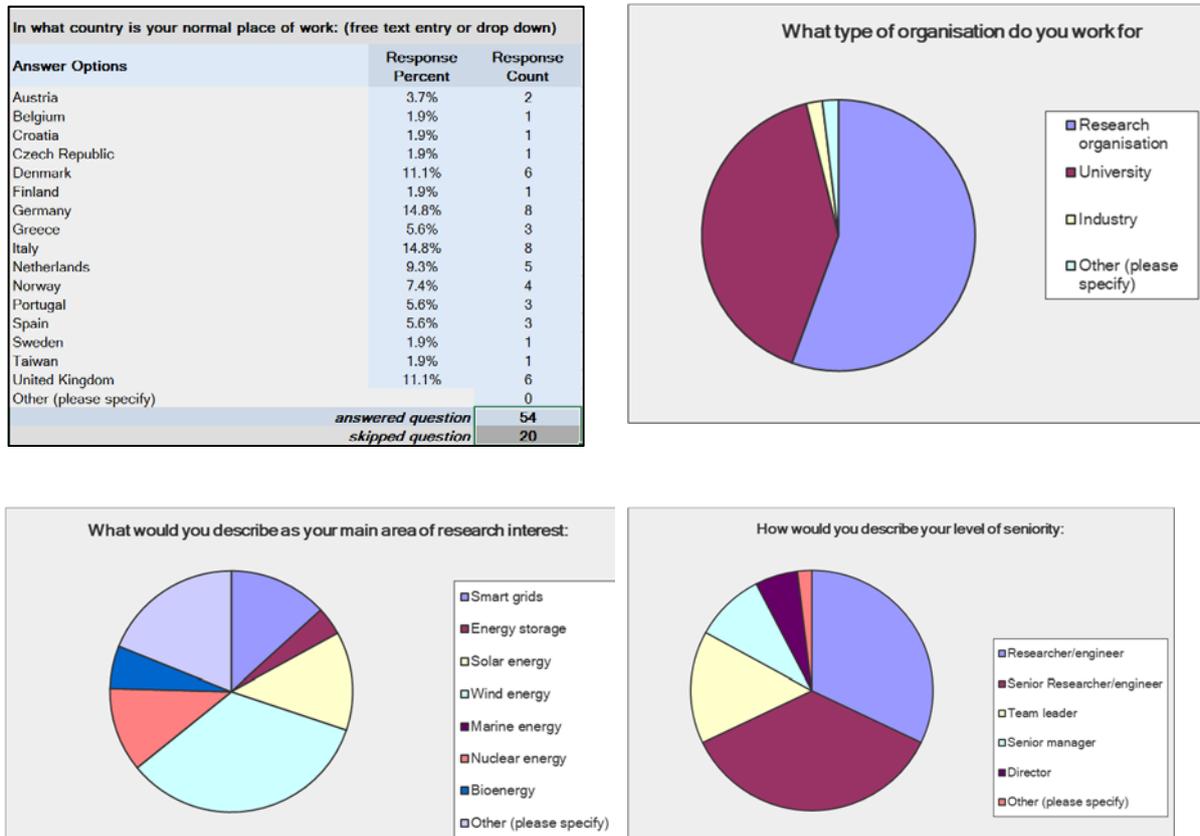


Figure 2: Charts reviewing the nature of the individuals and organizations represented in the survey.

The respondents reflected on a number of different mobility schemes as described in the following charts. They were in the main speaking from a position of understanding, with the majority reporting personal or organizational experience.

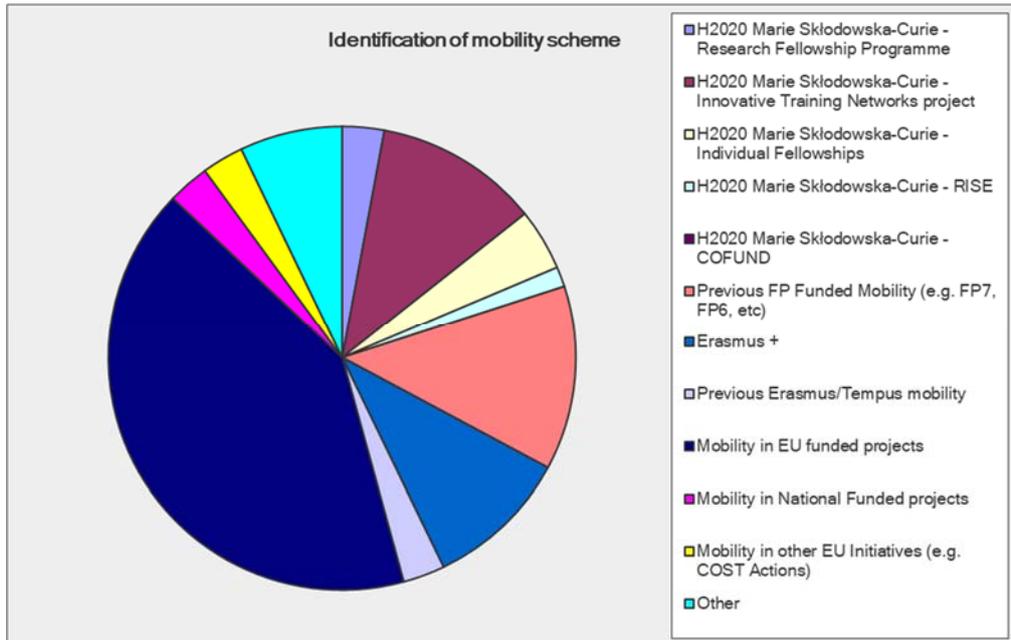


Figure 3: Distribution of respondents in different mobility schemes

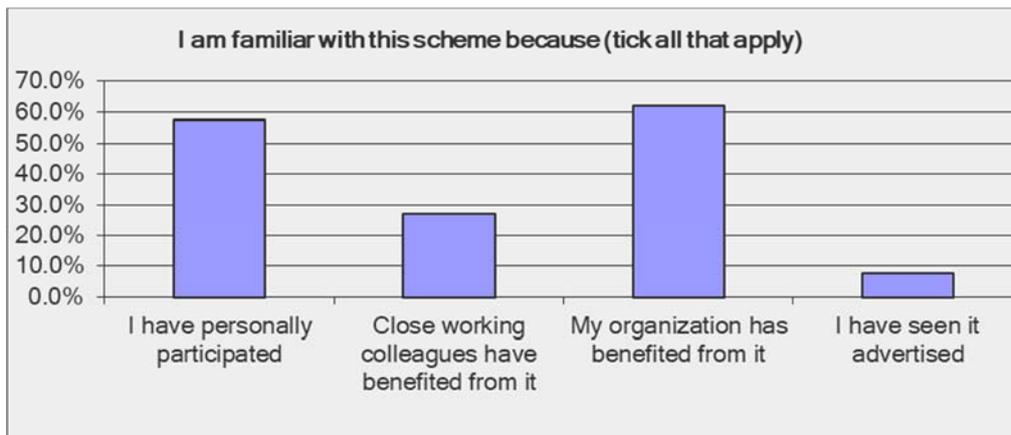


Figure 4: Respondents relationship with the mobility schemes

The majority of the reported schemes are focussed on collaboration between research organizations, and support several exchanges per year between project or European partners as confirmed by the following figures.

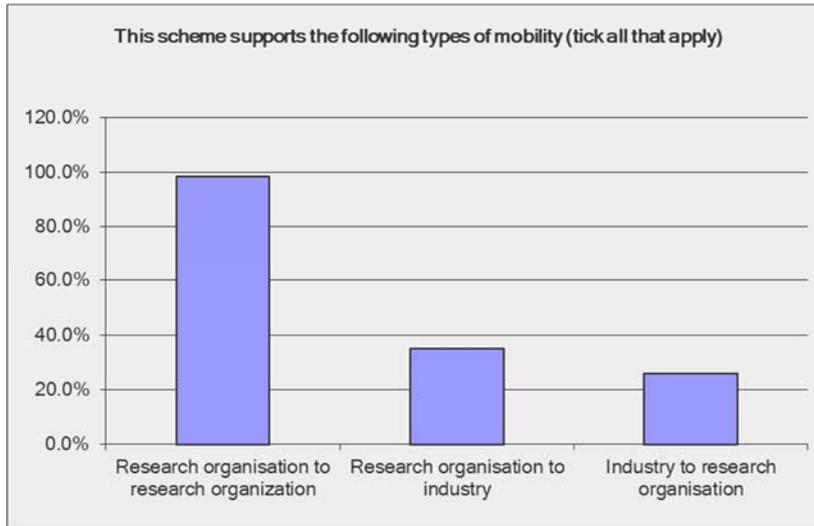


Figure 5: Types of mobility supported by the scheme

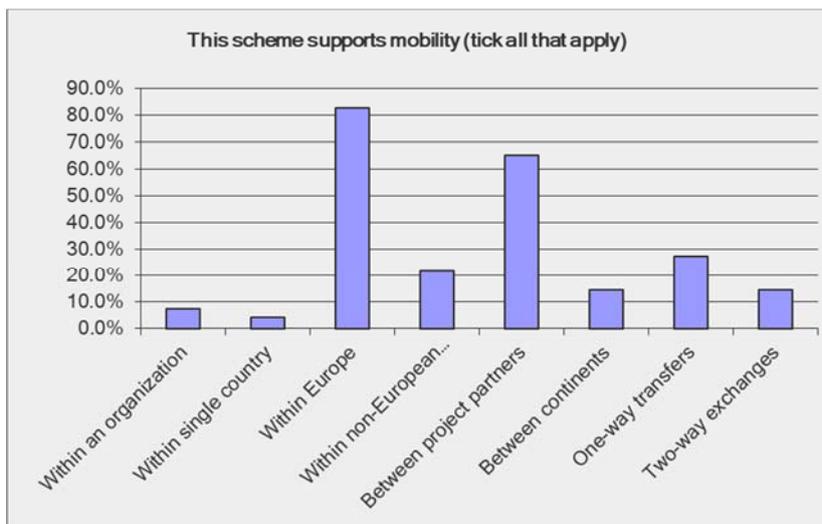


Figure 6: Form of mobility supported by schemes

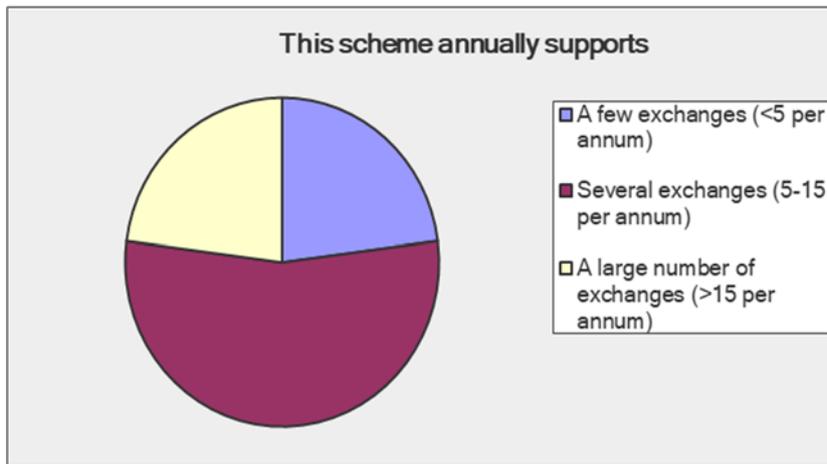


Figure 7: Scope of exchanges supported by scheme annually

A range of recipients is open to participating in these, with the majority of the schemes offering exchanges that are either medium or long duration and providing support for only travel and subsistence. These are summarised below together with their key features:

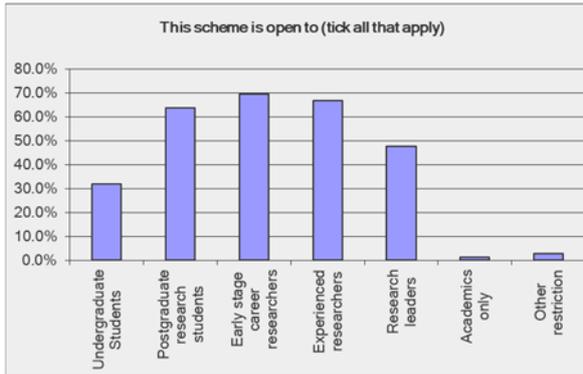


Figure 8: Stages of research certified to attend in the scheme.

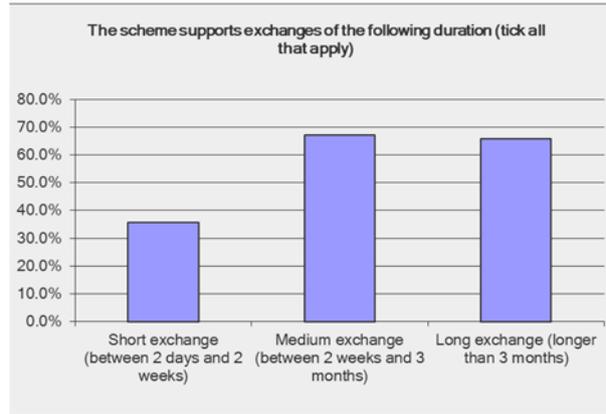


Figure 9: Duration of exchanges supported by the scheme.

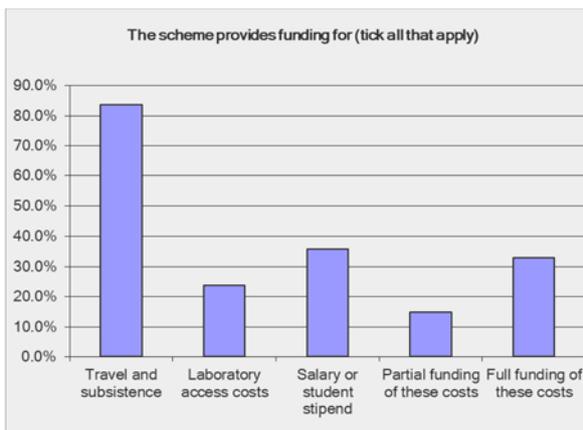


Figure 10: Types of funding covered by the scheme.

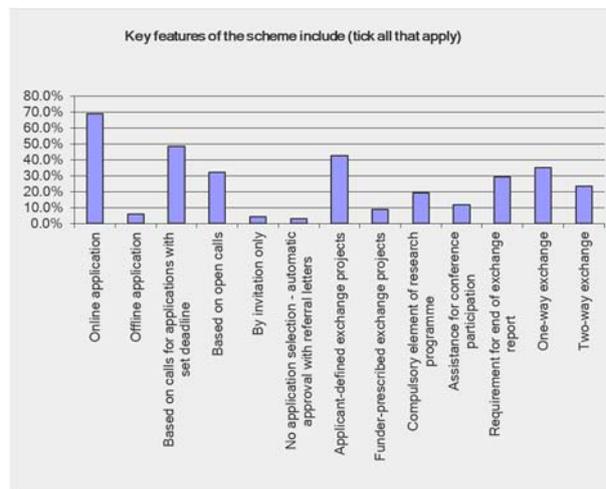


Figure 11: Ways of accessing the scheme.

The primary benefits of these mobility programmes are reported as follows. This shows that training and personal development was by far the top ranking benefit. International experience and of professional networking are each showing as the next most valuable benefit of mobility.

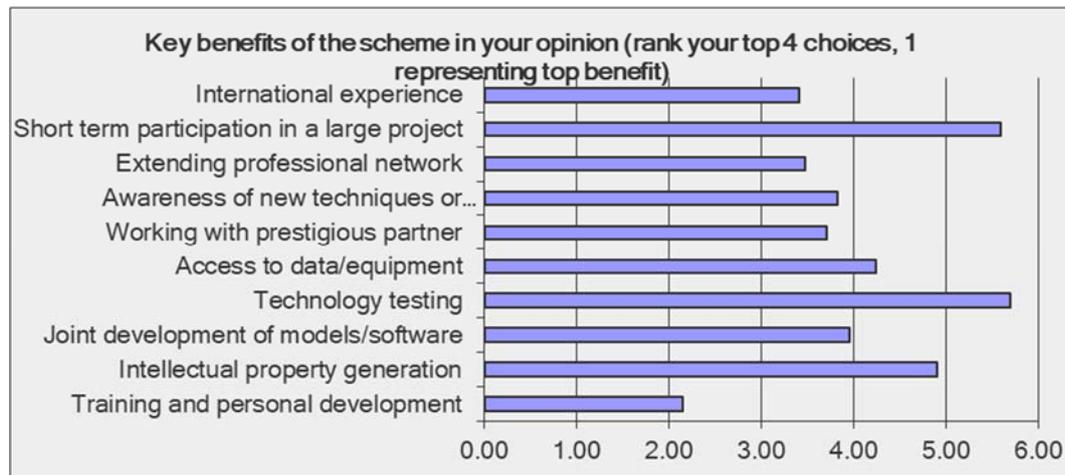


Figure 12: Primary benefits of mobility programme.

The recipients were invited to comment on those aspects that they thought best practice, and those considered to be aspects requiring improvement. These are listed under Q11 in the full questionnaire report.

In terms of the respondents' own experience, the majority have personally participated in exchanges, report their organisations benefited, and would encourage others to participate. They do report work load and family status as the two greatest limiting factors, though some further limiting factors have been elaborated.

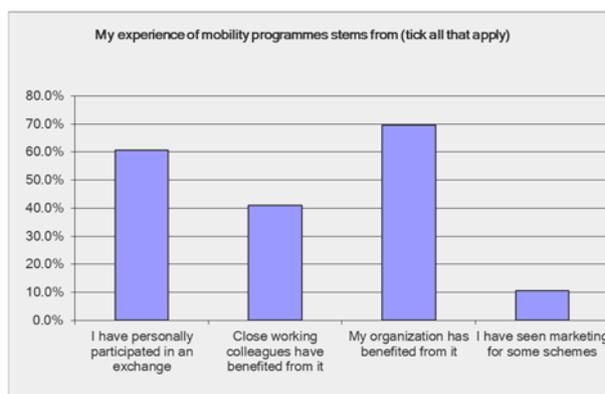


Figure 13: Respondents experience with mobility programmes.

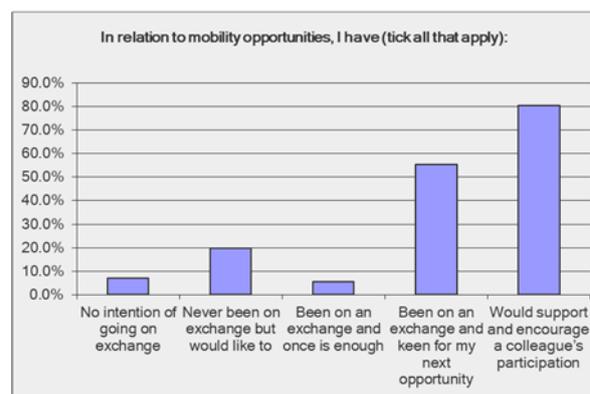


Figure 14: Respondents experience and approach towards mobility opportunities.

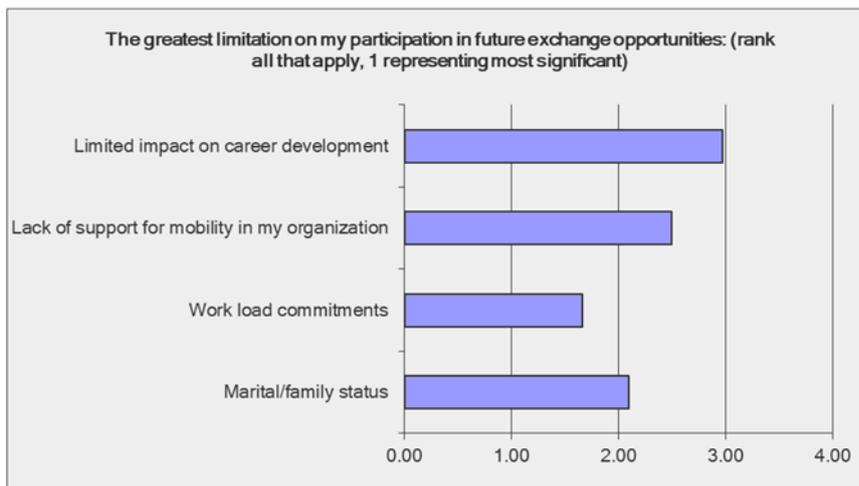


Figure 15: Limiting factors for participating in exchange opportunities.

| Number | Response Text |
|--------|--|
| | this scheme is ending, after a couple of years when I would like to participate |
| 1 | next, perhaps no scheme to apply for |
| 2 | Suitable reason/topic: I don't want to go "just because I can"; should have a real net benefit. |
| 3 | 2 weeks is too short for an impact on career development. longer stays sometimes desirable. |
| 4 | Other projects might suffer because of the lack of direct communication with colleagues |
| 5 | Difficult to transfer responsibilities at home when abroad for a longer duration For non-profit research institutes one will need a large R&D project to cover hour costs while on exchange since the usual work situation is to work on several projects and mobility will only cover direct extra costs for transport and subsistence |
| 6 | N/A |
| 7 | Support if partial funding needed. Age/career stage limitations. The way of funding the researcher, who should collect and keep all receipts. |
| 8 | Maybe a better way for funding, more efficient, should be found. |
| 9 | N/A |
| 10 | 3- Not involved in public research any longer (industry). |

The respondents felt that their own careers would benefit most from a mobility experience through the opportunity to extend their professional network and the opportunity to access specialist knowledge. This was followed by their expectation of personal development resulting from the experience. This is perhaps further reflected in the perception that exchanges are of greatest benefit to early career researchers.

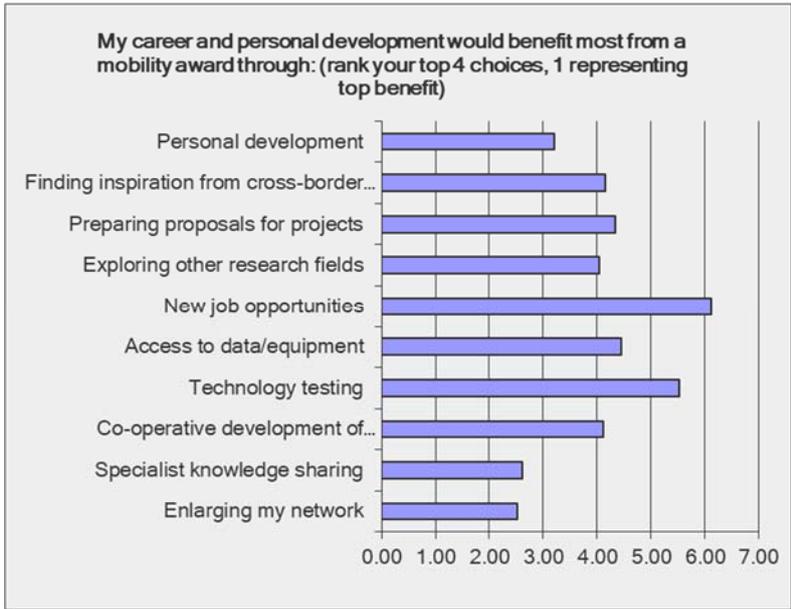


Figure 16: Most desirable features in a future EERA scheme.

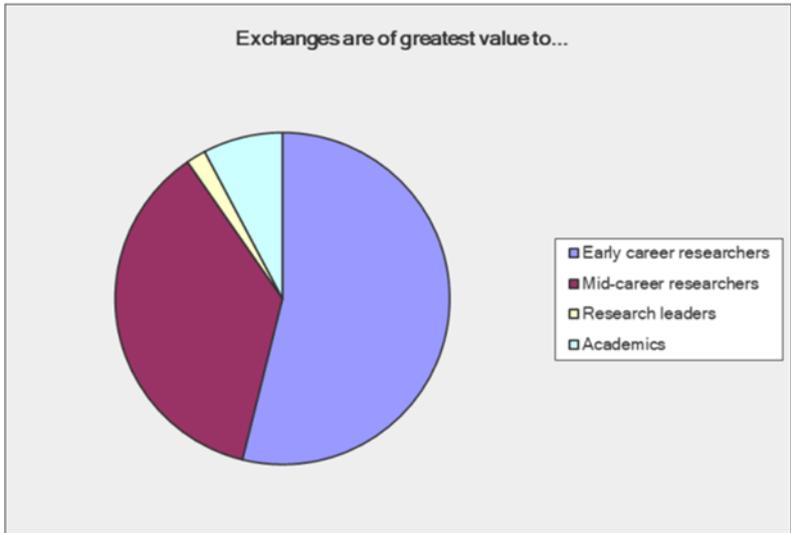


Figure 17: Overview of which group exchange is seen as most valueable.

The respondents were further invited to reflect on the most desirable features they would like to see in a future EERA mobility scheme. The top choices highlighted by the respondents were, almost equally, the provision of funds for of laboratory access as well as travel and subsistence, and being responsive to rapid approval and quick starts using standard agreements. The support for two-way exchanges and the avoidance of a quality review process resulted in least significance.

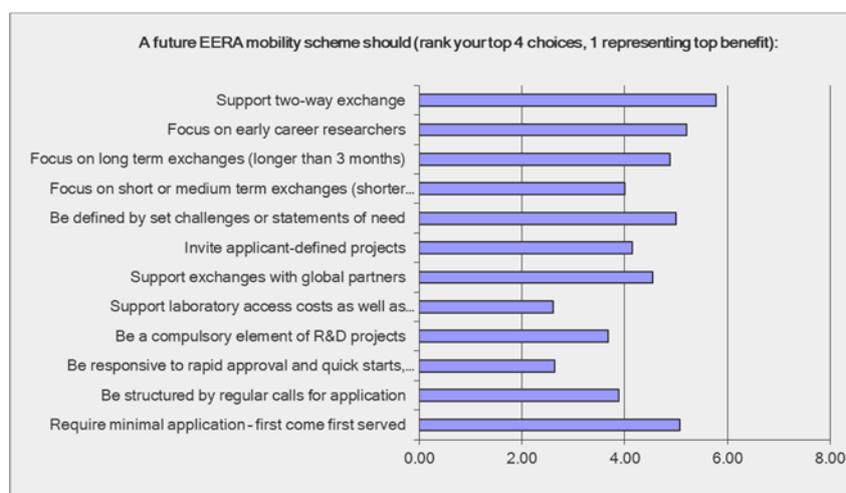


Figure 18: Desired structures of a future EERA mobility scheme.

While it has to be recognized that this survey includes a large measure of self-selection, given that non-responses were not included in the data, it does provide some insight on the characteristics of exchange programmes that are currently available, notably the perception of their pros and cons.

The results of this survey demonstrate that there is some enthusiasm for exchanges, that the experience offers personal and organizational benefit, and that an EERA scheme that supports rapid response and contribution to laboratory costs would be particularly welcomed.

5.4 Conclusive remarks.

In this report, we outline the main mobility programmes in Europe. Mobility programmes are mostly oriented toward education, training of ERSs and career development of young ERs. In these programmes, strengthen of collaboration and transfer of knowledge happen through the exchange of Ph.D. student between teams from different public and private sectors. The team at host organizations are provided with brilliant workforce but do not get any funding for their work.

The success rate for the applications submitted to the various EU dedicated programmes is very low for ITN Networks and Individual fellowships. This is a two-fold indicator: on one hand there is a positive response to and need for mobility or researchers in Europe, on the other hand, there is relatively little funding with respect to the number of proposals submitted so that it does not satisfy the real need.

What might be missing is the support to ESRs that only need training for building up experience and a CV to either start their own company or working in the industry.

Strengthen of collaboration and transfer of knowledge across teams and border sectors, and funneling ideas into innovation, happen mostly through funded projects where common goals must be reached.

Results⁵ from the IRPWind questionnaires from grantees and discussions during the Mobility sessions at IRPWind Conferences enhanced the need for flexibility in the schemes.

To introduce new types of flexibility in the whole process, we envisaged:

- Continuous open calls;
- Possibility to fraction at least the longer grants in shorter periods;
- Action from the host institution to facilitate the individuation of logistic solution for families, and
- Agreements to facilitate overcoming obstacles posed by different administrative rules in different countries.

About women participation. In IRPWind, female scientists submitted 5 applications and it must be mentioned that three applications were from the same female researcher who applied to stay at different Institutions for three different periods each of three-months length.

All three female researchers are married and this suggests that motivation to mobility might overcomes general personal reason obstacles. However, mobility was made easier for the following reasons:

- Possibility for husbands to join for certain periods,
- Possibility for husbands to come along for the whole period,
- Possibility to bring along a baby child, and
- Support from the family at home.

Therefore, it seems that a “portable” family is a necessary condition for mobility. Similar conclusions can be drawn from male researchers.

A “family allowance” to top up the salary as in the MSC ITN and IF or support at the host institution would be an added value.

⁵ http://www.irpwind.eu/-/media/Sites/Irpwind/Publications/Deliverables/D-5-7-Guidelines-Best-practice_document.ashx?la=da

Table 2: Summary of the different mobility schemes in Europe classified by the main goal.

| Purpose | Type of projects | Time length | Target group | Comment |
|---|--|-----------------------------------|----------------------------|---|
| International Education | ERASMUS+ | Long-term | ESR Doctoral programmes | Students need full support Little money, family must support |
| | MSC ITN | Long-term | ESR Doctoral programmes | ESRs need full support Good support conditions |
| Create an international network and career development and transfer new knowledge | MSC IF | Long-term | Post-doc | Post -It needs full support |
| Strengthen collaborations | MSC RISE, IRPWind / Electra and FP/H2020 projects | Short-term <6 months | Researchers/seniors | It needs economic incentives |
| Reaching faster results Transfer of knowledge | IRPWind / Electra and other FP/H2020 projects | Short-term 1-3 months | Researchers/seniors | It needs economic incentives. E.g. ad hoc funding allocation within the project from the proposal stage. |
| Use of infrastructures | FP7 (MARINET1, IRPWind WP infrastructures) H2020 MARINET2 | Short-term < 1 Month | From ESR to Seniors | The sending institution must also support this mobility. However, but the support pays back in terms of free-of-charge access to large infrastructure |
| Border sectors transfer of knowledge | Marinet 1&2 MSC-RISE | Medium Short-term 6 months< 1y | From ESR to Seniors | Little funding for mobility |
| Public to Industry (ideas funnelling and testing) | MSC ITN-ETN, ITN-IDN Collaborative projects. | Mediu-Short-term | From ESR to Seniors | Depends on the level of openness of the Industrial partner |

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7 Appendices

7.1 Appendix I: Summary of the mobility questionnaire posted to SurveyMonkey

About the mobility schemes you have knowledge of: please complete Q1-11 for each scheme.

1. Identification of mobility scheme
 - ✓ Name of scheme: (free text entry)
 - ✓ Associated web site: (free text entry)
2. I am familiar with this scheme because:
 - ✓ I have personally participated
 - ✓ Close working colleagues have benefited from it
 - ✓ My organization has benefited from it
 - ✓ I have seen it advertised
 - ✓ Other: (free text entry)
3. This scheme supports the following types of mobility (tick all that apply):
 - ✓ Research organisation to research organization
 - ✓ Research organisation to industry
 - ✓ Industry to research organisation
4. This scheme supports mobility (tick all that apply):
 - ✓ Within an organization
 - ✓ Within single country
 - ✓ Within Europe
 - ✓ Within non-European continent
 - ✓ Between project partners
 - ✓ Between continents
 - ✓ One-way transfers
 - ✓ Two-way exchanges
 - ✓ Provide specific details, e.g. specific countries eligible: (free text)

5. This scheme annually supports:
 - ✓ A few exchanges (<5 per annum)
 - ✓ Several exchanges (5-15 per annum)
 - ✓ A large number of exchanges (>15 per annum)
6. This scheme is open to (tick all that apply):
 - ✓ Undergraduate students
 - ✓ Research students
 - ✓ Early career researchers
 - ✓ Mid-career researchers
 - ✓ Research leaders
 - ✓ Academics only
 - ✓ Other restriction: (free text entry)
7. The scheme supports exchanges of the following duration (tick all that apply):
 - ✓ Visit (less than 2 days)
 - ✓ Short exchange (between 2 days and 2 weeks)
 - ✓ Medium exchange (between 2 weeks and 3 months)
 - ✓ Long exchange (longer than 3 months)
8. The scheme provides funding for (tick all that apply):
 - ✓ Travel and subsistence
 - ✓ Laboratory access costs
 - ✓ Salary or student stipend
 - ✓ Partial funding of these costs
 - ✓ Full funding of these costs

9. Key features of the scheme include (tick all that apply):
- ✓ Online application
 - ✓ Offline application
 - ✓ No application selection – automatic approval with referral letters
 - ✓ Applicant-defined projects
 - ✓ Funder-prescribed projects
 - ✓ Compulsory element of research programme
 - ✓ Assistance for conference participation
 - ✓ Requirement for end of exchange report
 - ✓ One-way exchange
 - ✓ Two-way exchange
 - ✓ Based on calls for applications, with deadlines
 - ✓ Based on open invitations
10. Key benefits of the scheme in your opinion (rank all that apply, 1 representing top benefit):
- ✓ Training and personal development
 - ✓ Intellectual property generation
 - ✓ Joint development of models/software
 - ✓ Technology testing
 - ✓ Access to data/equipment
 - ✓ Working with prestigious partner
 - ✓ Awareness of new techniques or technologies
 - ✓ Extending professional network
 - ✓ Short term participation in a large project
 - ✓ International experience
 - ✓ Other: (free text entry)
11. This scheme
- ✓ Represents best practice in this regard: (free text entry)
 - ✓ Could be improved in this regard: (free text entry)

About your experience and opinions: please also complete Q12-17.

12. My experience of mobility programmes stems from:
- ✓ I have personally participated in an exchange
 - ✓ Close working colleagues have benefited from it
 - ✓ My organization has benefited from it
 - ✓ I have seen marketing for some schemes
 - ✓ Other: (free text entry)
13. In relation to mobility opportunities, I have (tick all that apply):
- ✓ No intention of going on exchange
 - ✓ Never been on exchange but would like to
 - ✓ Been on an exchange and once is enough
 - ✓ Been on an exchange and keen for my next opportunity
 - ✓ Would support and encourage a colleague's participation
14. The greatest limitation on my participation in future exchange opportunities: (rank all that apply, 1 representing most significant)
- ✓ Marital/family status
 - ✓ Work load commitments
 - ✓ Lack of support for mobility in my organization
 - ✓ Limited impact on career development
 - ✓ Other: (free text entry)

15. My career and personal development would benefit most from a mobility award through: (rank all that apply, 1 representing top benefit)
- ✓ Enlarging my network
 - ✓ Specialist knowledge sharing
 - ✓ Cooperative development of technology/software/models
 - ✓ Technology testing
 - ✓ Access to data/equipment
 - ✓ New job opportunities
 - ✓ Exploring other research fields
 - ✓ Preparing proposals for projects
 - ✓ Finding inspiration from cross-border sectors/disciplines
 - ✓ Other: (free text entry)
16. Exchanges are of greatest value to:
- ✓ Early career researchers
 - ✓ Mid-career researchers
 - ✓ Research leaders
 - ✓ Academics
17. A future EERA mobility scheme should (rank all that apply, 1 representing most important):
- ✓ Require minimal application – first come first served
 - ✓ Be structured by regular calls for application
 - ✓ Be responsive to rapid approval and quick starts, supported by standard agreements
 - ✓ Be a compulsory element of R&D projects
 - ✓ Support laboratory access costs as well as travel/subsistence
 - ✓ Support exchanges with global partners
 - ✓ Invite applicant-defined projects
 - ✓ Be defined by set challenges or statements of need
 - ✓ Focus on short or medium term exchanges (shorter than 3 months)
 - ✓ Focus on long term exchanges (longer than 3 months)
 - ✓ Focus on early career researchers
 - ✓ Support two-way exchange
 - ✓ Other: (free text entry)

About you and your organisation: please lastly complete Q18-22.

18. In what country is your normal place of work: (free text entry or drop down)
19. What type of organisation do you work for:
- ✓ Research organisation
 - ✓ University
 - ✓ Industry
 - ✓ Other: (free text entry)
20. How would you describe your level of seniority:
- ✓ Researcher/engineer
 - ✓ Team leader
 - ✓ Senior manager
 - ✓ Director
 - ✓ Other: (free text entry)
21. What would you describe as your main area of research interest:
- ✓ Smart grids
 - ✓ Energy storage
 - ✓ Solar energy
 - ✓ Wind energy
 - ✓ Marine energy
 - ✓ Nuclear energy
 - ✓ Other energy sectors: (free text entry)
 - ✓ Other non-energy: (free text entry)
22. If you would like to have the opportunity to comment further on the results from this questionnaire, then please provide a contact email address: (free text entry)

7.2 Appendix II: Funding Schemes of the H2020 Marie Skłodowska-Curie Programme for different categories.



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Table 2: Country correction coefficients (CCC) for ITN and IF living allowances

For countries where the correction coefficient is not indicated, the Commission will decide on a case-by-case basis.

| Country Code ³⁴ | CCC | | | | |
|----------------------------|--------|--|--------|------------------------|--------|
| EU Member States | | | | | |
| AT | 104.8% | HU | 76.2% | ME | 66.9% |
| BE | 100.0% | IE | 113.5% | MK | 68.4% |
| BG | 71.5% | IT | 106.7% | NO | 131.9% |
| CY | 91.8% | LT | 73.1% | RS | 67.1% |
| CZ | 83.8% | LU | 100.0% | TN | 70.5% |
| DE | 98.8% | LV | 75.9% | TR | 86.6% |
| DK | 135.3% | MT | 89.6% | UA | 92.3% |
| EE | 78.3% | NL | 104.3% | Third countries | |
| EL | 92.7% | PL | 76.4% | AM | 89.9% |
| ES | 97.6% | PT | 89.1% | AO | 114.6% |
| FI | 116.6% | RO | 68.3% | AR | 58.5% |
| FR | 111.0% | SE | 111.7% | AU | 105.0% |
| HR | 97.5% | SI | 86.1% | AZ | 93.0% |
| | | SK | 82.6% | BB | 116.6% |
| | | UK | 120.3% | BD | 47.2% |
| | | Horizon 2020 associated countries | | BF | 93.8% |
| | | AL | 76.1% | BJ | 92.6% |
| | | BA | 73.6% | BM | 151.5% |
| | | CH | 113.1% | BO | 51.3% |
| | | FO | 134.1% | BR | 92.0% |
| | | GE | 89.5% | BW | 55.3% |
| | | IL | 108.7% | BY | 65.0% |
| | | IS | 116.6% | BZ | 75.3% |
| | | MD | 61.1% | CA | 86.4% |
| | | | | CD | 127.6% |
| | | | | CF | 114.3% |
| | | | | CG | 124.9% |
| | | | | CI | 102.0% |
| | | | | CL | 67.1% |
| | | | | CM | 103.3% |
| | | | | CN | 85.0% |
| | | | | CO | 76.6% |
| | | | | CR | 76.7% |
| | | | | CU | 83.8% |
| | | | | CV | 76.4% |
| | | | | DJ | 93.4% |
| | | | | DO | 66.9% |
| | | | | DZ | 81.7% |
| | | | | EC | 68.8% |
| | | | | EG | 48.6% |
| | | | | ER | 61.2% |
| | | | | ET | 85.2% |
| | | | | FJ | 68.1% |
| | | | | GA | 113.1% |
| | | | | GH | 68.2% |
| | | | | GM | 67.7% |
| | | | | GN | 60.4% |
| | | | | GT | 78.8% |

³⁴ ISO 3166 alpha-2, except for Greece and the United Kingdom (EL and UK used respectively instead of GR and GB).

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| | | | | | | | |
|----|--------|----|--------|----|--------|----|--------|
| GW | 102.7% | LS | 56.7% | PG | 83.0% | TJ | 64.9% |
| GY | 58.9% | LY | 60.0% | PH | 65.8% | TL | 78.3% |
| HK | 93.8% | MA | 83.5% | PK | 49.4% | TO | 85.0% |
| HN | 69.0% | MG | 80.0% | PS | 100.4% | TT | 74.1% |
| HT | 108.7% | ML | 90.4% | PY | 71.9% | TW | 83.6% |
| ID | 75.3% | MR | 64.5% | RU | 115.5% | TZ | 65.2% |
| IN | 52.8% | MU | 72.7% | RW | 87.3% | UG | 65.7% |
| JM | 94.9% | MW | 76.0% | SA | 84.8% | US | 99.4% |
| JO | 75.5% | MX | 70.4% | SB | 93.3% | UY | 75.3% |
| JP | 115.9% | MY | 71.6% | SD | 65.1% | UZ | 51.4% |
| KE | 78.1% | MZ | 71.6% | SG | 102.5% | VE | 70.0% |
| KG | 83.1% | NA | 68.3% | SL | 85.2% | VN | 51.1% |
| KH | 70.5% | NC | 128.9% | SN | 86.2% | VU | 112.6% |
| KR | 105.2% | NE | 87.9% | SR | 50.6% | WS | 75.8% |
| KZ | 100.2% | NG | 92.4% | SV | 74.3% | XK | 58.6% |
| LA | 77.7% | NI | 57.3% | SY | 74.8% | YE | 68.1% |
| LB | 86.4% | NP | 73.5% | SZ | 56.8% | ZA | 55.8% |
| LI | 110.0% | NZ | 94.1% | TD | 125.3% | ZM | 66.4% |
| LK | 61.6% | PA | 57.0% | TG | 88.7% | ZW | 47.2% |
| LR | 100.1% | PE | 75.5% | TH | 65.0% | | |



