



Serving European Science

**EIROforum response to
European Research Area (ERA)
Progress Report
October 2013**

Europe's Intergovernmental Research Organisations

CERN | EFDA | EMBL | ESA | ESO | ESRF | XFEL | ILL

INTRODUCTION

On 23 September 2013 the EC released a progress report on the implementation of the European Research Area (ERA). It is a critical assessment of whether the goal of creating a “reinforced European Research Area”¹ by the year 2014 is achievable. The report is an inventory of progress made in 28 EU Member States and a number of associated countries in five different fields that are considered key for a fully functioning ERA by the EC:

1. More effective national research systems;
2. Optimal transnational co-operation and competition (including constructing and running effectively key research infrastructures on a pan-European basis);
3. An open labour market for researchers;
4. Gender equality and gender mainstreaming in research;
5. Optimal circulation, access to and transfer of scientific knowledge including via digital ERA.

The EC report is a baseline preparing for an in depth assessment of progress in ERA in 2014. The report concludes that the ERA landscape is still fragmented across EU Member States. EIROforum shares this assessment and therefore suggests possible measures on how to improve different aspects of the completion of the ERA.

ROLE OF THE EIROFORUM PARTNER ORGANISATIONS WITHIN ERA

EIROforum is a partnership of Europe’s eight largest intergovernmental research organisations (see also **Annex 1**). As world leaders within their respective fields, the member organisations of EIROforum (hereinafter “Partner Organisations”) are in the vanguard of European science. Operating some of the largest research infrastructures in Europe devoted to the exploration of key questions on the origins and evolution of matter and biological life in the universe, these organisations enable European scientists to engage in truly cutting-edge research and, moreover, to be competitive on a global scale.

The Partner Organisations are therefore key stakeholders within the ERA and at the same time best practice examples for implementing some of the ERA priorities. As such they participated in the ERA survey in April 2013 that was launched to take stock of the current status of the ERA and which helped establishing the presented progress report.

Partner Organisations not only take responsibility for implementing the ERA in their daily business, but are also best practice examples of how ERA could function in the future, i.e. as joint efforts between (mostly) EU Member States independent from national systems.

The Partner Organisations are world-leading research infrastructures that best showcase the importance of such facilities for the host countries, member state countries and Europe’s scientific landscape, as well as its economy and society. Moreover, the Partner Organisations perform cutting-edge research, foster international cooperation, facilitate mobility of

¹. Commission Communication Enhancing and focusing EU international cooperation in research and innovation: A strategic approach”, COM(2012) 497 final

scientists, and attract the best scientists from all over the world by applying criteria of excellence. The EC acknowledges EIROforum's leading role in the implementation of the ERA in the ERA report and the accompanying Staff Working document (see **Annex 2**).

EIROforum very much welcomes the positive report of the EC with regard to the role of Partner Organisations in implementing the ERA. At the same time EIROforum agrees with the EC conclusions that ERA remains fragmented in many aspects. Therefore, EIROforum suggests some further measures how to complete some aspects of the ERA implementation, relating in particular to Research Infrastructures, knowledge transfer and mobility.

KEY AREAS WHERE THE PARTNER ORGANISATIONS COULD FURTHER CONTRIBUTE TO IMPLEMENT ERA

1 RESEARCH INFRASTRUCTURES

While recognizing that excellent research depends upon world-class facilities, the ERA progress report also highlights that financial, management and political barriers hinder the development and implementation of Research Infrastructures. In addition, it calls for more transparency of the conditions for transnational access to research infrastructures.

EIROforum shares this impression. Research infrastructures (national, pan-European and international facilities, in all fields of science) are real drivers of scientific excellence, pushing the frontiers of knowledge, promoting cross-border and international cooperation, contributing to the development of cutting-edge technologies and the training and education of the next generation of scientists and engineers. Access to world-class research infrastructure is a precondition for a particular scientific community to be competitive on an international scale. Europe already has a range of such leading research infrastructures, among them the EIROforum Partner Organisations.

According to the ERA Progress Report tight research budgets are the reason for the slow implementation of existing and lagging construction of new infrastructures. EIROforum feels that this statement is true both in view of national research budgets but also in view of the efforts at the European level, in particular as regards **H2020**.

The Research Infrastructures programme under **H2020** should provide sufficient support to enable the development of wider activities, and the integration of infrastructures, without detriment to the core mission of the pursuit of scientific excellence that results in world leadership in their scientific fields.

A strong and flourishing ERA requires the development of increased interaction between national and international research facilities. The **H2020** budget does not adequately address the needs of research infrastructures and their user communities in Europe, in particular when taking into account the need to maintain excellence of existing European research infrastructures, including its instrumentation and technology development, and to support the development of the **ESFRI projects**.

Further efforts should be made to contribute to the up-grading of existing and the establishment of new research infrastructures, thus helping to build up capacity as well

as scientific excellence. The ESFRI process has triggered many developments at national and European level. However, Europe, with its heterogeneity and diversity, faces huge challenges in realising these projects because of diverse priorities of countries and stakeholders involved. In this regard the Partner Organisations agree with the EC assessment that national roadmaps need to be aligned and their development coordinated. In addition, existing and well functioning European research infrastructures should not be forgotten and in some cases an upgrade of an existing research infrastructure might be the better way forward than constructing a costly new one that bears the risk of duplication and unnecessary competition.

The Experience of the EIROforum Partner Organisations shows that **trans-national access** to national or European research infrastructures needs to be facilitated. According to the ERA Progress Report almost 60% of research performers which answered the ERA survey 2012 indicated that their researchers require access to research infrastructures of pan-European interest. Survey results indicated that around 37% of research performers requiring access to research infrastructures experience problems in terms of complex access rules, high costs and insufficient information available.

The EC has announced that it will develop a **Charter for cross border access to and use of research infrastructures**. EIROforum welcomes this structured approach and is interested to contribute with its know-how.

Organisations created by intergovernmental convention that currently build and operate infrastructures such as the eight members of EIROforum serve as valuable models and sources of expert advice. They are designed for international country-based membership, have sustainable funding systems and ensure the efficient conduct of their research activities.

However, the inter-governmental procedures currently required to establish such organisations can take years. This is why the EU has devised a tailor-made legal framework for a European Research Infrastructure Consortium (ERIC). An ERIC offers a legal framework and thereby an alternative to other existing legal frameworks. The ERA report states that ERICs provide for “more comparable governance structures and clear access conditions”². However, the ERIC Regulation leaves a lot of flexibility to the design of the ERIC statutes in terms of governance or access conditions, therefore EIROforum finds this conclusion of the report somewhat surprising. In addition, there is no evidence that this particular model offers a shorter or simpler path to setting up a research infrastructure. Moreover, funding should not be linked to the choice of a legal framework and there is no obvious justification for privileged treatment of ERICs in comparison to other legal forms chosen by European research infrastructures. For those ESFRI projects that depend on existing infrastructure or would benefit from integration with ongoing research activities it might be more appropriate to make use of an existing international organisation. This arrangement has for example been adopted by the E-ELT (European Extremely Large Telescope) and ELIXIR (European Life-Science Infrastructure for Biological Information) that will build on the existing structures of ESO and EMBL respectively. Other ESFRI projects have decided to initially follow national legal frameworks. The European XFEL (X-ray Free Electron Laser), for example, is constructed and operated as a not-for-profit company (GmbH) of limited liability under German law. Considering the different nature and the varying

². See ERA Progress Report 2013, p.5.

member state composition of individual ESFRI projects it is important that flexibility is available such that each project can choose the most appropriate legal and governing framework without jeopardizing its right to receive the same recognition and privileges internationally. In the case of the EIROforum Partner Organisations for example the legal structure as Intergovernmental Organisations has turned out to be a considerable strength, with support from countries that are able to provide each organisation with privileges and sustainable funding

2 KNOWLEDGE TRANSFER

The ERA progress report acknowledges the importance of **knowledge transfer** for research and innovation: Science and innovation policy have become interconnected. EIROforum strongly supports this view and is interested to contribute to further development of innovative knowledge transfer strategies in Europe.

The EIROforum has established a working group on “Innovation Management and Knowledge/Technology Transfer”, which acts as a discussion forum and a coordination platform. Its primary focus is the identification of policies and instruments (like incentives or favorable IP rules) capable of enhancing and accelerating the transfer of new technologies developed in the frame of publicly financed research to the private sector and ultimately to the market.

As a key stakeholder EIROforum is interested to be involved in the development of the policy approach for open innovation and knowledge transfer. In addition to contributing to the future policy on knowledge transfer, EIROforum would consider it highly relevant to have a flexible financial instrument in H2020, which would support developments targeted to the commercialization of public research results, with a particular focus on early stage technologies (proof of concept), covering both licensing to existing companies and the creation of new companies through spin-outs.

The innovation generated by the EIROforum Partner Organizations is particularly important in areas where they play a leadership role at global scale, like IT and scientific instrumentation. In this respect, in November 2012 EIROforum published a position paper “Scientific Instrumentation for the EU Framework Programme (Horizon 2020)”. The Partner Organisations are constantly developing and maintaining scientific excellence and world leadership in their core scientific activities. Development and operation of state-of-the-art scientific instrumentation is one of the key pre-requisites of this leadership and needs substantial investment by the Partner Organisations. The associated financial and human investment covers not only the implementation of new scientific instruments but also the development of the necessary enabling technologies. From an industrial point of view, these high-tech programmes often target niche markets and involve high initial costs and long developmental timelines. From the perspective of RIs, the industrialisation processes can drain resources from their core activities and prime objectives. To fully exploit their innovation potential, it is essential to bridge the gap that exists between RIs and industry in the field of R&D for scientific instrumentation, to reduce risk (both perceived and real), and to create a win-win situation. Practical solutions with incentives must be implemented.

All of the Partner Organisations are currently launching new instrumentation programmes or instrumentation upgrades, which will be completed over the next 5 to 10 years and which will critically rely on innovative approaches and new technologies. They are all

committed to the formulation and implementation of advanced research programmes and are ideally situated to make propositions for strategic developments in the field of scientific instrumentation. EIROforum therefore welcomes the development of enabling technologies by the creation of specific calls and programmes in the following critical areas:

- **Engagement with European Industry:** The EC is invited to consider mechanisms that will provide financial and structural incentives for the establishment of closer relations among the R&D programmes of research infrastructures and industry through dedicated actions in the field of scientific instrumentation. These actions should be matched with mechanisms to leverage the use of research infrastructures by industry for innovation in their R&D, their manufacturing processes, and their products.
- **Enabling Technologies:** EIROforum welcomes the development of enabling technologies through the creation of specific calls and programmes in the following critical areas: Detector Systems and Sensors; Optics – over the entire electromagnetic spectrum, from far-infra-red to X-rays and including electron optics; Cooling Technologies; Adaptive Systems; and New Engineering Materials.
- **Training:** Inspired by the Marie Curie Actions, which are at present too limited in FTE for large scale instrumentation projects, the EC is invited to consider targeted funding for specific educational, training and networking programmes, fully dedicated to instrumentation activities with the goal of improving the technical and managerial expertise of future researchers and engineers in these domains.

3 OPEN LABOUR MARKET FOR RESEARCHERS – MOBILITY

The ERA progress report emphasises that the research population is highly mobile internationally and calls on the EC, Member States and other institutions to further coordinate efforts to remove the remaining obstacles to mobility, but also to training and attractive careers. EIROforum concurs with the report and suggests a measure aiming to encourage mobility of staff/researchers working within research infrastructures.

In 2011 EIROforum and the European Association of National Research Facilities (ERF) proposed a mobility scheme for European Research Infrastructures “Research Infrastructures Staff Exchange (RISE): a new scheme for staff mobility within European Research Infrastructures” (see **Annex 3**), which focuses on the more specific and urgent need to respond to an increased demand for expert personnel for the design, construction and upgrade phases in the development of an EU capability in Research infrastructures (RIs). EIROforum and ERF consider that there is a lack of qualified and experienced personnel in the field of European Research Infrastructures.

The suggested secondment-based scheme follows the assumption that lacking expertise can be partly compensated by increased mobility within an open and internationally oriented environment. The scheme proposes to establish a Europe-wide secondment-based scheme for staff mobility within an integrated structure of European RIs covering one, or several, research communities. This would provide a solid framework within which staff mobility

could occur, individual experts could follow a career path across a wide range of RIs and career development within a group of RIs, rather than within a single RI.

The scheme addresses expert individuals, ranging from instrument scientists, engineers, technicians to administrators whose expertise is recognised as of mutual interest for both RIs and the expert individual. The proposed scheme reflects in detail the needs of the receiving RI, the impact on the sending RI and the implications for the individual expert's career, who usually remains an employee of the sending RI. In the proposed scheme, the sending RI continues to pay the related remunerations, social security and pension contributions and unemployment provisions (although these will often be recovered from the receiving RI, or another funder) The individual expert should receive a remuneration package that is sufficient to cover the additional expenses incurred as a result of mobility.

In addition, EIROforum suggests establishing a financial scheme, which would include a specific set of accompanying measures coming from a common fund. In case of full or co-funding by the EC a suitable governance structure should be in place to ensure the validation of the selection process as well as the attribution and the control of funds.

The advantages of this scheme would be numerous: Firstly, there is a clear added-value not only for the sending and receiving RIs and the seconded person but also for the community as a whole in the exchange of knowledge and capacity building opportunities. Secondly, the scheme is attractive to young researchers who often take up post-doctoral research positions in European RIs outside their home countries. Thirdly, the scheme may ultimately stimulate the knowledge transfer between the facilities and the industry. Under certain conditions, private companies could be entitled to benefit from the scheme in connection with joint innovation projects. Fourthly, increased mobility may extend the influence of European RIs beyond the boundaries of the ERA, establishing a new equilibrium between Eastern and Western European countries and progressively integrating countries bordering the EU. Finally, it may even be appropriate, if supported by a significant number of RIs, to establish a pan-European "Charter for Mobility" that would be adopted by participating RIs. The beneficiaries of the support could be limited to those coming from RIs whose management signed the "Charter for Mobility". This would reinforce the confidence of the expert staff.

The mobility scheme was proposed to the EC on the occasion of the ICRI Conference in Copenhagen 2012. Although some aspects of this proposal are reflected in the draft H2020, a concerted approach proposed by this scheme, which would be so important for successfully implementing the ERA, is still missing.

ANNEX 1 EIROFORUM

EIROforum is a partnership, established 10 years ago in the context of the ERA. Its partner organisations are treaty-based organisations at government level, supported by countries, the majority of which are members of the EU and others which are not. The Partner Organisations are world-leaders within their particular field and there is increased interest by countries beyond the borders of the EU to join these organisations. They have catalysed the formation of bottom-up disciplinary ERAs and by virtue of strong member state support, in variable geometry, can be seen as the vanguard of the ERA with an important international cooperation component.

EIROforum is growing. The European XFEL has recently joined and several other major new organisations have shown interest in joining the partnership, which currently comprises:

CERN	European Organisation for Nuclear Research
EFDA-JET	European Fusion Development Agreement-Joint European Torus
EMBL	European Molecular Biology Laboratory
ESA	European Space Agency
ESO	European Organisation for Astronomical Research in the Southern Hemisphere (European Southern Observatory)
ESRF	European Synchrotron Radiation Facility
ILL	Institut Laue-Langevin
XFEL	European X-Ray Free-Electron Laser Facility

All EIROs operate in a competitive global environment, attracting users from all over the world to the very best scientific and technological resources. As centres of excellence for the development of some of the world's most advanced technologies, they interact with European industry and thus play a crucial role in the innovation process, whilst enabling Europe's researchers to maintain scientific leadership in their fields.

The EIROs have an ongoing commitment with, and through, their user communities to a range of activities contributing to the stimulation of growth through innovation, the promotion of technology transfer and knowledge exchange, the support of training and high-quality capacity building, the execution of research that contributes to addressing the societal grand challenges; and the support of education and public understanding of science.

In June 2010, the Directors General of the partner organisations and the European Commissioner for Research and Innovation signed a Statement of Intent³ focussing on exchange of information and joint actions in areas such as mobility and human resources, public awareness of science and technology transfer. The partners also entertain close links and conduct activities with a multitude of partners across the entire world. A number of science policy papers have been published by EIROforum which are available on its website.

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ANNEX 2

LIST OF ACKNOWLEDGEMENTS OF EIROFORUM IN THE ERA PROGRESS REPORT AND THE ACCOMPANYING STAFF WORKING DOCUMENT

The EC acknowledges EIROforum's leading role in the implementation of the ERA in the ERA report and the accompanying Staff Working document "ERA Facts and Figures" as follows:

- EIRO organisations are explicitly mentioned as best practice examples in the report: *"...a number of significant Inter-governmental Organisations play an important role in support of transnational cooperation through co-ordinating and funding research on an intra-European and international level. For instance with the strong support of their Member States, the European Inter-governmental Research Organisations that are members of EIROforum, provide some of the best research infrastructures in the world. Aligning the scientific community's needs and Member States' support is a key component to the success of the EIROforum."*³
- EIROforum is mentioned as one of the most important contributors to the assessment of the implementation of the ERA: *"Consolidated contribution to the ERA survey by seven EIROforum members (EIROs)."*⁴
- EIRO organisations are mentioned as best practice examples for the use of peer review criteria: *"EIROs always utilise international peer review in the assessment of proposals and/or experiments and the selection is based on excellence."*⁵
- EIRO organisations are mentioned as best practice examples for trans-national cooperation: *"Transnational co-operation is implemented by all EIROs."*⁶
- In the context of European Research Infrastructures that foster excellent research the EIRO organisations are mentioned again as best practice examples: *"MS and AC also fund the development and operations of EIRO [Organisations]."*⁷
- EIRO organisations respond to the huge demand of researchers to get access to European Research Infrastructures: *"EIROs provide access (in some cases free of charge) to research infrastructures through different modalities: participation to research experiments, bilateral and multilateral agreements, visitors programmes and/or peer review calls for proposals."*⁸
- Open, merit based and transparent recruitment ensures that research performers

3. ERA Progress Report, p. 8.

4. Commission Staff Working Document, European Research Area, Facts and Figures 2013, Accompanying the document "Report From The Commission To The Council And The European Parliament, European Research Area Progress Report 2013", COM(2013) 637 final, p. 7.

5. Ibid., p. 14.

6. Ibid., p. 17.

7. Ibid., p. 18.

8. Ibid., p. 19.

9. Ibid., p. 21.

- are able to select the best researchers from the widest possible pool of talents: *“EIROs open their vacancies to any nationality.”*⁹
By applying the Code and Charter (C&C) EIRO organisations ensure attractive careers and decent working conditions: *“EIROforum members have Human Resources strategies well aligned with the C&C”*¹⁰ and aim to improve gender balance: *“EIROs also implement a variety of actions to improve gender balance”*.¹¹
- EIRO organisations already now follow the EC’s appeal for more open access to make funded scientific content publicly available: *“EIROs endorse open access to research results obtained utilising public funding.”*¹²
- EIRO organisations are mentioned as best practice examples for the implementation of open Innovation and Knowledge Transfer: *“EIROs regularly jointly develop many research projects with industry.”*¹³
- EIRO organisations support the *“Digital ERA”* (which includes provision of digital research services, development of e-infrastructures and seamless electronic access): *“EIROs have been actively contributing to and supported the Digital ERA for many years.”*¹⁴

ANNEX 3

RESEARCH INFRASTRUCTURES STAFF EXCHANGE (RISE): A NEW SCHEME FOR STAFF MOBILITY WITHIN EUROPEAN RESEARCH INFRASTRUCTURES

^{10.} Ibid., p. 22.
^{11.} Ibid., p. 26.
^{12.} Ibid., p. 28.
^{13.} Ibid., p. 30.
^{14.} Ibid., p. 32.

Research Infrastructures Staff Exchange (RISE): a new scheme for staff mobility within European Research Infrastructures

The proposed scheme is not trying to solve the wider general problem of mobility of researchers and technical staff in Europe, but focuses on the more specific and urgent need to respond to an increased demand of expert personnel for the design, construction and upgrade phases in the development of an EU capability in Research infrastructures (RIs). The ESFRI European Roadmap together with the national roadmaps have enabled a strategic approach in which a coherent fabric of world-class research infrastructures can be established. The possible use of structural and local funds for the construction and upgrade of existing RIs play constitutes important elements of this approach. However, the lack of qualified and experienced personnel is now being strongly felt as an issue and a possible bottleneck with respect to the realisation of these ideas. Indeed the existing expert human resources are limited, and in most cases there is the need to allow a transfer of personnel and knowledge from projects, which has been successfully implemented to new projects. The increase in mobility advocated below can also stimulate the training capabilities of different European centres for junior researchers and technicians in a more open and internationally oriented environment.

1. Staff mobility: lack of a scheme adapted to the needs of European RIs

The exchange of knowledge and capacity building within European Research Infrastructures (RIs) is crucial for Europe to increase its competitiveness worldwide. Staff mobility can make significant contributions that lead to the acceleration of capacity building, improvement of staff employability, absorption of peak work-loads and assurance of the availability of suitably qualified professional project teams. The increased interaction and involvement in the exchange of experience and know-how in all domains (including, for example, safety/security, engineering, project organisation and management, procurement methods, quality assurance, communication,...) is of benefit to both the involved parties (that is, expert individuals and RIs, including those in the process of progressing from the ESFRI road-map to construction) and the research community as a whole.

Having said that, staff mobility **between European RIs appears to be very poor**, for example:

- only half a dozen professionals are subject to a significant trans-European move each year within the synchrotron community, which has overall about 3000 staff;
- the moves result more from individual decisions than from a clear analysis and strategy; thus, there are risks for all participants (individuals and RIs).

The current FP7 mechanism - Marie Curie Fellowships - meets many of the needs for researcher mobility but is limited by scope and procedures for many of the

specific needs of an RI. Specifically, the present target for the allocation of Marie Curie Fellowships is too narrow to match the broader, more project-oriented and operations-related needs of RIs (which includes high-level engineers and other professionals) and the time required to complete the Marie-Curie process (call/evaluation/negotiation) is incommensurate with the urgency of the needs of the RI. The incentives needed to promote mobility are also limited. A wide gap exists between the current situation and that needed to promote and facilitate the exchange of S&T expertise between European RIs.

The purpose of this document is to make concrete suggestions and identify a **pragmatic solution** that would increase employability and facilitate staff mobility within European RIs. Such a solution could be the introduction of **an attractive scheme for the temporary secondment of expert staff** from a **sending RI** to a **receiving RI**.

2. Scheme benefits: scope, duration and added-value

Staff mobility should bring clear **benefits** to all the parties involved. The benefits should be recognisable already in the definition of the **scope and duration** of the scheme for staff mobility, with the **added-value** for the sending and receiving RIs and the expert individual being highlighted, and complemented by **clarity, transparency and flexibility** in application.

The **scope** of the scheme should be broad but focussed on the specific needs of the RIs and the expert individuals. It is proposed that the scheme be:

- open to a wide range of suitably qualified expert individuals, including instrument scientists, engineers, technicians and administrators;
- recognised as of mutual interest for both RIs and the expert individual;
- subject to the generation of a relevant transfer/exchange of knowledge;
- project-oriented (development, training, commissioning, etc);
- based on a case-by-case initiative in which the individual expert can devote effort fully to the success of the project and, in return, expect career progression;

The **duration** of the scheme should be established clearly at the outset, together with the conditions under which **extension, repatriation** to the sending RI, or **integration** into the receiving RI could occur. It is proposed that:

- The duration of the scheme should be fixed, lasting from, say, 3 months to 3 years. It should reflect properly the needs of the receiving RI, the impact on the sending RI and the implications for the individual expert's career;
- The balance between extension, repatriation or integration should be given careful consideration. Conditions should be established at the outset and reviewed periodically by all parties, including the individual expert;
- Repatriation should be possible at any time, in principle, providing a reasonable notice period is given; individual experts should be assured of this; force-majeure repatriation should allow, whenever possible, the timely completion of the mission while limiting the impact on the individual expert.

Turning to the **added-value for the sending and receiving facilities**, the receiving RI is usually the primary beneficiary. Therefore, it is important for the sending RI to be adequately compensated, to a level that reflects the impact of the individual expert's departure. Specifically, it is proposed that:

- The sending RI should be reimbursed by the receiving RI for salaries and other permissible charges and, depending on whether or not this constitutes a reasonable compensation, additional in-kind costs should be considered; the dispositions regarding the legal aspects and the reimbursement should be concluded in a separate agreement between the two facilities,
- Opportunities for promoting young individuals or recruiting fixed-term contractors within the overall financial support associated with the scheme should be explored.

With regard to the **added-value for individual experts**, full consideration should be given to security of employment, career development and financial remuneration. It is proposed that:

1. The participant remains an employee of the sending RI (or institution); the location where he/she works is changed but the employment contract is not interrupted, but eventually amended by clauses relating to conditions of mobility;
2. The sending RI continues to pay the related remunerations, social security and pension contributions and unemployment provisions (even if these are recovered from the receiving RI, or another funder)⁽¹⁾. Thus, additional formalities are limited since existing rules, rates and coverage remain applicable;
3. The participant should receive a remuneration package that is sufficient to cover the additional expenses incurred as a result of mobility.
4. a common system for managing mobility between the RIs could create an Institution for Occupational Retirement Provision (IORP), a tool recently introduced by the EU (http://europa.eu/legislation_summaries/employment_and_social_policy/social_protection/l24038b_en.htm) and valid for all workers. IORP makes it possible to transfer funds accumulated under the social security law of a single EU country, to a fund created ad hoc in another EU country, according to the social security law of that country. This allows earning money from each country and ensuring a substantial income at the end of career.

It should be noted that (2) would require changes to be made to the legal situation in the case of many national RIs as well as international RIs in Europe that fall under national law due to their organisational setup.

Finally, the **benefits** of mobility will be recognised fully by all the parties involved only when a

'**culture of mobility**' exists within the participating organisations and permeates to all levels:

- Directors need to be fully supportive of the need for the mobility of their staff outside their organisation, even when their most expert staff are involved;

¹ Such a scheme is clearly different from a "detachment" where the expert individual signs a local job contract in the receiving country, under the local regulations in terms of pension rights and health-care cover.

- HR departments need to facilitate staff mobility and ensure proper career progression within their organisation;
- Line-managers need to recognise the significance of staff mobility and the opportunities that arise when even their own expert staff need to be replaced on a temporary basis;
- Individual experts need to balance the disruption often associated with mobility with the benefits to themselves, to their sending and receiving institutes and to their research community in terms of knowledge exchange and capacity building.

Such a 'culture of mobility' is considered to be a pre-requisite for increased mobility within Europe.

3. The proposed secondment-based scheme: implementation and consequences

It is proposed to establish a Europe-wide secondment-based scheme for staff mobility within an integrated structure of European RIs covering one, or several, research communities. This would provide a solid framework within which staff mobility could occur, individual experts could follow a career path across a wide range of RIs and career development within a group of RIs, rather than within a single RI, could be envisaged.

The faster the process for implementation, the better. European RIs, together with those in the process of progressing from the ESFRI road-map to construction, need administrative mechanisms that can react rapidly to short-term mobility actions and limit the delay for processing ('time to secondment').

Specifically, it is proposed to establish a **close relation between HR Managers** in order:

- to organise, where appropriate, an '*RI staff mercato*' once a year where job opportunities and standard CV of staff willing to move could be proposed under strict rules of confidentiality;
- to ensure that the **selection process** is simple, accessible, open and quick (open call with regular examination; the overall process should not exceed 3 months). A **permanent group of experts from the participating RIs** could make the selection; they should be fully aware of the specific needs of the RIs and the competences of the individuals;
- to ensure that the secondee's career progresses in line with the benefits that accrue for the RIs;
- to monitor progress during the secondment, by both the sending and receiving RIs, in order to optimise the quality of the expertise, to demonstrate effective and appropriate knowledge exchange and to reduce the associated risks; each step should be documented;
- to establish a permanent dialogue between the secondee and the RI managers, if needed, from a short-term secondment to a longer-term stay that may lead to a permanent job position.

The larger the participating community, the better. This approach might be **applied progressively** in different parts of the European Research Area, beginning with those European RIs that have urgent and specific needs regarding researchers and engineers, operational requirements, etc. However, the benefits of this scheme should be limited to European research facilities respecting basic HR rules in term of employment conditions, social advantages and career follow-up.

A financial scheme should be established to support this secondment-based mobility. It is proposed to include a specific set of accompanying measures:

- A set of **financial measures** that include a living allowance and the reimbursement of removal expenses; exceptional solutions may be considered to cover education expenses or the loss of a partner's job; existing European-level financial rules should be examined for applicability;
- An additional funding mechanism should be established to provide the **budget needed to cover the supplementary costs associated with these measures.**

The financial resources needed to implement these accompanying measures could come from a **common fund**, either:

- as part of the “**FP8-PEOPLE-equivalent**” or “**FP8-CAPACITIES-equivalent**” Programme and/or
- A dedicated fund established together with the research communities that participate in the integrated structure of European RIs;

Last but not least, in case of full or co-funding by the European Commission, a joint governance structure composed of representatives from the facilities and the European Commission, should be in charge to ensure the validation of the selection process as well as the attribution and the control of funds.

4. Conclusions

The proposed secondment-based scheme for staff mobility will facilitate the exchange of those suitably highly qualified experts within European Member States willing to support RIs, including those Member States which have no RIs or have yet to host large-scale RIs. The scheme has four significant impacts.

First, there is clear added-value not only for the sending and receiving RIs and the secondee but also for the community as a whole in the exchange of knowledge and capacity building opportunities.

Second, the scheme may also be attractive to young researchers who often take up post-doctoral research positions in European RIs outside their home countries. For them, it is not unusual to move two or three times during the early years of their careers to benefit from interactions with experienced researchers and engineers. Thus, the stress-less approach of this scheme could impact fixed-term employment

in European RIs. **This may change completely their perception of career progression.**

Third, this scheme may ultimately stimulate the **knowledge transfer between the facilities and the industry**. Under certain conditions, private companies could be entitled to benefit from the scheme in connection with joint innovation projects.

Fourth, increased mobility may extend the influence of European RIs beyond the boundaries of the European Research Area, establishing **a new equilibrium between Eastern and Western European countries** and progressively integrating European border countries (IPCP, Mediterranean Partner Countries) using support from EU neighbouring policies.

Finally, it may even be appropriate, if supported by a significant number of RIs, to establish a **pan-European 'Charter for Mobility'** that would be adopted by participating RIs. The beneficiaries of the support could be limited to those coming from RIs whose management signed the "Charter for Mobility". This would reinforce the confidence of the expert-staff.

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