

WORK PROGRAMME 2013

CAPACITIES

PART 1

RESEARCH INFRASTRUCTURES

2ND REVISION

(European Commission C(2013)5571 of 2 September 2013)

Changes to the Capacities Work Programme 2013: Research Infrastructures

This work programme replaces the version adopted on 17 December 2012.

This update introduces the following changes:

- an increase of EUR 16 million to the amount added to the budget of Call N° 10 - FP7-INFRASTRUCTURES-2012-1 to support projects in the reserve list (see pages 19 and 20);
- the inclusion of Call N° 12 - FP7-INFRASTRUCTURES-2013-2, a new call for proposals for support actions on policy development, including international cooperation, for e-Infrastructures. The budget of the call is EUR 2.5 million (see page 12, 15, 16, 19 and 20);
- an increase of EUR 0.55 million to the budget for independent experts (see pages 17 and 19);
- a reduction of EUR 0.1 million to the budget allocated to the studies addressing the scoping and road-mapping of e-Infrastructures future activities (public procurement) (see pages 18 and 19);
- an increase of the RSFF budget (see pages 18, 19, 31, 34)

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Objective

The overall objective of the Research Infrastructures Part of the 'Capacities' specific programme is to optimise the use and development of the best research infrastructures existing in Europe, and to help to create in all fields of science and technology new research infrastructures of pan-European interest needed by the European scientific community to remain at the forefront of the advancement of research, and able to help industry to strengthen its base of knowledge and its technological know-how.

I. CONTEXT

Political landscape

Against the backdrop of the current economic situation and increased global competition, the Union has defined a strategy to support growth and job creation, Europe 2020.

The *Innovation Union Flagship* initiative¹ supports this strategy through specific commitments. Research and innovation are key drivers of competitiveness, jobs, sustainable growth and social progress. The *Innovation Union* highlights the increasing relevance of world-class research infrastructures to enable ground-breaking research and innovation and stresses the need of pooling resources across Europe to build and operate research infrastructures in view of their cost and complexity. It commits Member States together with the Commission to complete or launch by 2015 the construction of 60% of the priority European research infrastructures currently identified by the European Strategy Forum on Research Infrastructures (ESFRI) and to increase the potential for innovation of research infrastructures. The *Digital Agenda for Europe*², another flagship initiative of Europe 2020, highlights the role and need for reinforcement of e-Infrastructures as well as targeted development of innovation clusters for building Europe's innovative advantage.

The work programme 2013 aligns with, and contributes towards, the objectives of Europe 2020, the Innovation Union and the Digital Agenda Flagships, and other EU policies. There is a determined focus on fostering new ideas, supporting world class teams tackling significant societal challenges, and on ensuring that the fruits of our investments can be properly exploited.

In this way the work programme provides for a smooth transition towards the new research and innovation programme for 2014-2020, Horizon 2020.

The proposed action in 2013 will also have synergies with the trans-European broadband backbone for public services, which is part of the Connecting Europe Facility (CEF) proposal. In addition to direct financial support to participants in RTD actions, the EU will improve their access to private sector finance by contributing financially to the 'Risk-Sharing Finance Facility' (RSFF), an innovative financial instrument established under FP7 by the European Investment Bank (EIB). Information on the RSFF is available online³ (see also section VII.4). The Commission will respond to further needs of potential beneficiaries for information on the RSFF (by, e.g., awareness-raising activities in conjunction with the European Investment Bank, participation to thematic events).

¹ Communication from the EC to the European Parliament, Council, European Economic and Social Committee and the Committee of the Regions, Europe 2020 Flagship Initiative Innovation Union COM(2010) 546 final

² Communication from the EC to the European Parliament, Council, European Economic and Social Committee and the Committee of the Regions, A Digital Agenda for Europe COM(2010) 245 final

³ <http://www.eib.org/products/loans/special/rsff/?lang=en> ; http://ec.europa.eu/invest-in-research/funding/funding02_en.htm

Research Infrastructures Action

Research infrastructures play an increasing role in the advancement of knowledge and technology and their exploitation. For example, radiation sources, data banks in genomics or in social science, observatories for environmental sciences, systems of imaging or clean rooms for the study and development of new materials or nano-electronics, are at the core of research and innovation processes. By offering high quality research services to users from different countries, including from the peripheral and outermost regions, by attracting young people to science and by networking facilities, research infrastructures help structuring the scientific community and play a key role in the construction of an efficient research and innovation environment. Because of their ability to assemble a 'critical mass' of people, knowledge and investment, they contribute to national, regional and European economic development. They are therefore at the core of the knowledge triangle of research, education and innovation.

The development of a European approach with regard to research infrastructures, including ICT-based e-infrastructure, and the carrying out of activities in this area at a European level, can make a significant contribution to boosting European research potential, increasing the efficiency and effectiveness of research, as well as to reinforcing European research communities. Indeed, since such infrastructures are expensive and need a broad range of expertise to be developed, they should be built, used and exploited on a European or even a global scale.

While Member States remain central in the development and financing of most infrastructures, the EU can and should via FP7 play a catalysing and leveraging role by helping to ensure wider and more efficient access to and use of the infrastructures existing in the different Member States. The EU actions should also stimulate the coordinated development, deployment and networking of these infrastructures, and foster the emergence of new research infrastructures of pan-European interest within a medium to long term vision⁴.

Within the scope of this EU action, the term 'research infrastructures' refers to facilities, resources, systems and related services that are used by research communities to conduct top-level research in their respective fields. This definition covers: major scientific equipment or set of instruments; knowledge-based resources such as collections, archives or structured scientific information; ICT-based e-Infrastructures (networks, computing resources, software and data repositories) for research and education; any other entity of a unique nature essential to achieve or enable excellence in research. Research infrastructures may be 'single-sited' or 'distributed' (a network of resources).

This EU action addresses only research infrastructures with a clear European dimension and added value in terms of performance and access. These infrastructures must contribute significantly to the development of European research and innovation capacities. The activities to be supported are identified under three main lines of actions as described below.

1 - Support to existing research infrastructures

The objective is to optimise the use and development of existing research infrastructures in all fields of science and technology, including e-Infrastructures, and to facilitate the access of research teams from all over the EU to these infrastructures. This line of action

⁴ Moreover, the EU also supports the development and construction of research infrastructures via Cohesion Policy.

represents the majority of the efforts (more than 60% of the operational funds) to be carried out under this Part of the Specific Programme. Support will be provided for:

- *Integrating Activities*: to bring together and integrate, on a European scale, key research infrastructures in a given field, in order to promote their coordinated use and development. Integrating Activities provide researchers with a harmonised and optimised access to the best research infrastructures of a given field, independent of where the research infrastructures are located and by whom they are operated. In particular, they provide users with harmonised and enhanced interfaces, improved processing methods and optimised procedures. Integrating Activities create the basis for a more rapid advancement of science in Europe, enabling the development of new advanced technologies and the associated growth of the European technology market as well as the creation of a new generation of researchers, ready to exploit in the best way all the essential tools needed for their research. Lastly, by integrating major scientific equipment (telescopes, synchrotrons, research vessels, etc.) or set of instruments (sensors, microscopes, radars, etc.), as well as knowledge-based resources (collections, archives, structured scientific information, data infrastructures, etc.), they harmonise and organise the continuous flux of data collected or produced by these facilities and resources.
- *e-Infrastructures*: Relentless progress in ICT makes it now possible to deploy integrated ICT environments that radically transform the process of scientific and engineering research. In *eScience*, computer simulation and knowledge extraction from unprecedented amounts of data help to address scientific and global challenges of enormous complexity and scale. These ICT-based environments, commonly called e-Infrastructures, empower researchers by offering them access to facilities and resources regardless of their location. They foster the emergence of new working methods, based on the shared use of resources across different disciplines and technology domains enabling sustainable collaboration and partnerships between researchers in 'virtual research communities' in all e-Science fields, thereby creating a single European space for "online" research. e-Infrastructures are often also used beyond research, for example in education or public services. They include today high-capacity and high-performance communication networks (GÉANT), cloud and grid-empowered resource sharing infrastructures and supercomputing facilities (PRACE), combined with scientific application software, data repositories and services. The further development and adoption of e-Infrastructures requires structured interaction between computational scientists and ICT engineers and a broad range of scientific disciplines as well as catering for the specific needs of scientific and industrial user communities.

2 - Support to new research infrastructures (or major upgrades of existing ones)

The aim is to help to create in all fields of science and technology new research infrastructures of pan-European interest needed by the European scientific community in order to remain at the forefront of the advancement of research, and be able to help industry to strengthen its base of knowledge and its technological know-how. This action would also examine the opportunities to exploit the potential for scientific excellence of the convergence and outermost regions through new infrastructures. This line of action represents about one third of the total financial resources available for this Part of the Specific Programme.

Support is provided for:

- *Design Studies*: to contribute to conceptual design studies for new research infrastructures, that demonstrate a clear European dimension and interest.
- *Construction of new infrastructures (or major upgrades of existing ones)*: to provide a catalytic and leveraging support for the construction of critical new facilities building primarily upon the work conducted by the European Strategy Forum on Research Infrastructures (ESFRI)⁵. This activity follows a two stage-approach:
 - *Stage 1 - support to the preparatory phase*: This first phase involves, in particular, the finalisation of the legal organisation, of the management and multi-annual financial planning. Some technical work could also be considered.
 - *Stage 2 - support to the implementation phase*: this phase involves the actual construction or deployment, building on the technical, legal, administrative and financial agreement achieved during the preparatory phase between all stakeholders.

Only projects which have sufficiently progressed in the preparatory phase could proceed to Stage 2. FP7 EU financial support for the implementation phase is limited to cases where there is a critical need and clear European added value for such a support.

3 - *Support to policy development and programme implementation*

The aim is to enhance the effectiveness and coherence of national and EU research policies and international cooperation in the field of research infrastructures.

Approach for 2013

The work programme for 2013 will build on the strategic approach for existing and new research infrastructures undertaken in previous years, taking into account the orientations set out in the *Europe 2020* strategy and its two flagship initiatives: *Innovation Union* and *Digital Agenda*. The foreseen actions will support the transition to Horizon 2020. They will help overcome the fragmentation of efforts and will contribute to the development of technological capacity, scientific performance and innovative advantage in Europe. They will contribute thereby to the development of a more efficient, attractive and seamless European Research Area.

- Innovation dimension of the activities and bridging towards Horizon 2020:

Call N° 11 for *e-Infrastructures* focuses on the support of the next phase of development of research and education networks in Europe (GÉANT), one of the main pillars of the online European Research Area. This call will address innovation explicitly, both at technology and at service level.

The 2013 work programme also contributes to the objectives of the *Innovation Union* and *Digital Agenda* flagships as follows:

The *Innovation Union* Commitment n. 4: "*Opening of Member State operated research infrastructures to the full European user community*" will be directly addressed by the addition of EUR 99.2 million from the 2013 budget to the budget of Call N° 10 - FP7-

⁵ http://ec.europa.eu/research/infrastructures/index_en.cfm?pg=esfri

INFRASTRUCTURES-2012-1, published in July 2011, in particular to support a larger number of the *Integrating Activities* recommended under the call. These projects will provide to user community trans-national and on-line access to the best research facilities in Europe.

The *Innovation Union* Commitment n. 32: "*to step up European Union cooperation on the roll-out of the global research infrastructures*" will be directly addressed by Call N° 11 reinforcing Europe's position as a hub of global research networking by strengthening the international dimension of GÉANT.

The following aspects of the *Digital Agenda* will be directly addressed in the GÉANT topic:

- "Leveraging more private investment (Key Action 9) through the strategic use of pre-commercial procurement".
- "Ensure sufficient financial support to joint ICT research infrastructures and innovation clusters.

Finally, this work programme contains innovation measures in support of activities closer to market such as, in the GEANT topic:

- the possibility to implement R&D activities through public-private partnerships or pre-commercial procurement,
- the exploration of innovative business models e.g. for clouds, federated AAI (Authorisation and Authentication Infrastructure) and mobility; and contribution to international standardisation such as in IETF (Internet Engineering Task Force),
- the deployment of an open, advanced, virtualised, multi-domain testbed facility and its expansion to cloud testing.

- Strengthening the European Research Area

All activities foreseen in this work programme will directly contribute to reinforcing research infrastructures of pan-European interest. The addition of 2013 budget to the budget of Call N° 10 - FP7-INFRASTRUCTURES-2012-1, in particular to support a larger number of the *Integrating Activities* recommended under the call, will support a wider use of research infrastructures at Union level, and will promote their integrated use and development. The GEANT topic will enable compute- and data-intensive collaborative research and education anywhere in Europe and beyond. This will contribute to a more efficient, attractive and seamless European Research Area.

- Dissemination actions

In line with the political context set out in the *Innovation Union* a specific work package on innovation has been requested, whenever appropriate, in all *Integrating Activities* submitted to Call N° 10. This work package covers activities to reinforce the partnership with industry, e.g. transfer of knowledge and other dissemination activities, activities to foster the use of research infrastructures by industrial researchers, involvement of industrial associations in consortia or in advisory bodies.

Open Access Pilot in FP7: beneficiaries funded partially or entirely by the Capacities Programme under the e-Infrastructures activities are required to deposit peer-reviewed articles resulting from projects to an institutional or subject-based repository, and to make their best efforts to ensure open access to these articles within six months.

- International Cooperation

Call N° 11 will strengthen the international dimension of GÉANT, in particular:

- ensuring global connectivity and interoperability,
- developing an open, virtualised and multi-domain testbed facility and expanding it globally.

II. CONTENT OF CALLS

This section describes all the topics for which proposals will be called in this work programme. This concerns only the content of the calls. For all practical modalities related to these calls, please refer to section III 'Implementation of calls'. For actions not implemented through calls for proposals, please refer to section IV 'Other actions'.

1.1 Support to existing research infrastructures

1.1.1 Integrating Activities

There will be no further call for proposals for 'Integrating Activities' under FP7.

However the 2013 Work Programme will add EUR 99.2 million from the budget 2013 to the budget of the Call N° 10 - FP7-INFRASTRUCTURES-2012-1 published in July 2011. This additional funding will allow supporting a larger number of *Integrating Activities* projects recommended under that call.

1.1.2 e-Infrastructures

The e-Infrastructures activity fosters the emergence of new research environments in which 'virtual communities' of scientists and engineers are empowered to share and exploit the collective power of the European ecosystem of scientific and engineering facilities. The topic supported in 2013 is the deployment, operation and evolution of the pan-European high-capacity and high-performance communication networking (GÉANT) as well as the deployment of user-centric services, in close articulation with the National Research and Education Networks (NRENs). GÉANT should be seen as an e-Infrastructure that should be seamlessly integrated with other infrastructures and services for computing and data. Activities related to socio-economic impact assessment and evaluation should also be foreseen where appropriate. Projects shall implement (i) *Networking Activities*, (ii) *Service Activities* and (iii) *Joint Research Activities* (JRA) in a closely coordinated manner following the I3 model (see section VII-1).

Topics opened in Call FP7-INFRASTRUCTURES-2013-1 (Call N° 11):

INFRA-2013-1.2.1: GÉANT. The overall objective is to advance towards the GÉANT expert Group 2020 vision⁶, enabling compute- and data-intensive collaborative research and education anywhere in Europe and beyond, through innovative services and operational excellence. This also implies bridging the digital divide and ensuring the free and unimpeded movement of scientific data and knowledge in the EU. Specific objectives to be addressed are:

- a) Support knowledge communities' growing requirements, address the approaching data tsunami⁷ and evolve GÉANT by:
 - deploying the 100 Gbits/s technology across Europe and improving peering;
 - developing, testing and operating innovative user-centric services; decisions for investing in new services should be based on a clear business case and commitment to deploy by several NRENs;

⁶ "Knowledge without borders: GÉANT 2020 as the European Communication Commons", Report of the GÉANT expert group, October 2011.

⁷ "Riding the Wave: How Europe can gain from the rising tide of scientific data", Report of the high level group of experts on scientific data, October 2010.

- strengthening the EU added value of GÉANT: adopt federated authentication and authorisation infrastructure (eduGAIN); define decision-making procedures for aggregating demand, brokering services and joint procurements at European level on behalf of NRENs; and aligning to the most recent regulations, e.g. in terms of data protection;
- reinforcing Europe's position as a hub for global research networking, by ensuring intercontinental as well as neighbourhood connectivity;
- seeking synergies with public services at European and national levels when appropriate.

b) Ensure GÉANT stays at the forefront of innovation, boosting the innovation potential of research and education network communities by:

- R&D activities that are open to academia, industry and user communities, e.g. implemented through open calls, public-private partnerships or pre-commercial procurement⁸; this includes exploring innovative business models e.g. for clouds, federated AAI and mobility; and contributing to international standardisation, such as in IETF.
- deploying an open, advanced, virtualised, multi-domain testbed facility and expanding it globally and to cloud testing;
- exchanging staff between NRENs, academia and industry, and training;

In order to stimulate competition, the R&D activities that will be open to participation by external partners and implemented through open calls should amount to at least 50% of the EU contribution requested for the JRA. Where such activities concern applied research for developing new services, they will be supported only if tested over the GÉANT infrastructure and if there is commitment by at least three NRENs to use the services developed.

Achieving these objectives will require improving governance through greater end-user involvement and strengthened coordination with other e-Infrastructures in Europe and globally.

Given the specific objective of this topic, the proposal shall be submitted solely by legal entities operating the NRENs or legal entities created by the NRENs to contribute to the deployment of connectivity and services on a pan-European scale (e.g. DANTE, TERENA, NORDUnet).

Expected impact: GÉANT becomes the European communications commons, where talent anywhere is able to collaborate with their peers around the world and to have instantaneous and unlimited access to any resource for knowledge creation, innovation and learning, unconstrained by the barriers of pre-digital world; Europe is the hub for research networking excellence world-wide; the GÉANT community produces innovative solutions and drives the internet evolution; GÉANT governance is able to cope with the changing environment.

⁸ Pre-commercial procurements are public procurements of R&D services (as described in COM (2007) 799 and SEC / 2007 /1668, see also section VII.3 of this work programme) carried out by public purchasers which are contracting authorities in the meaning of the public procurement directives 2004/18/EC and/or 2004/17/EC. Cross-border cooperation via pre-commercial procurement enables public sector organisations of different countries to define together the mid-to-long term procurement requirements for a shared public sector purchasing need and to explore, test and validate together alternative solution approaches from various solution providers that could respond to the common challenge.

1.2 Support to new research infrastructures

There will be no further call for proposals for supporting new research infrastructure projects under FP7.

1.3 Support to policy development and programme implementation

The aim is to enhance the effectiveness and coherence of national and EU research policies and international cooperation in the field of research infrastructures. This work programme calls for support actions for e-Infrastructures.

Expected impact: Support measures are expected to strengthen the development of a consistent and dynamic European policy for e-infrastructure. They should significantly promote the alignment of national and EU research infrastructure policies, enable interoperability of e-infrastructures, and contribute to the emergence of integrated cross-disciplinary research services. They should also promote innovative use of High Performance Computing (HPC) by SMEs. They should help involving a broader set of actors in e-infrastructure development, operation and use, and support the participation of citizens in the scientific process. Furthermore, they should address specific needs for international cooperation in data infrastructures, thus achieving critical mass and driving global policies and laying ground and stronger role for European industry in exploiting data made available through global data infrastructures.

Topics opened in Call FP7-INFRASTRUCTURES-2013-2 (call N° 12):

INFRA-2013-3.1: Support actions on policy development, including international cooperation, for e-Infrastructures.

Proposals will aim at providing policy support for e-Infrastructures, in one of the following areas:

- bringing together national and pan-European e-Infrastructure and research infrastructures initiatives and stakeholders (in particular e-IRG and ESFRI) in view of better meeting common research infrastructure needs through e-infrastructure offerings,
- investigating the feasibility of EU-wide network of HPC competence centres to provide services to industry, in particular to SME's,
- fostering an increased European role and participation with relevant stakeholders in global data infrastructure initiatives, in particular the Research Data Alliance (RDA); this includes facilitating European industrial involvement in order to exploit emerging opportunities for products and services based on the increased availability of interoperable data,
- developing a roadmap for broadening e-infrastructures deployment to support the participation of the citizens in all phases of the scientific development process, including the definition of research goals.

Up to one proposal per area will be funded under this call. The following additional eligibility criterion applies in this call: each proposal shall cover only one of the four areas.

III. IMPLEMENTATION OF CALLS

For description of the topics of the calls, please refer to section II 'Content of calls'

Call title: Call N° 11 - FP7-INFRASTRUCTURES-2013-1

- **Call identifier:** FP7-INFRASTRUCTURES-2013-1
- **Date of publication⁹:** 10 July 2012
- **Deadline⁹:** 3 January 2013 at 17.00.00, Brussels local time.
- **Indicative budget¹⁰:** EUR 41.80 million

| Line of action/Activity | Topics called | Funding schemes | EUR million indicative |
|-----------------------------------------|-------------------------|-------------------------------------------------------------------------------------|------------------------|
| 1.2 Support to existing infrastructures | | | |
| 1.1.2 ICT based e-Infrastructures | INFRA-2013-1.2.1: GÉANT | Combination of Collaborative projects and Coordination and Support Actions (CP-CSA) | 41.80 |

- **Eligibility criteria:**

- The general eligibility criteria are set out in Annex 2 of this work programme and in the guide for applicants. Please note that the completeness criterion also includes that part B of the proposal shall be readable, accessible and printable.
- Table of standard minimum number of participating legal entities for all funding schemes used in the call, in line with the Rules for Participation:

| Funding scheme | Minimum conditions |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Combination of Collaborative projects and Coordination and Support Actions (CP-CSA) | At least 3 independent legal entities, each of which is established in a MS or AC, and no two of which are established in the same MS or AC. |

- Only information provided in part A of the proposal will be used to determine whether the proposal is eligible with respect to budget thresholds and/or minimum number of eligible participants.
- **The following additional eligibility criteria apply in this call:**
 - Proposals shall address all the three categories of activities (networking activities, service activities, joint research activities) of the I3 model as defined in Section VII.1.
 - Proposals shall be submitted solely by legal entities operating the NRENs or legal entities created by the NRENs to contribute to the deployment of connectivity and services on a pan-European scale (e.g. DANTE, TERENA, NORDUnet).

⁹ The Director-General responsible for the call may publish it up to one month prior to or after the envisaged date of publication. Also, the Director-General responsible may delay this deadline by up to two months.

¹⁰ The budget for this call is indicative. The final budget of the call may vary by up to 10% of the total value of the indicated budget for the call.

- **Evaluation procedure:**

- The evaluation criteria and scoring scheme are set out in Annex 2 of the work programme. However, specific selection and award criteria are set out in section VII.2 replacing those of Annex 2 to the Capacities work programme.
- Proposal page limits: Applicants must ensure that proposals conform to the page limits and layout given in the Guide for Applicants, and in the proposal part B template available through the electronic Submission Services of the Commission. The Commission will instruct the experts to disregard any pages exceeding these limits. The minimum font size is 11. All margins (top, bottom, left, right) should be at least 15 mm (not including any footers or headers).
- A one stage submission procedure will be followed.
- The procedure for prioritising proposals with equal scores is described below. It will be applied successively for every group of *ex aequo* proposals requiring prioritisation, starting with the highest scored group, and continuing in descending order:
 - (i) Proposals that address topics not otherwise covered by more highly-rated proposals will be considered to have the highest priority.
 - (ii) These proposals will themselves be prioritised according to the scores they have been awarded for the criterion *impact*. If necessary, any further prioritisation will be based on other appropriate characteristics, to be decided by the panel, related to the contribution of the proposal to the European Research Area and/or general objectives mentioned in the work programme.
 - (iii) The method described in (ii) will then be applied to the remaining *ex aequos* in the group.
- A reserve list may be produced of projects that pass the evaluation but fall below the available budget in case additional budget becomes available.

- **Indicative timetable:**

- Evaluation results: estimated to be available within some 4 months after the closure date.
- Grant Agreement signature: it is estimated that the first grant agreements related to this call will come into force before the end of 2013.

- **Consortia agreements:** Participants are required to conclude a consortium agreement.

- **The forms of grant and maximum reimbursement rates** which will be offered are specified in Annex 3 to the Capacities work programme.

- **Flat rates to cover subsistence costs:** In accordance with Annex 3 of this work programme, this call provides for the possibility to use flat rates to cover subsistence costs incurred by beneficiaries during travel carried out within grants for indirect actions. For further information, see the relevant Guides for Applicants for this call.

The applicable flat rates are available on the Participant Portal at: http://ec.europa.eu/research/participants/portal/page/fp7_documents under 'Guidance documents for FP7/Financial issues/Flat rates for daily allowances'.

- **Dissemination.** Grant agreements of projects financed under topics INFRA-2013-1.2.1 of this call for proposals will include the special clause 39 on the "Open Access Pilot in FP7". Under this clause, beneficiaries are required to make their best efforts to ensure free access to peer-reviewed articles resulting from projects via an institutional or subject-based repository.

Call title: Call N° 12 - FP7-INFRASTRUCTURES-2013-2

- **Call identifier:** FP7-INFRASTRUCTURES-2013-2
- **Date of publication**¹¹: 03 September 2013
- **Deadline**¹¹: 03 December 2013 at 17.00.00, Brussels local time.
- **Indicative budget**¹²: EUR 2.50 million

| Line of action/ Topics called | Funding schemes | EUR million indicative |
|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|------------------------|
| 1.3 Support to policy development and programme implementation | | |
| INFRA-2013-3.1: Support actions on policy development, including international cooperation, for e-Infrastructures | Coordination and Support Actions - supporting actions (CSA-SA) | 2.50 |

- **Eligibility criteria:**

- The general eligibility criteria are set out in Annex 2 of this work programme and in the guide for applicants. Please note that the completeness criterion also includes that part B of the proposal shall be readable, accessible and printable.
- Table of standard minimum number of participating legal entities for all funding schemes used in the call, in line with the Rules for Participation:

| Funding scheme | Minimum conditions |
|---------------------------------------------------------------|--------------------------|
| Coordination and Support Actions - supporting action (CSA-SA) | At least 1 legal entity. |

- Only information provided in part A of the proposal will be used to determine whether the proposal is eligible with respect to budget thresholds and/or minimum number of eligible participants.

- **Additional eligibility criteria:**

- The following additional eligibility criterion applies in this call: each proposal shall cover only one of the four areas described in the work programme.

- **Evaluation procedure:**

- The evaluation criteria and scoring scheme are set out in Annex 2 of the work programme. Nonetheless, the highest rated proposal above thresholds for each area will have priority over all the other proposals in the ranking list.
- Proposal page limits: Applicants must ensure that proposals conform to the page limits and layout given in the Guide for Applicants, and in the proposal part B template available through the electronic Submission Services of the Commission. The Commission will instruct the experts to disregard any pages exceeding these limits. The

¹¹ The Director-General responsible for the call may publish it up to one month prior to or after the envisaged date of publication. Also, the Director-General responsible may delay this deadline by up to two months.

¹² The budget for this call is indicative. The final budget of the call may vary by up to 10% of the total value of the indicated budget for the call.

minimum font size is 11. All margins (top, bottom, left, right) should be at least 15 mm (not including any footers or headers).

- A one stage submission procedure will be followed.
 - The procedure for prioritising proposals with equal scores is the following: these proposals will be prioritised according to the scores they have been awarded for the criterion *impact*. If necessary, any further prioritisation will be based on other appropriate characteristics, to be decided by the panel, related to the contribution of the proposal to the European Research Area and/or general objectives mentioned in the work programme.
 - A reserve list may be produced of projects that pass the evaluation but fall below the available budget in case additional budget becomes available.
- **Indicative timetable:**
 - Evaluation results: estimated to be available within some 2 months after the closure date.
 - Grant Agreement signature: it is estimated that the first grant agreements related to this call will come into force at the beginning of 2014.
 - **The forms of grant and maximum reimbursement rates** which will be offered are specified in Annex 3 to the Capacities work programme.
 - **Flat rates to cover subsistence costs:** In accordance with Annex 3 of this work programme, this call provides for the possibility to use flat rates to cover subsistence costs incurred by beneficiaries during travel carried out within grants for indirect actions. For further information, see the relevant Guides for Applicants for this call.
The applicable flat rates are available on the Participant Portal at: http://ec.europa.eu/research/participants/portal/page/fp7_documents under 'Guidance documents for FP7/Financial issues/Flat rates for daily allowances'.
 - **Dissemination:** Grant agreements of projects financed under topics INFRA-2013-3.1 of this call for proposals will include the special clause 39 on the "Open Access Pilot in FP7". Under this clause, beneficiaries are required to make their best efforts to ensure free access to peer-reviewed articles resulting from projects via an institutional or subject-based repository.

IV. OTHER ACTIONS (not implemented through calls for proposals)

- **Conference on Research Infrastructures**

Following the International Conference on Research Infrastructures (ICRI 2012), held as a Danish Presidency event in March 2012 in the context of the rotating Presidency of the Union, the Research Infrastructure action would support in 2014 one major *International conference on research infrastructures under the Greek Presidency*. This event, jointly organised with the European Commission, is outside the scope of call for proposals. It is supported using Coordination and Support Actions. The general selection and award criteria are those set out in Annex 2 to this work programme.

The beneficiary of the grant will be the Athena Research and Innovation Center in Information Communication & Knowledge Technologies, Artemidos 6 Kai Epidavrou, 15125 Maroussi (EL). The conference will take place in the first semester of 2014 in Athens. It should be a two and a half-day event for approximately 650 participants. The objectives of the conference are (1) to facilitate strategic international cooperation between European Research Infrastructures and their International counterparts, thus promoting global governance schemas for interoperable and sustainable research infrastructures at a global scale; (2) to advance complementarities amongst funding instruments, e.g. Horizon 2020 and Structural-Regional Funds in the European Research Area and beyond.

The rate of EU co-financing will be up to 75 % of the total eligible costs for a maximum EU funding of EUR 250 000.

Indicative budget: EUR 0.25 million

Funding scheme: *Coordination and support actions*¹³ - *Grants to named beneficiaries*

- **External expertise**

- The use of appointed independent experts for the reviewing of running projects.
- The set up of groups of independent experts to advise on or support the design and road-mapping of future EU research policy as well as the implementation of EU research policy.

Indicative budget: EUR 1.25 million

Funding scheme: *Coordination and support actions*¹⁴ - *Expert contracts*

- **RSFF:** In addition to direct financial support to participants in RTD actions, the EU will improve access for them to private sector finance by contributing financially to the 'Risk-Sharing Finance Facility' (RSFF) established by the European Investment Bank (EIB).

¹³ In compliance with Article 14(a) of Regulation (EC) No 1906/2006 of 18 December 2006 laying down the rules for the participation of undertakings, research centres and universities in actions under the Seventh Framework Programme and for the dissemination of research results (2007-2013), and Article 168 of the Implementing Rules of the Financial Regulation.

¹⁴ In compliance with Article 14(c) of Regulation (EC) No 1906/2006 of 18 December 2006 laying down the rules for the participation of undertakings, research centres and universities in actions under the Seventh Framework Programme and for the dissemination of research results (2007-2013).

The EU contribution to RSFF will be used by the Bank in accordance with eligibility criteria set out in section VII.4 of this Work Programme. RSFF support is not conditional on promoters securing grants resulting from calls for proposals described herein, although the combination of grants and RSFF-supported financing from EIB is possible. Further information on the RSFF is given in section VII.4 The Commitment and Payment Appropriations for the RSFF in 2013 will be EUR 50.00 million¹⁵.

- ***Studies***

One or more studies addressing the scoping and road-mapping of e-Infrastructures future activities. The European Commission plans to launch the call for tenders for a service contract during the first semester 2013, and conclude indicatively the contract before year end.

Indicative budget: *EUR 0.20 million*

Funding scheme: *Coordination and support actions¹⁶ - Public procurement*

¹⁵ This amount for 2013 corresponds to primary-credit appropriations. It will be complemented by an additional amount (corresponding to the allocation of EUR 1,400,000 to RSFF of the EFTA credits). It may be further increased by other Third Countries appropriations (of a minimum of EUR 3,533,619).

¹⁶ In compliance with Article 14(b) of Regulation (EC) No 1906/2006 of 18 December 2006 laying down the rules for the participation of undertakings, research centres and universities in actions under the Seventh Framework Programme and for the dissemination of research results (2007-2013).

V. BUDGET

Research Infrastructures - Indicative budget

| | Budget 2013 EUR million¹⁷ |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| Call N° 10: FP7-INFRASTRUCTURES-2012-1 (<i>see WP 2012</i>) | 99.20 |
| Call N° 11: FP7-INFRASTRUCTURES-2013-1 | 41.80 |
| Call N° 12: FP7-INFRASTRUCTURES-2013-2 | 2.50 |
| Other actions <ul style="list-style-type: none"> • Conference on Research Infrastructures (EUR 0.25 million) • RSFF (EUR 50.00 million¹⁸) • Independent experts (EUR 1.25 million) • Studies (EUR 0.20 million) | 51.70 |
| Estimated total budget allocation | 195.20 |

Budget figures in this work programme

All budgetary figures given in this work programme are indicative. The final budgets may vary following the evaluation of proposals.

The final budget awarded to actions implemented through calls for proposals may vary:

- The total budget of the call may vary by up to 10% of the total value of the indicated budget for each call; and
- Any repartition of the call budget may also vary by up to 10% of the total value of the indicated budget for the call.

For actions not implemented through calls for proposals:

- The final budgets for evaluation, monitoring and review may vary by up to 20% of the indicated budgets for these actions;
- The final budget awarded for all other actions not implemented through calls for proposals may vary by up to 10% of the indicated budget for these actions.

¹⁷ Under the condition that the planned appropriations coming from the Associated third Countries will be available in 2013.

¹⁸ This amount for 2013 corresponds to primary-credit appropriations. It will be complemented by an additional amount (corresponding to the allocation of EUR 1,400,000 to RSFF of the EFTA credits.) It may be further increased by other Third Countries appropriations (of a minimum of EUR 3,533,619).

VI. OVERVIEW OF CALLS

The table below provide an overview and information about the calls published under the Seventh Framework Programme.

| Activity | Call 1 Feb07 | Call 2 Sep07 | Call 3 Feb08 | Call 4 Sep08 | Call 5 Mar09 | Call 6 Dec09 | Call 7 Nov09 | Call 8 Nov10 | Call 9 Nov10 | Call 10¹⁹ Nov11 | Call 11 Jan13 | Call 12 Oct13 |
|-----------------------------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|--------------------------------------|-------------------------|-------------------------|
| Integrating activities | | | 278 | | | 168 | | 107.5 | | 130.4 | | |
| e-Infrastructures | 44 | 50 | | 115 | 4 | | 85 | | 72 | | 41.8 | |
| Design studies | 29 | | | | | | | 17.7 | | | | |
| Construction – support to the preparatory phase | 147 | | | | | 44 | | | | 21.3 | | |
| Construction – support to the implementation phase | | | | | | | 20 | 32.2 | 18 | 19 | | |
| Support to policy development | 8 | 13 | 4 | | 5 | 5 | 10 | 6.1 | 5 | 20.5 | | 2.5 |
| Budget (EUR million) | 227 | 63 | 282 | 115 | 9 | 217 | 115 | 163.5 | 95 | 191.2 | 41.8 | 2.5 |

¹⁹ An amount of EUR 99.20 million from the 2013 budget is added to this call.

VII. COMPLEMENTARY INFORMATION

1. The Integrated Infrastructure Initiative (I3) model

Integrated Infrastructure Initiatives (I3) should combine, in a closely co-ordinated manner: (i) *Networking activities*, (ii) *Trans-national access and/or service activities* and (ii) *Joint research activities*. All three categories of activities are mandatory as synergistic effects are expected from these different components.

(i) *Networking activities*. To foster a culture of co-operation between the participants in the project and the scientific communities benefiting from the research infrastructures and to help developing a more efficient and attractive European Research Area. Networking activities could include (non-exhaustive list):

- joint management of access provision and pooling of distributed resources;
- dissemination and /or exploitation of project results and knowledge, outreach toward industry, contribution to socio-economic impacts, promotion of innovation;
- strengthening of virtual research communities;
- definition of common standards, protocols and interoperability; benchmarking;
- development and maintenance of common databases for the purpose of networking and management of the users and infrastructures;
- spreading of good practices, consultancy and training courses to new users;
- foresight studies for new instrumentation, methods, concepts and/or technologies;
- promotion of clustering and coordinated actions amongst related projects;
- coordination with national or international related initiatives and support to the deployment of global and sustainable approaches in the field;
- promotion of long term sustainability, including the involvement of funders and the preparation of a business plan beyond the end of the project.

(ii) *Trans-national access and/or service activities*.

Trans-national access activities

To provide trans-national access to researchers or research teams to one or more infrastructures among those operated by participants. These access activities should be implemented in a coordinated way such as to improve the overall services available to the research community. Access may be made available to external users, either in person ('hands-on') or through the provision of remote scientific services, such as the provision of reference materials or samples or the performance of sample analysis. EU financial support should never exceed 20% of the annual operating costs of the infrastructure to prevent it from becoming dependent on the EU contribution and should not include capital investments. This financial support will serve to provide access 'free of charge' to external users, including all the infrastructural, logistical, technological and scientific support (including training courses, travel and subsistence for users). Access costs will be defined on the basis of 'user fees' related to the operating costs of the infrastructure.

The research infrastructures must publicise widely the access offered under the grant agreement to ensure that researchers who might wish to have access to the infrastructure are made aware of the possibilities open to them. They must maintain appropriate documentation to support and justify the amount of access reported. This documentation shall include records of the names, nationalities, and home institutions of the users within the research teams, as well as the nature and quantity of access provided to them.

The selection of researchers or research teams shall be carried out through an independent peer-review evaluation of their research projects. The research team, or its majority, must come from countries other than where the operator of the infrastructure is established (when the infrastructure is composed of several research facilities, operated by different legal entities, this condition shall apply to each facility) except in the case of a distributed set of resources or facilities offering remote access to the same services. Provided that the majority of users are from Member States or Associated Countries, other third country users can be part of an eligible user team. Only research teams, including industrial users, that are entitled to disseminate the knowledge they have generated under the project are eligible to benefit from research services to the infrastructure under the grant agreement. The duration of stay at a research infrastructure shall normally be limited to three months.

Service activities for Integrating Activities

To provide access to scientific services freely available through communication networks (e.g. databases available via Internet). Only services widely used by the community of European researchers will be supported. In such case, projects of potential users would not normally be subject to peer review. However, in such cases, the services offered to the scientific community will be periodically assessed by an external board.

Service activities for e-Infrastructures

To provide specific research infrastructure related services to the scientific community. This may include (non-exhaustive list):

- procurement and upgrading communication infrastructure, network operation and end-to-end services;
- distributed computing infrastructure support, operation and management; integration, test and certification; services deployed on top of generic communication and computing infrastructures to build and serve virtual communities in the various scientific domains;
- deployment, quality assurance and support of middleware component repositories;
- data and resources management (including secure shared access, global scheduling, user and application support services) to foster the effective use of distributed supercomputing facilities; federated and interoperable services to facilitate the deployment and wide use of digital repositories of scientific information;
- vertical integration of the different services in support of specific virtual research communities, including virtual laboratories for simulation and specific workspaces.

(iii) *Joint Research activities*. These activities should be innovative and explore new fundamental technologies or techniques underpinning the efficient and joint use of the participating research infrastructures. To improve, in quality and/or quantity, the services provided by the infrastructures, these joint research activities could address (non-exhaustive list):

- higher performance methodologies and protocols, higher performance instrumentation, including the testing of components, subsystems, materials, techniques and dedicated software;
- integration of installations and infrastructures into virtual facilities;
- innovative solutions for data collection, management, curation and annotation;
- innovative solutions for communication network (increasing performance, improving management, exploiting new transmissions and digital technologies, deploying higher degrees of security and trust) and introduction of new end-to-end services (including dynamic allocation of resources and innovative accounting management);

- novel grid architecture frameworks and policies, innovative grid technologies, or new middleware solutions driving the emergence of high level interoperable services;
- advanced Service Level Agreements and innovative licensing schemes, fostering the adoption of e-Infrastructures and the use of other types of Research Infrastructures by industry;
- innovative software solutions for making new user communities benefit from computing services.

2. Evaluation criteria for Integrating Activities and ICT-based e-Infrastructures

1. Scientific and/or technological excellence (relevant to the topic addressed by the call) (award)

- Soundness of concept and quality of objectives.
- Progress beyond the state-of-the-art (e.g. improved performance and capacity of the proposed integrated Research Infrastructures and e-Infrastructures).
- Quality and effectiveness of the methodology to achieve the objectives of the project, in particular the provision of integrated services.
- Quality and effectiveness of the Networking Activities and associated work plan. The extent to which the co-ordination mechanisms will foster a culture of co-operation between the participants, and enhance the services to the users.
- Quality and effectiveness of the Trans-national Access and/or Services, and associated work plan. The extent to which the activities will offer access to state-of-the-art infrastructures, high quality services, and will enable users to conduct high quality research.
- Quality and effectiveness of the Joint Research Activities and associated work plan. The extent to which the activities will contribute to quantitative and qualitative improvements of the services provided by the infrastructures.

2. Quality and efficiency of the implementation and the management (selection)

- Appropriateness of the management structure and procedures.
- Quality and relevant experience of the individual participants.
- Quality of the consortium as a whole (including complementarity, balance, critical mass).
- Appropriate allocation and justification of the resources to be committed (staff, equipment...), by work package and participant.

3. Potential impact through the development, dissemination and use of project results (award)

- Contribution to the expected impacts listed in the work programme under the relevant topic.
- Contribution at the European level towards structuring the European Research Area taking into account the EU objective of balanced territorial development for optimising the use and development of the best research infrastructures existing in Europe.
- Appropriateness of measures for the dissemination and/or exploitation of project results and knowledge and for spreading excellence.
- Contribution to socio-economic impacts, including for promoting innovation and developing appropriate skills in Europe.

Notes:

- Evaluation scores will be awarded for each of the three criteria, and not for the sub-criteria. Each criterion will be scored out of 5. No weightings will apply. The threshold for individual criteria will be 3. The overall threshold, applying to the sum of the three individual scores, will be 10.
- The second criterion corresponds to the **selection criteria** in the meaning of Article 115 of the Financial Regulations applicable to the general budget of the EU (OJ L248 16.9.2002, p.1). It will be the basis for assessing the 'operational capacity' of participants. The remaining criteria and sub-criteria correspond to the **award criteria**.

3. Specific Requirements for the implementation of Pre-Commercial Procurement

The following requirements are applicable to Pre-Commercial Procurement (PCP) calls for tender launched under actions requiring PCP to ensure that the conditions for the Article 16f/24e exemption of the public procurement directives²⁰ are respected, that the risk-benefit sharing in PCP takes place according to market conditions and that the Treaty principles²¹ and competition rules are fully respected throughout the PCP process:

- The consortium of public purchasers should verify that the topic proposed for the joint PCP call for tender would **fit the scope of an R&D²² services contract**. During the preparation phase of the PCP call for tender, the consortium should encourage an open dialogue²³ with potential tenderers and end-users to broach the views of the market about the R&D scope of the PCP. Regarding scope, PCP only covers the procurement of R&D services, in a way that is clearly separated from any potential subsequent purchases of large volumes of end-products (ref COM/2007/799). Participation to a PCP action therefore does not commit participating public purchasers to subsequent procurement of large volumes of end-products resulting from a PCP. Public purchasers undertaking a PCP can if they so desire, but are not obliged to, procure at market price R&D results resulting from a PCP (e.g. limited set of prototypes or test series products/services that were developed during a PCP²⁴).
- **The practical set-up foreseen for the PCP** shall be clearly announced in the PCP contract notice. This shall include the intention to select multiple companies to start the pre-

²⁰ Directives 2004/18/EC and 2004/17/EC

²¹ In particular the fundamental Treaty principles on the free movement of goods, the free movement of workers, the freedom to provide services, the freedom of establishment and the free movement of capital, as well as the principles deriving there from, such as the principles of non-discrimination, transparency and equal treatment

²² R&D can cover activities such as solution exploration and design, prototyping, up to the original development of a limited volume of first products or services in the form of a test series. Original development of a first product or service may include limited production or supply in order to incorporate the results of field testing and to demonstrate that the product or service is suitable for production or supply in quantity to acceptable quality standards. R&D does not include commercial development activities such as quantity production, supply to establish commercial viability or to recover R&D costs, integration, customisation, incremental adaptations and improvements to existing products or processes.

²³ The open dialogue should be organised in a way not to preclude or distort competition. In respect of the Treaty principles, the open dialogue should be announced widely and well in advance and enable companies regardless of the geographic location to participate to the dialogue at least in English. All information given in answers to questions from participants in the dialogue should be documented and published.

²⁴ Contracts providing more than only services are still considered a public service contract if the value of the services exceeds that of the products covered by the contract. Art. 31(2)(a) resp. Art. 40(3)(b) of public procurement directives 2004/18/EC resp. 2004/17/EC.

commercial procurement in parallel, as well as the number of phases and the expected duration of each phase.

- **Functional specifications** shall be used in order to formulate the object of the PCP tender as a problem to be solved without prescribing a specific solution approach to be followed.
- In view of triggering tenderers to send in innovative offers that include R&D that can bring breakthrough improvements to the quality and efficiency of public services, the selection of offers shall not be based on lowest price only. The PCP contracts shall be awarded to the tenders offering **best value for money**, that is to say, to the tender offering the best price-quality ratio, while taking care to avoid any conflict of interests²⁵. In case public purchasers use external experts to assist e.g. in the preparation of the PCP call for tender or in the evaluation of offers, they should ensure that these are independent experts.
- In respect of the Treaty principles the public purchasers shall ensure **EU wide publication** for the PCP call for tender²⁶ in at least English, shall accept offers and enable communication with stakeholders at all stages throughout the PCP project in at least English, and shall evaluate all offers according to the same objective criteria regardless of the geographic location of company head offices, company size or governance structure. The PCP process should require participating companies to locate the majority of the R&D and operational activities related to the PCP contract, including in particular the principal researcher(s) working for the PCP contract, in the Member States or countries associated to FP7. Subcontracting of R&D work by companies/consortia participating in a PCP to other third parties should be limited. Companies/consortia participating in a PCP should pass on to any of their subcontractors the obligation to respect the rights assigned in PCP projects to the public purchasers and the EC that are financially supporting the PCP.
- In PCP, the public purchaser does not reserve the R&D results exclusively for its own use. To ensure that such an arrangement is beneficial both for the public purchaser and for the companies involved in PCP, **R&D risks and benefits are shared** between them in such a way that both parties have an incentive to pursue wide commercialisation and take up of the new solutions. Therefore, for PCP, ownership rights of **IPRs** generated by a company during the PCP contract should be assigned to that company. The public purchasers should be assigned a free licence to use the R&D results for internal use as well as the right to require participating companies to license IPRs to third parties under fair and reasonable market conditions. A call-back provision should ensure that IPRs from companies that do not succeed to exploit the IPRs themselves within a given period after the PCP project return back to the public purchasers. The public purchasers should inform participating companies of their right to publish - after consultation with each participating company - public summaries of the results of the PCP project, including information about key R&D results attained and lessons learnt by the public purchaser during the PCP (e.g. on the feasibility of the explored solution approaches to meet the purchasers' requirements and lessons learnt for potential future deployment of solutions). Details should not be disclosed that would hinder application of the law, would be contrary to the public interest, would harm the legitimate business interests of the companies involved in the PCP (e.g. regarding IPR protected specificities of their individual solution approaches) or could distort fair competition between the participating companies or others on the market.

²⁵ For more info refer to Staff Working Document on PCP: SEC (1668) 2007

²⁶ Through the Official Journal of the European Union (OJEU), using the TED (Tenders Electronic Daily) web portal

- In order to enable the public purchasers to **establish the correct (best value for money) market price for the R&D service, in which case the presence of State aid can in principle be excluded** according to the definition contained in Art. 107 of the Treaty on the functioning of the European Union, the distribution of rights and obligations between public purchasers and companies participating in the PCP, including the allocation of IPRs, shall be published upfront in the PCP call for tender documents and the PCP call for tender shall be carried out in a competitive and transparent way in line with the Treaty principles which leads to a price according to market conditions, and does not involve any indication of manipulation. The consortium of public purchasers should ensure that the PCP contracts with participating companies contain a financial compensation according to market conditions²⁷ compared to exclusive development price for assigning IPR ownership rights to participating companies, in order for the PCP call for tender not to involve State aid.
- The PCP contract that will be concluded with each selected organisation shall take the form of **one single framework contract covering all the PCP phases**, in which the distribution of rights and obligations of the parties is published upfront in the tender documents and which does not involve contract renegotiations on rights and obligations taking place after the choice of participating organisations. This framework contract shall contain an agreement on the future procedure for implementing the different phases (through specific contracts), including the format of the intermediate evaluations after the solution design and prototype development stages that progressively select organisations with the best competing solutions.
- In order to remove unnecessary barriers for innovative new companies, typically SMEs, to make offers for the PCP call for tender, consortia should avoid the use of selection criteria based on stringent qualification requirements and disproportionate financial guarantee requirements (e.g. with regards to prior customer references and minimum turnover). As an alternative, the commercialisation plan can be a factor in the evaluation criteria used along the PCP process, requiring participating companies to demonstrate that they are able to build up - gradually throughout the PCP process - sufficient financial capacity²⁸ to successfully commercialise the solutions developed during the PCP.

²⁷ The financial compensation compared to exclusive development cost should reflect the market value of the benefits received and the risks assumed by the participating company. In case of IPR sharing in PCP, the market price of the benefits should reflect the commercialisation opportunities opened up by the IPRs to the company, the associated risks assumed by the company comprise for instance the cost carried by the company for maintaining the IPRs and commercialising the products.

²⁸ e.g. by requiring in the later PCP phases proof of support of an external financial investor such as a Venture Capitalist, or the commitment of a first buyer – e.g. a public procurer – to make a follow-up investment in the solutions developed during the PCP (e.g. to further scale up the production chain to large scale production and/or deploy a first batch of commercial end-solutions once successfully tested at the end of the PCP).

4. Risk-Sharing Finance Facility

In accordance with Annex III to the Capacities Specific Programme, the European Union (EU) provides a contribution to the European Investment Bank (EIB), which is a risk-sharing partner for the debt financial instrument, entitled "Risk-Sharing Finance Facility" (RSFF). RSFF is co-funded by the EU and the EIB. It aims at fostering primarily private sector investment across Europe in research, technological development, demonstration as well as innovation²⁹ (RDI). This financing instrument was designed by the Commission and the EIB, and launched in June 2007.

Political landscape

Against the backdrop of the current economic situation and increased global competition, the EU has defined a strategy to support growth and job creation, Europe 2020. The Innovation Union flagship initiative supports this strategy through specific commitments. Research and innovation are key drivers of competitiveness, jobs, sustainable growth and social progress.

The work programme 2013 aligns with, and contributes towards, the objectives of Europe 2020, the Innovation Union flagship initiative and other policies, in particular to bring together research and innovation to address major challenges and to enhance access to finance for enterprises.

Access to finance to support investments in RDI is part of the Innovation Union Flagship Initiative. Its Commitment No. 10 is that by 2014 the EU should put in place financial instruments to attract a major increase in private finance and close market gaps in investing in RDI. The Commission proposal on Horizon 2020 also put emphasis on raising private investment and access to risk finance, in particular through loan guarantees and equity instruments.

There is a determined focus on fostering new ideas, supporting world class teams tackling significant societal challenges and on ensuring that the fruits of EU investments can be properly exploited. In this way the work programme provides for a smooth transition towards the new research and innovation programme for 2014-2020, Horizon 2020.

An Independent Expert Group in charge of the RSFF interim evaluation underlined its successful achievements and proposed improvements in 2010³⁰. On this basis, the European Council, in its conclusions of 4 February 2011 on Innovation³¹, invited the Commission to present proposals by the end of 2011 for scaling-up the RSFF and for assessing how best to meet the needs of relatively underrepresented beneficiaries, such as research infrastructures. The European Parliament expressed similar requests.

Responding to the European Council and European Parliament, the EU and the EIB signed Amendment No. 4 to the RSFF cooperation agreement on 5 December 2011. The EU now

²⁹ See below under 'Innovation dimension of the activity'.

³⁰ See Report of the Independent Expert Group in charge of the RSFF evaluation:

http://ec.europa.eu/research/evaluations/index_en.cfm?pg=rsff

and the response: European Commission Communication COMM (2011)52 'On the Response to the Report of the Expert Group on the Interim Evaluation of the Seventh Framework Programme for Research, Technological Development and Demonstration Activities and to the Report of the Expert Group on the Interim Evaluation of the Risk-Sharing Finance Facility':

http://ec.europa.eu/research/evaluations/pdf/archive/other_reports_studies_and_documents/commission_response_fp7_ie_report_2011.pdf#view=fit&pagemode=none

³¹ Doc EUCO 2/11.

assumes a higher risk: the EU financial contribution is used as a first-loss piece³². The amendment enlarges the definition of entities eligible as research infrastructures: RSFF can help any entity that participates to the achievements of the Research Infrastructure Programme (e.g. not only research infrastructures, but also suppliers and entities commercialising their outputs).

Approach for 2013

RSFF Context

The RSFF has repeatedly been showcased as an example of how EU resources can leverage private funding for a larger impact in achieving EU objectives. It has also been hailed as a model for collaboration between the EU and the EIB³³.

Private investment in research and innovation in Europe remains below the level necessary to achieve the ambitions of the *'Europe 2020 strategy'*. In addition to grants, other mechanisms – in the form of financial instruments including the RSFF – have proven effective in leveraging private investment by firms, thus mobilising the financial markets and diversifying funding sources for European RDI actions.

The financial crisis has made access to finance for innovative companies even more difficult as banks have become more than ever risk-averse. As a result, risk capital for private investments in RDI is very scarce. In addition, public financial support for RDI at national level is also scarce, fragmented and cyclical depending on the availability of budget resources in the EU Member States.

Improving access to loans for RDI actions requires public support to overcome market deficiencies for the financing of European RDI actions, which often involve a high level of risk.

One of the key challenges of the 2013 RSFF work programme is to support the implementation of the Innovation Union and to improve access to the appropriate forms of finance to increase RDI investment, especially private one, in Europe. This notably concerns research infrastructures, for which specific obstacles need to be addressed.

The RSFF focus for 2013 is on maximising the implementation level for target groups that have so far been relatively less attracted to the RSFF, in particular research infrastructures under the Capacities Specific Programme. In 2013, the Commission and the EIB Group will implement the major changes introduced in the RSFF cooperation agreement, following the RSFF interim evaluation.

With the same spirit of the RSFF interim evaluation of 2010, a group of very-high level independent experts will evaluate the RSFF activities in mid-2013. The evaluation will notably assess to which extent the Commission and the EIB Group have implemented the recommendations of the RSFF interim evaluation for a better support to research infrastructures.

³² The EU contribution would be used first to cover potential losses for a portfolio of loans provided to a specific target group, up to a defined percentage of losses ("first-loss" cushion). Only if potential losses were to exceed the EU contribution, the EIB contribution to the RSFF would be used to cover such further losses on an agreed basis.

³³ In the words of President Barroso, the RSFF is "an excellent example to build on in order to improve the blending between grants from the EU budget and EIB loans" (in the *Political Guidelines for the Next Commission, 2009*)

This will feed into the process of designing an enlarged and expanded debt financing facility under the proposed Horizon 2020 to increase the leverage and multiplier effects of such an instrument in total RDI investments.

Innovation dimension of the activities and bridging towards Horizon 2020

The Innovation Union and Horizon 2020 give increased weight to innovation. It is worth noting that the RSFF has financed support to innovation already since 2007.

This work programme contains innovation measures in support of activities closer to the market such as support to market-uptake, notably through more activities aimed at generating knowledge to deliver new and more innovative products, processes and services. This notably supports activities such as prototyping, testing, demonstrating, knowledge transfer, proof of concept and activities addressing exploitation of existing research results. The demand-driven nature of the RSFF also encourages innovation and particularly the industrial participation, on a market basis.

The EU–EIB risk-sharing arrangement ensures that RSFF can cover activities from any part of the value-chain (e.g. from "blue-sky" research to commercialisation activities, encompassing innovation). The RSFF interim evaluation showed that the majority of approved loans financed technological development and innovation activities in the period 2007-2009.

Regarding the EU financial contribution, costs related to innovation activities are eligible for EU RSFF Operations if they comply with the provisions of the RSFF Cooperation Agreement³⁴. In this final year of FP7, the RSFF is well positioned to ensure a smooth transition to the scaled-up debt instrument that the proposal of Horizon 2020 foresees under "Access to Risk Finance".

Dissemination actions

Information on the RSFF is available online³⁵. The Commission will respond to further needs of potential beneficiaries for information on the RSFF (by, e.g., awareness-raising activities in conjunction with the EIB, participation to thematic events).

Since 2006, the EIB Group, and the Commission services have carried out an intensive awareness-raising campaign to reach stakeholders in as many Member States and Associated Countries as possible. Such awareness-raising actions will continue in 2013, with special focus on the most RDI-intensive sectors in Europe and on beneficiaries potentially eligible under the enlarged definition of research infrastructures. However it should be noted that loans can only be signed under RSFF until 31 December 2013.

The RSFF involves the development of financial engineering solutions adapted to the needs of European research infrastructures. Relevant solutions can be implemented in 2013 in compliance with the provisions of Amendment No. 4. As soon as such a solution can be considered replicable, case studies and new products developed specifically for RSFF are published on the EIB's dedicated RSFF web-site.

A number of workshops for representatives of the Member States and Associated Countries have been held since the launch of the RSFF. They have disseminated financial engineering

³⁴ As stated below under 'Selection of Projects for Financing and the Eligibility Criteria'

³⁵ See: <http://www.eib.org/products/loans/special/rsff/index.htm?lang=en>

solutions and sought future cooperation opportunities. Initiatives of this kind continue in 2013, both at European and national level, to make the link with Horizon 2020.

Contacts with potential clients

The RSFF dedicated websites and other awareness raising activities have resulted in applications from promoters of European research infrastructures. In parallel, the EIB has discussed with research infrastructure promoters, public and private, their concrete financing needs. This has resulted in the signature of RSFF loans to research infrastructures and the approval of other projects.

All types of legal entities, irrespective of size (including SMEs in particular and research organisations, including universities) may benefit from this facility to support their eligible operations.

The objective is also to increase the participation in RSFF in as many Member States and Associated Countries as possible. Specific efforts are also made to address financing needs of research infrastructures and entities that participate to the achievements of the Research Infrastructures Part (e.g. not only research infrastructures, but also suppliers and entities commercialising their outputs).

A yet broader geographical distribution of projects is expected. Appropriate performance indicators are in place to encourage the EIB Group to do so. The participation rate has risen steadily to over 20 participating countries under Cooperation and Capacities Specific Programmes. Moreover, European added-value is not only ensured by the geographical distribution of projects. It also stems from the actual design of projects: a client may have RDI operations in several countries even if the concrete RSFF loan is extended to a sole client.

Overall expected impact

In terms of current impact, the Independent Expert Group in charge of the RSFF interim evaluation in 2010 notably underlined that *"the RSFF has been one of the most successful instruments for addressing market imperfections in the debt financing of RDI investments in Europe. As the financial crisis unfolded, the market imperfections with respect to loan finance for RDI investments did not just increase substantially, they became to some extent ubiquitous. RSFF remained one of the few financial instruments available to innovative firms and organisations. RSFF helped many European research intensive firms to maintain RDI activities in period of major financial stress (...)"*.

Following the experts' recommendations on research infrastructures, Amendment No. 4 has made it possible to help finance more operations, thus contributing to the diversification of long-term private-financing sources for research infrastructures.

International Co-operation

In accordance with the provisions of the Capacities Specific Programme, the EIB may only use the EU contribution to RSFF to cover risk of operations limited to those borrowers or beneficiaries of guarantees from legal entities from Third Countries other than Associated Countries who participate in FP7 projects and whose costs are eligible for EU funding or, in the case of research infrastructures, if their services are used or requested for use by research communities from at least three Member States or Associated Countries.

Modalities of implementation

Within the framework of a maximum contribution of EUR 1 billion for the period 2007-2013, the EU has provided its first contributions to the EIB for RSFF for an amount of EUR 949.6 million for the period 2007-2012³⁶, EUR 151.6 million of which coming from the Capacities Specific Programme (Research Infrastructures). For the period 2011-2013, following the positive results of the RSFF interim evaluation, the EU has released a contribution of EUR 500 million to RSFF, as foreseen in the RSFF legal basis³⁷.

For the period 2012-2013, it is expected that the EU transfers EUR 50 million (broken down as follows: in 2012: EUR 0 million; in 2013: EUR 50 million) to the EIB³⁸ from the Capacities Specific Programme (Research Infrastructures). The EIB Group is the sole beneficiary of this European Union action. Pursuant to a EIB decision of 9 June 2006, the EU contribution will be matched by an equivalent amount from the EIB (up to EUR 1 billion for the period 2007-2013).

The EU and the EIB signed the cooperation agreement with respect to the RSFF – the RSFF co-operation agreement – on 5 June 2007. The Commission amended it on the basis of the Commission Decision C(2008) 8058 of 12 December 2008 authorising the Director-General of the Directorate-General for Research to conclude further amendments to the Agreement on behalf of the Commission on a number of points specified in the decision.

The cooperation agreement defines terms and conditions related to RSFF and, in particular, to the use of the EU contribution in RSFF, the risk-sharing methodology, the indicative annual budget, the reporting conditions, the governance, the rules for establishment of network of financial intermediaries in all Member States and Associated Countries and its relating conditions.

It was subject to the following amendments: The first amendment on 26 February 2009 simplifies and harmonises the financial reporting requirements and rules for asset management with other Commission funds managed by the EIB. It allows, *inter alia*, for the allocation to RSFF of the Third Country Appropriations. The second amendment on 8 September 2009 specifies the EU contribution for 2009 and simplifies reporting dates. The third amendment on 5 January 2011 specifies the maximum EU contribution for the period 2007-2010.

The recommendations of the Independent Expert Group in charge of the RSFF interim evaluation were endorsed by the Commission in its Communication of 9 February 2011³⁹. Amendment No. 4 was signed accordingly on 5 December 2011.

Governance

³⁶ For the record, an amount of EUR 70 million was front-loaded from the 2010 budget to the 2009 budget in response to the financial and economic crisis for the Cooperation Specific Programme. An additional contribution of EUR 1.5 million in 2009 was requested by the budgetary authority for the Capacities Specific Programme, consequently increasing the total EU contribution for 2007-2010 to EUR 501.5 million (All amounts mentioned here are voted credits).

³⁷ The EU contribution to RSFF is expected to come from the following sources for the period 2011-2013: EUR 400 million from the Specific Programme "Cooperation" and EUR 100 million from the Specific Programme "Capacities".

³⁸ This amount for 2013 corresponds to primary-credit appropriations. It will be complemented by an additional amount (corresponding to the allocation of EUR 1,400,000 to RSFF of the EFTA credits). It may be further increased by other Third Countries appropriations (of a minimum of EUR 3,533,619).

³⁹ COM(2011) 52

RSFF implementation is managed by the EIB in accordance with its own rules and procedures and in compliance with the RSFF Cooperation Agreement (and its subsequent amendments). The RSFF implementation, in particular the use of the EU Contribution, is supervised by a Steering Committee. It is composed by at least four representatives, at Director level, from the Commission and the EIB.

The Commission continues to monitor closely the effective use of the EU Contribution. This includes ex-post assessments of the features of the action. It reports regularly to the Programme Committee. In addition, the Commission include the main findings in the annual report on research and technological development activities which it sends to the European Parliament and the Council pursuant to Article 190 TFEU. The RSFF interim evaluation concluded very positively on the implementation phase and governance of the RSFF also making specific recommendations for the future, notably for research infrastructures.

Selection of Projects for Financing and the Eligibility Criteria

The EIB was recognised as a beneficiary of the EU action in the Council and Parliament decision adopting the Seventh Framework Programme. In accordance with the principles established in the Capacities Specific Programme, the EIB will use the EU contribution on a 'first come, first served basis' to cover part of the risks associated with its operations supporting eligible research infrastructures. An operation may be considered eligible as a RSFF research infrastructure if one of the following non-cumulative conditions is fulfilled:

- (i) The operation concerns the development of a research infrastructure (new or existing and publicly and/or privately owned) within the scope of the Capacities Specific Programme⁴⁰;
- (ii) The potential beneficiary of the operation could be (1) the owner or operator of the research infrastructure itself (either a public or a private body), or (2) a supplier participating in or contributing to the development or construction of a Research infrastructure, or (3) an entity dedicated to the commercialisation of the research-infrastructure services.

The EU contribution to RSFF supports activities which can be classified as 'fundamental research', 'industrial research' or 'experimental development', as defined in the European Union Framework for State Aid for Research and Development and Innovation⁴¹.

Prototypes and pilot projects, which are part of 'experimental development', are eligible if they fulfil the conditions specified therein. Innovation activities, as defined in the EU

⁴⁰ The term "research infrastructures" on the basis of FP7 refers to facilities, resources or services that are needed by the research community to conduct research in all scientific and technological fields. This definition covers, including the associated human resources:

- major equipment or set of instruments used for research purposes,
- knowledge-based resources such as collections, archives, structured information or systems related to data management, used in scientific research,
- enabling Information and Communication Technology-based infrastructures such as Grid, computing, software and communications,
- any other entity of a unique nature that is used for scientific research.

Only research infrastructures or networks of research infrastructures with clear interest for the European scientific community (academic, public and industrial), in terms of performance and access, can be considered for support. They must contribute significantly to the development of European research capacities.

⁴¹ OJ C323, 30.12.2006

Framework for State Aid for Research and Development and Innovation, intended to prepare the commercial use of research results within the time period of the project (such as training, technology management and transfer) are eligible if they are linked to and complementary to research and technological development and/or demonstration activities, the latter constituting at least 2/3 of the action. Other innovation activities of a commercial nature are eligible for RSFF only via the use of the EIB's own contribution.

The RSFF Cooperation Agreement, including its amendments, comprises a list of exclusions criteria for the support of the EU contribution, in compliance with the Seventh Framework Programme and its Capacities Specific Programme.

The Commission Right to Object to the Use of the European Union Contribution

The Commission has a right to express its opinion on each and every financial operation proposed by the EIB to its Board for decision under Article 21 of the EIB Statutes. Where the Commission delivers an unfavourable opinion, the EIB Board may not grant the loan or guarantee concerned, unless it votes unanimously in its favour, the Commission nominee abstaining. Should the Bank proceed with financing despite the Commission's negative opinion the European Union contribution to RSFF may not be used.

In accordance with EU FP7 Rules of Participation and the RSFF Cooperation Agreement, the Commission may object, in duly justified cases, to the use of the EU contribution to cover the risk for a loan or a guarantee proposed by the EIB. If such a case arises the Commission may conduct an independent, internal or external, review of such a case.

European Union Financial Contribution to RSFF in 2013

As foreseen in the RSFF legal basis and following the positive outcome of the RSFF interim evaluation, the EU contribution is expected to come from the following sources for the period 2011-2013: EUR 400 million from the Cooperation Specific Programme and EUR 100 million from the Capacities Specific Programme. Under the Capacities Specific Programme, only the Research Infrastructures Part contributes to RSFF. The EU financial contribution to RSFF from the Research Infrastructures Part of the Capacities Specific Programme may reach a maximum amount of EUR 200 million for 2007-2013.

After the interim evaluation of the RSFF the Commission endorsed the recommendation of the Independent Expert Group to release up to EUR 500 million for the period 2011-2013. By voting the EU budgets in 2011 and 2012 (including a total of around EUR 450 million for the RSFF), the Council and the European Parliament agreed in principle on the release of the second tranche. In the conclusions of the Competitiveness Council of 9 March 2011, the Council agreed with the recommendation of the Independent Expert Group to release an additional EU contribution of up to EUR 500 million for the period 2011-2013.⁴²

⁴² See final Council conclusions on the interim evaluation of the RSFF on 04/03/2011: "*Regarding the role of the Risk-Sharing Finance Facility (RSFF) in FP7, the Council WELCOMES the finding of the Independent Expert Group (IEG) that RSFF has been a success, both in quantitative and qualitative terms and that very considerable results on an EU-wide scale have been achieved since its launch. The Council therefore AGREES with the recommendation of the IEG, also supported by the Commission, to release an additional EU contribution of up to EUR 500 million for the period 2011-2013 under the conditions foreseen in the FP7 Decision in accordance with the applicable procedures. The Council CALLS ON the Commission, in liaison with the European Investment Bank, to urgently examine ways and means to improve the take-up by currently underrepresented target groups, in particular SMEs, universities and research infrastructures with a view to achieving significant progress in 2012. A specific SME lending mechanism within the current facility is being*

The Commission proceeds annually with an equal amount of commitment and payment of the EU contributions to RSFF. It is based on the EIB's activity and forecast report and its request for the amount of the contribution estimated necessary for the following year.

For the period 2012-2013, the Commission commits an amount of EUR 50 million (broken down as follows: in 2012: EUR 0 million; in 2013: EUR 50 million⁴³) coming from the Research Infrastructures Part.

Process for Recovering and Reallocating Unused European Union Funds

In order to mitigate the risk of accumulation of unused funds the multi-annual planning will be adjusted on the basis of reports. They include pipeline report (summary of information on projects considered for financing) and demand forecasts. Amounts committed but not used for the operations of RSFF will be reallocated to other activities of the contributing Part.

Notwithstanding the above and unless the Council and the European Parliament adopting Horizon 2020 for the period post 2014 decide otherwise the Commission will recover from the EIB any unused funds of the EU contribution (including interest and income) which have not been used or committed to be used or are required to cover eligible costs on 31 December 2013, as defined in the RSFF Cooperation Agreement.

designed by the Commission, the European Investment Fund and the EIB in this respect. The Council is looking forward to the Commission proposals called for by the European Council for scaling up the RSFF".

⁴³ This amount corresponds to voted-credit appropriations only. It will be complemented by an additional amount corresponding to the allocation to RSFF of the EFTA credits (of EUR 1,400,000) and by third-country appropriations (of a minimum of EUR 3,533,619).