



FACCEJPI

Deliverable 3.4

Toolbox of potential funding instruments

Due date of deliverable: March 2013 (M24)

Actual Submission date: September 2013 (M30)

Dissemination level: RE (Restricted to FACCE-JPI)

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Introduction

This document aims to explore different options, processes and methodologies for the implementation of joint actions within the [Joint Programming Initiative on Agriculture, Food security and Climate Change](#) (FACCE-JPI). The voluntary guidelines on framework condition for joint programming in research 2010¹ as well as experiences from existing initiatives, such as ERA-NETs, Article 185, and instruments of FP7 and those planned for Horizon 2020 have been considered to provide synergy and complementarities with FACCE-JPI for maximum work and cost efficiency. This has been complemented by desk studies and further discussions in the process of implementation of FACCE-JPI.

The output is this “toolbox”, depicting potential funding instruments and their main modalities, which will be presented and made available to FACCE-JPI. Based on the [Strategic Research Agenda](#), FACCE-JPI will be then able to decide faster, depending on the identified priorities, on which funding instrument should be implemented, and tailor-made to run its joint activities. To this aim, tools will be listed in this document and featured by some indicators. The toolbox is a non-exhaustive list of tools made available to FACCE-JPI as a supporting document, which should be revised as new approaches are identified.

Within the scope of FACCE-JPI, different **categories of research topics** might be identified and subjected to a common approach by FACCE-JPI member countries. The hereafter described funding instruments will also be linked to one/some of the 3 following **categories**:

1- **Mature research:**

- Areas where there are many activities already funded in each country: therefore these are current priority areas where networking and alignment of national projects and programmes can be readily achieved through knowledge hubs and other means AND
- Areas in which only a smaller number of countries have active national research projects: therefore these are priority areas for focused alignment, or the need for capacity building in some countries.

2- **Emerging subjects:** Emerging areas, which will require new approaches such as ideas laboratories/sand pits or creative workshops.

¹ http://ec.europa.eu/research/era/docs/en/voluntary_guidelines.pdf

- 3- **Need for common European efforts and developing research:** Priority areas where there is a need for increased European efforts. These are priority areas to stimulate new research projects and programmes.

Further aspects of the tools will also be considered and tentatively described throughout the document:

- The **Focus** (possibly foci) of the intended joint activity to be implemented via this toolbox. Different approaches are required in order to tackle the challenges faced in the frame of FACCE-JPI. These could be Research, Networking, Capacity building & Knowledge sharing, Excellence...
- The expected **Degree of Difficulty (DoD)** to implement an activity via the mentioned tool. This includes the challenging aspects of implementation and work load for FACCE-JPI linked to the implementation of an activity (e.g. an “innovative” or a new tool will require the preparation of a brand-new implementation process. This comprises also the time required to deliver the activity as well as the potential and predictable hurdles to be faced to run the activity (e.g. to find an agreement among funders). This factor is an attempt to estimate the workload linked to the running of a tool in comparison to other tools. Three DoDs will be used: **High, Medium and Low**.
- The expected **Time-Schedule (TS)** to set up and implement the activity. After this time, the activity should be running (e.g. in the frame of transnational calls, ongoing research projects). This could be **Short term (less than 1 year), Medium term (up to 3 years) or Long term (more than 3 years)**.

These features, including each category, are only indicative, since many factors cannot be assessed for beforehand (e.g. the TS for a transnational joint call could change if the agreement between the funders takes longer...). Moreover, listing a tool in a category does not exclude the possibility to use this tool in another category. The table at the end of the document provides an indicative overview of the tools to support FACCE-JPI activities.

As the Joint Programming process is running and Horizon 2020 is coming, further national/regional activities will be launched, and new tools might be developed. Even regarding tools which are currently listed in this document, their state-of-the-art will evolve. The Toolbox could require regular updates, in order to list new approaches allowing an easier implementation of FACCE-JPI Strategic Research Agenda.

Modes of funding

For all these tools, several modes of funding already exist² :

- **Virtual common pot:** The amounts of the individual national budgets are always limiting factors. The virtual common pot (or distributed common pot), in which countries and regions pay for their own participants and which does not involve trans-national flows of national funding. This mode is the most frequently used option so far. This type of common pot does actually not establish a joint budget to finance the selected individual projects, but is based on national contributions. Even though the virtual common pot involves a jointly coordinated call and evaluation, this call must be accompanied by national calls for proposals and is based on national programs. Each country will fund its own national project participants of successful proposals and will cover its own administrative activities. The advantage of this funding scheme is that program owners agree much more easily to contribute to the call budgets and often observed the willingness to raise national budget limits, if the initial committed funding is not sufficient to fund the successful proposals. A range of evaluation outcomes is possible, e.g. funding categories (fund – fund if budget available – do not fund) up to a joint ranking list.
- **Real common pot:** Countries contributions are pooled in a common and centrally administered call budget. This provides funding for successful proposals irrespective of the applicant's national affiliation and results in transnational flows of funding (funding crosses borders). Funding for the positively evaluated projects is ensured within the framework of the agreed overall budget. The individual projects to be funded are evaluated and selected by experts. The required outcome of the evaluation is a joint ranking list. The real common pot requires a system to administer the distribution of funds. The overall budget is a limiting factor. This requires a sound and independent evaluation process, establishing a ranking list of the proposals. The main barrier to this mode remains the impossibility for most countries to pay for research abroad.
- **Mixed mode,** a blend of the above-described types of funding, requiring a joint ranking list as the evaluation outcome and aiming at ensuring that the selection of proposals can follow the ranking list while maintaining to a large extent the 'fair return' principle. Parts of the call budget are reserved for a "real common pot" which allows compensating mismatch between national or regional funding contributions and requested budgets for successful proposals following the ranking list. This funding mode is the most common within ERA-NET Plus calls, where it is the desirable financial mode (see below). Generally, an agreement between the participating funders is reached regarding the administrative procedures (e.g. cost of the secretariat).

² Source: NETWATCH; <http://netwatch.jrc.ec.europa.eu/de/web/lp/learning-platform/toolbox/call-implementation/call-planning/call-process-and-administration/funding-mode>

Centre of excellence (CoE)

A Centre of excellence is a structure where research is performed of world standard, in terms of measurable scientific production (including training) and/or technological innovation. It brings together a "critical mass" of high level scientists and/or technology developers into one entity (physical or virtual).

The research to be performed could be mono- or multidisciplinary. A Centre of excellence is also very appropriate to host doctoral colleges, to provide new training and learning activities (see below "Emerging topics").

This tool seems to be one of the most challenging, especially regarding the competition to identify the host of the centre. Also, many issues need to be considered while establishing such a Centre of Excellence (e.g.: to whom belong the results of research, etc...), high administrative costs can be foreseen and therefore self-administration seems necessary.



It might be considered to use this tool at a "lower" level in order to ease its establishment: the CoE would be a Research Unit, physically located, working on a specific area, funded in the framework of FACCE-JPI, including potential doctoral training centers.

<i>Examples:</i>	IIASA (Austria – Wittgenstein Centre), FORSYS Centres
Category	Mature research (Emerging subjects?)
Focus	Excellence, Research
DoD	High (brand-new process to be developed; the concept of "excellence" should also be defined)
TS	Long-term

Thematic Annual Programming (TAP)

Typically, calls for transnational research projects launched e.g. by ERA-Nets need a budget commitment from participating countries on a specific topic of the call. Then, the ERA-Net runs the call, which is linked to administrative costs (evaluation costs, preparation for the submission of proposals, communication with applicants, etc...). In order to facilitate the implementation of FACCE-JPI Strategic Research Agenda while limiting the efforts, the “Thematic Annual Programming” could be an interesting tool.

Based on the SRA, mapping meetings, bibliometrics and advanced poster analysis, topics would be defined which are shared across many countries. Then national programme managers would be invited to meet with each other and the SAB to define topics to be shared by any new national programme in this area. An item text (e.g. one page) will be included in each national programme participating (on a voluntary basis). Then, after launching national programmes, a meeting would be organised with all projects working on a given item to discuss objectives, methods and expected outcomes. As part of this coordination, it might be possible to e.g. organise a database from project outputs (to be agreed and planned in advance) funded by the JPI. Following a pilot of this type, programme managers would be invited to evaluate the effectiveness of this approach.



Research projects would be funded by FACCE-JPI countries, without much more additional efforts for FACCE-JPI. However, it is important to ensure that this contributes to alignment of research without duplication of the research carried out at national level. This could be ensured by common workshops of national funded projects on a specific topic (see also [tool related to COST](#)).

This tool gives the opportunity to FACCE-JPI members to plan, for several years, a certain degree of alignment of a national/regional programme with the aims decided by FACCE-JPI. The main difficulty lies in the identification of priorities.

Category	Need for common European efforts and developing research
Focus	Research
DoD	Low: as long as FACCE-JPI agrees on the specific topics. For instance, the follow-up of the common workshop could be more problematic and should be carefully prepared
TS	Mid-term (in order to prioritise a topic in national programmes)

Call for transnational R&D&I projects

This represents the majority of the activities undertaken under the umbrella of ERA-Nets. The common rules might differ depending on different matters (industry participation, international dimension of the consortium, conditions regarding the coordinating entity of an applying consortium, etc...). A variable geometry is often featured, allowing each country to apply its specific rules. Since these are competitive processes, the quality of the proposals are always a limiting aspect to the research funding (“We do not fund projects under the threshold”). The features of the call procedure are diverse (specific topics or horizontal call, one-step or two-step, support for matchmaking, electronic submission, joint evaluation organised by the funders³, peer-review process, funding decision based on a ranking list, etc...). Typically, projects funded must involve participants from at least 3 different countries participating to the call.

We can consider three different types of funded projects:

1. Small collaborative projects (SCP)

These are typically projects funded in the framework of ERA-Nets, with a duration of up to 4 years. For these projects, both bottom-up and top-down approaches are possible as it has been demonstrated in the numerous ERA-Nets.

<i>Example:</i>	<u>Multi-partner Call on Agricultural Greenhouse Gas Research</u> (<i>virtual common pot, peer-review process</i>).
Category	Need for common European efforts and developing research
Focus	Research (possibly Innovation), Excellence
DoD	Low: There are already many examples of projects regarding this instrument, which is well-known by research funders. However, depending on particular modalities, rules, etc... and mainly on the funding mode, this might require additional efforts.
TS	Short-term

2. Large collaborative projects (LCP)

Large collaborative projects would involve a rather large research consortium (e.g. at least 8

³ E.g. proposals are first evaluated on a national level and the evaluation outcomes are brought together

partners), with a higher amount of funding and a longer duration.

“**Large scale integrated collaborative projects** are objective-driven research projects, which aim at generating new knowledge, including new technology, or common resources for research in order to improve European competitiveness, or to address major societal needs.”⁴

Category	Need for common European efforts and developing research (possibly Mature research)
Focus	Research (possibly Innovation), Excellence
DoD	Medium: Experiences exist, however regarding the larger amount of funding to be foreseen in this scheme (or actually per project to be funded), the process seems harder to be launched, especially at the funding recommendation stage (longer negotiation for a “more expensive project”)
TS	Medium-term

3. One-page Proposal (1-page)

This instrument could aim at funding short projects, namely feasibility studies, which could then lead to improved proposals for SCP and LCP. It could consist in the submission of a very short proposal, a rather short evaluation, leading to a small amount of funding for a one year project. At the end of the project, a call, e.g. for LCPs, is launched in order to fund projects whose feasibility is ensured.

This instrument could also be used in other frameworks (e.g. as preparatory phase for an infrastructure or preliminary to a sandpit...).

Category	Need for common European efforts and developing research
Focus	Research (possibly Innovation), Excellence
DoD	Very Low
TS	Short-term

⁴ Source: http://www.pro-ideal.eu/CP_Collaborative_projects

FACCE-JPI Knowledge Hub (FACCE-JPI KH)

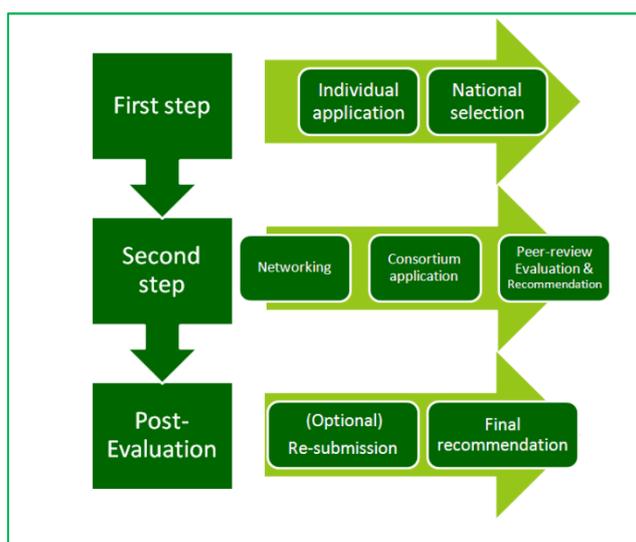
A “FACCE-JPI Knowledge Hub” is an instrument developed by FACCE-JPI to foster the transnational co-operation, collaboration and communication of the research communities in a given field and to contribute to optimizing research outcomes by facilitating a better networking and information exchange between all actors. A Knowledge Hub is a network consisting of selected research groups within a defined area of research. The FACCE-JPI Knowledge Hub compiles features inspired from the Centre of Excellence with some capacity building aspects. Its main aims are:

- ✓ Increase and facilitate cooperation between excellent researchers and research institutions
- ✓ Improve international visibility
- ✓ Develop research capacity, provide learning and training activities
- ✓ Long-term: provide efficient scientific support for strategic and political decision-making

Example: [MACSUR](#), the pilot action of FACCE-JPI, launched in July 2011 is a FACCE-JPI Knowledge Hub: it was launched in July 2012, with funding for three years. The implementation of this pilot action is a good example.

Call process established for MACSUR.

Source: D3.3 of FACCE-CSA



Category	Mature research
Focus	Networking, Capacity building, Research
DoD	Medium: since FACCE-JPI has already established a procedure for its pilot action, much of the work has already been done. However, the procedure in place remains heavy (e.g. Networking Meeting), especially due to the degree of innovation of the instrument “Knowledge Hub” (scientists are not aware of how it works)
TS	Short-term, if we can follow the same process as for MACSUR

Coordination of nationally-funded research (COST)

Example of COST : It is an intergovernmental framework for European Cooperation in Science and Technology, allowing the coordination of nationally-funded research on a European level. It is a bottom-up programme. Such a funding instrument should be aligned with activities of the COST-secretariat.

Each COST Action is a network centered on nationally-funded research projects in fields that are of interest to at least five COST countries. COST provides the COST Actions with financial support for joint activities such as conferences, short-term scientific exchanges and publications. Each COST Action has an objective, defined goals and clear deliverables. One of COST's main characteristics is its flexibility, allowing for an easy implementation and light management of the research initiatives. Activities are launched following a "bottom-up" approach, meaning that the initiative of launching a COST Action comes from the European researchers themselves. The member countries participate on a "à la carte" principle, in that only countries interested in the Action participate. COST works via a continuous open call.

A COST Action builds up a network of nationally funded projects. Therefore, it seems especially suited to align research in FACCE-JPI countries. However, it seems to remain unattractive for researchers, especially due to the high administrative burden.



In a Joint Programming Initiative, specific themes could be identified where interaction of researchers could have a clear added value. Researchers could be invited to organise themselves in such a configuration. This "networking" of national research could also be the follow up of the tool "Thematic Annual Programming".

<i>Examples:</i>	<i>COST actions in Food and Agriculture (around 140 actions)</i>
Category	Mature research
Focus	Networking
DoD	Medium (continuous open transnational calls are very scarce)
TS	Medium-term

Common talent programmes (Marie Curie)

[Marie Curie Actions](#) are open to researchers of all ages and levels of experience, regardless of nationality. FACCE-JPI could develop similar programmes to those already existing alone or together with the EU, or interact with those within H2020.

Currently existing Marie Curie Actions are:

- **Initial Training Networks (ITN)** - an action providing training opportunities for Early Stage Researchers usually provided by a network of universities, businesses and research institutes;
- **Intra-European Fellowships for Career Development (IEF)** – an individual grant allowing an Experienced Researcher to move within Europe to pursue his/her research project;
- **Career Integration Grants (CIG)** – a lump sum to encourage Experienced Researchers to settle/return in Europe;
- **Co-funding of Regional, National, and International Programmes (COFUND)** – a co-funding mechanism providing an extra financial support to national, regional research mobility programmes;
- **Industry Academia Partnerships and Pathways (IAPP)** – an action promoting partnership and collaboration between business and academia. Early Stage Researchers, Experienced Researchers, or technical research staff can participate;
- **International Outgoing Fellowships (IOF)** – an individual grant for Experienced Researchers willing to receive research training in a host institution in a third country (outside Europe);
- **International Incoming Fellowships (IIF)** - an individual grant for Experienced Researchers based in third countries (non-Europeans) willing to receive research training in a host institution based in Europe;
- **International Research Staff Exchange Scheme (IRSES)** – a staff exchange scheme fostering collaboration between research institutions based in Europe and in third countries.



These instruments cover a wide range of potential research area and can focus on different aspects. “Mobility” could be e.g. in the core / part of a call for research projects.

<i>Examples:</i>	<i>COST actions in Food and Agriculture (around 140 actions)</i>
Category	Mature research
Focus	Mobility
DoD	Low (using existing procedures and features, but depending on the action; however, developing programmes which already exist seems easier than developing something brand-new)
TS	Medium -term

Research Infrastructures (RI)

The term “research infrastructures” refers to **facilities, resources and related services** used by the scientific community to conduct top-level research in their respective fields. Research Infrastructures (RIs) should offer **unique research services** to users from different countries, attract young people to science, and help to shape scientific communities. RIs may be ‘**single-sited**’ (a single location), ‘**distributed**’ (a network), or ‘**virtual**’ (electronically). Due to the very high cost of such an activity, jointly establishing RIs or the common use of existing/new RIs is an interesting approach.

The common use of RIs could be achieved via competitive calls, based on excellence of the applying scientific teams and/or on the quality of project ideas (similar to Marie Curie-actions) to allow researchers to use these RIs for their research. Relevant RIs should be primarily identified and involved in the process. Then FACCE-JPI members could provide the access to these RIs to researchers from their countries by paying the access fees, travel costs and training to use these RIs.

The European Strategy Forum on Research Infrastructures ([ESFRI](#)) updates regularly a [Roadmap](#), which “identifies new Research Infrastructures (RI) of pan-European interest corresponding to the long term needs of the European research communities, covering all scientific areas, regardless of possible location”⁵. The RIs referred in this Roadmap may receive some funding from ESFRI for their “preparatory phase” (typically 3-5 years to build up the basis for the RI, e.g. legal framework, rules for the use of the RI, governance...). FACCE-JPI might recommend RIs for this Roadmap.



Relevant existing infrastructures for FACCE-JPI could also be mapped. FACCE-JPI could then try to agree on common access rights in order to allow researchers from all FACCE-JPI countries to use the infrastructure.

<i>Examples:</i>	<p>ANAEE: Infrastructure for Analysis and Experimentation on Ecosystems.</p> <p>EMMA: European Mouse Mutant Archive, distributed infrastructure consisting of a large scale repository of mouse lines, with nodes in six different countries yet appearing as one unique centre to the users, via a single web interface and that distributes the lines to the broad biology scientific community.</p>
Category	Mature research, (possibly also Emerging subjects)
Focus	Excellence, Research
DoD	High (many barriers exist, the process may be too long) to very High (building a new RI)
TS	Long-term

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

Venture Challenge (VC)

A Venture Challenge (VC)⁶ aims at stimulating and supporting researchers in translating their inventions into viable business ideas. This international graduate business plan competition gives graduate students from around the world an opportunity to seek investment in their business ideas. The event draws student teams from top global universities and provides them with a forum to present to potential investors and to earn more than \$25,000 in awards. A panel of experts from entrepreneurial companies, venture capital firms, investors and service providers judge the entries over the three day competition and provide valuable feedback to the teams.

A Venture Challenge is a competition where graduate students develop and present their business ideas to a panel of experts. Selected applicants are invited to a physical event for the finals of the competition, and also have the possibility to improve and optimise their business idea thanks to the feedbacks from experts and other competitors. The event can be combined with other events to improve the quality of the attendance (e.g. a conference, a fair, etc...).



After identifying an area where new business ideas need to emerge, FACCE-JPI could select promising ideas and invite successful applicants to such an event. The expert panel could be a mix of StAB and SAB members and potentially venture capital firms. The awarded project would receive some funding to launch his/her business. Other projects, even if not awarded, might be addressed and supported by present public/private investors (this is the rationale to invite investors and venture capital firms).

<i>Examples:</i>	<i>VCS organised by the Centre for BioSystems Genomics (The Netherlands)</i>
Category	Emerging subjects (possibly need for common European efforts and developing research)
Focus	R&D&I
DoD	Medium: because this is dealing with small grants; however, appropriate source of funding needs to be found since the process is fully new
TS	Short -term

⁶ Source: <http://lavincenter.sdsu.edu/programs/Venture-Challenge/>

Sandpit, ideas lab (SAND)

A Sandpit⁷ is a way to generate new breakthrough projects: “A Sandpit is an intensive, interactive workshop designed to produce radically innovative research proposals. Participants from a diverse range of disciplines come together in a creative, free-thinking environment – away from their everyday routines and responsibilities – and immerse themselves deeply in a collaborative process around an important challenge.

Typically, 20 to 30 participants are invited (they apply for it beforehand) from different disciplines and universities to a 5-day workshop. Over the course of the week, the group works to deepen their shared understanding of the designated challenge, to redefine the problems within the challenge and to generate novel ideas for research proposals.”



The idea is to identify one topic, launch a call on “excellence of researchers in this topic” and identify the participants. The outcomes are multi-disciplinary research projects that are cutting edge and unlikely to get funded through another source. Some of the research ideas generated during the workshop get a positive funding recommendation at the end.

Examples: This tool is already used in UK (e.g. [TSB](#)) and USA (e.g. [NSF](#))

Category Emerging subjects

Focus Excellence, Research, Networking

DoD Medium (two barriers: selection of participants and funding mode)

TS Short -term

⁷ Source: <http://knowinnovation.com/expertise/sandpit/>

Smart specialisation (SPE)

Smart specialisation is a strategic approach to economic development through targeted support to Research and Innovation (R&I). More generally, smart specialisation involves a process of developing a vision, identifying competitive advantages, setting strategic priorities and making use of smart policies to maximise the knowledge-based development potential of any region or country, strong or weak, high-tech or low-tech.

Some features of Smart specialisation are as follows:

- Focus policy support and investments on key national/regional priorities, challenges and needs for knowledge-based development.
- Build on each country/region's strengths, competitive advantages and potential for excellence.
- Support technological as well as practice-based innovation and aim to stimulate private sector investment.
- Get stakeholders fully involved and encourage innovation and experimentation.



JPI participants could agree on an approach to specialisation, with various partners concentrating on different specific themes. For instance: specialisation on different zoonosis (diseases transferable from animal to men, like tick bites, avian influenza and q-fever) or plant health issues.

Examples:	(Centropo) Vienna Biotechnology Cluster ⁸ ReglonCo – Regional Cooperation for Ion Beam Therapy – www.regionco.eu
Category	Need for common European efforts and developing research and mature research as well
Focus	Research, Innovation, Capacity building
DoD	High (difficult to agree between MS as some of them will focus on a specific issue, some issues might be more attractive than others; difficult to get the people to move to the site of the respective regional center, etc...)
TS	Long-term

⁸ http://www.oecd-ilibrary.org/fr/employment/clusters-innovation-and-entrepreneurship/the-biotechnology-cluster-of-vienna-austria_9789264044326-6-en;jsessionid=96pj0aqq7lfmo.delta

ERA-Nets in H2020 (H2020-Net)

ERA-Nets in the upcoming “Horizon 2020” (H2020) are meant to adopt most of the features from the former scheme known as ERA-Net+, in which one individual call is implemented and Member States and the European Commission (EC) contribute together to the research funding. Most often this scheme uses the “Mixed mode” type of funding. The main attractiveness of such a tool for Member States is funding provided by the EC.

At this time, there are still uncertainties regarding the rules of ERA-Nets in H2020 framework. Therefore, **DoD and TS are therefore more uncertain.**

<i>Examples:</i>	<i>FACCE-ERA-Net+ on Adaptation to climate change (upcoming)</i>
Category	Need for common European efforts and developing research
Focus	Research (possibly Innovation), Excellence
DoD	Medium: Experiences exist (FACCE-JPI should have its own experience in a near future with the implementation of the ERA-Net+ on Climate Smart Agriculture) although these experiences are within the ERA-Net+. The new scheme might differ in H2020. Moreover, it firstly requires to be included in a H2020-work programme, then to be applied for and finally to be implemented
TS	Short -term

Article 185 Initiatives (A185)

Article 185 TFEU enables the EU to participate in research programmes undertaken jointly by several Member States, including participation in the structures created for the execution of national programmes. It foresees the participation of the EU in the joint implementation of, or parts of, research and development national programmes. Regarding their implementation, Article 185 has features which have some similarities with ERA-Nets. Under the Seventh Framework Programme (FP7), identification criteria required for the establishment of an Article 185 action are as follows:

- relevance to EU objectives and to those of the Framework Programme
- presence of a pre-existing basis (existing or envisaged national research programmes)
- critical mass, with regard to the size and the number of programmes involved and the similarity of activities they cover
- European added value
- Efficiency of Article 185 TFEU as the most appropriate means for achieving the objectives

In an Article 185, participating countries bring together their own national programmes on a specific research area (e.g. “Baltic sea” for BONUS), also meaning that this specific area is not funded at the sole national level (only via the Article 185). The EU brings also a substantial amount of funding. Calls are launched similarly to ERA-Nets.



An Article 185 in itself is a very challenging instrument: FACCE-JPI might think of having a similar scheme, but should try to ease its implementation, in particular regarding the agreement on the funding model.

<i>Examples:</i>	Eurostars , http://www.eurostars-eureka.eu/ BONUS , http://www.bonusportal.org/
Category	Mature research
Focus	Research (possibly Innovation), Excellence
DoD	Very High: an Article 185 TFEU has to be set up through a Decision of the European Parliament and of the Council, via the co-decision procedure.
TS	Long-term

Other tools that could be developed for FACCE-JPI

As mentioned in the beginning of this document, the toolbox is a non-exhaustive list of tools, which should not restrict FACCE-JPI to existing schemes. The process of Joint Programming itself is a new approach, in which Member States should be able to discuss about any opportunities (not only calls) in order to implement the Strategic Research Agenda. Therefore, this toolbox should also allow an open-minded brainstorming for new schemes, instruments...

An example, somewhat similar to a Knowledge Hub, is the **Knowledge Network**. In this case, a larger research community is involved and thus a number of consortia are chosen (in contrast to only one in a Knowledge Hub), in this case in a competitive process. Related instruments focusing on innovation are other potential instruments for the JPI: **Innovation Hubs and Innovation Networks** are being considered as possible future instruments. Similarly to Knowledge Hubs and Networks, these instruments would bring together groups already working on a subject but with the goal to promote its uptake in the market.

Overview of schemes and tools

Area \ Time schedule	Short-term	Medium-term	Long-term
1) Mature research	Knowledge Hub	Marie Curie Coordination of nationally-funded research	Research Infrastructure Article 185 Centre of Excellence
2) Emerging subjects	Sandpit Venture Challenge	? Sandpit (?)	? Centre of Excellence (?)
3) Need for common European efforts and developing research	Small Collaborative Project 1-page Proposal ERA-Net+	Thematic Annual Programming Large Collaborative Project	Smart Specialisation

DoD:

Low

Medium

High