

Spanish preliminary inputs for the next Framework Programme

Working document

December 2010

PRELIMINARY REMARKS

The present document constitutes a preliminary collection of ideas that aims to nourish the debate about the design of future Research, Technological Development and Innovation policies after 2013.

It is worth saying that a consultation process is still open in Spain, and for sure new ideas will be brought to enrich what is presented here. In this sense, the following should not be interpreted as the Spanish position on the future Framework Programme and in no way prejudices the European Commission proposal that will be published in the near future.

However, as the debate is in fact already taking place among the different stakeholders, both at the Spanish and European level, the Spanish Ministry of Science and Innovation wishes here to contribute with some thoughts and ideas. The paper concentrates on what we consider should be the **guiding principles** when designing the future Framework Programme for R&I that will be built on the foundations of the current 7th Framework Programme but within a certainly different scenario.

CONTEXT

Current economic downturn is affecting European growth and employment expectations. **Solutions should drive not only to recovery but to guaranteeing the sustainability of European welfare standards.** In this sense, **Research, Development and Innovation policies will play a crucial role** to restore European credibility and confidence, fostering sustainable productive entrepreneurship and promoting high-quality employment while bringing social & territorial cohesion. The major European challenges identified require a balanced combination of Research, Innovation, Enterprise, Education and Cohesion policies¹. Major efforts have been done in these fields, but not enough in linking them in order to foster the innovation chain to competitiveness, as stated in the Innovation Union flagship initiative of the Europe 2020 Strategy.

Today, innovation becomes a very high political priority, shared by all policy action areas, from energy to environment, from health to transport and FP should be the main answer to these expectations.

Furthermore, Framework Programmes (FP) have been the major instrument for building the **European Research Area (ERA)**. In a radical new scenario as compared to previous editions, the new FP needs to clearly define its role in the richer, more complex ecosystem of RTD&I European policies and instruments as well as its interfaces with National and Regional programmes and with other EU funds and policies.

¹ While Europe maintains a leading position in Research and Technological Development (RTD), it still lags behind its major world competitors. This fact has been recently stated through the different evaluations and monitoring of the performance of Framework Programmes: Seventh Framework Programme (FP7) progress report, as well as the ex-post FP6 evaluation report (2002- 2006). Moreover, as described in these reports, more coherence and coordination are needed amongst different policy tools related to research and technological development and innovation, since there is a lack of consistency between research and innovation policies in the European Union.

KEY MESSAGES

The above mentioned major facts -the need to overcome economic downturn towards a sustainable competitive economy, and a new complex RTD&I scenario framed by the EU2020 strategy, drive the Spanish proposals for the future FP, which contains the following key elements:

1. A sound STRATEGY and DESIGN

Ensuring real impact

The future Framework Programme should contribute, in a determined manner, to facing the grand challenges and solving societal needs, while transforming European industry in order to avoid future crisis due to the high impact on jobs. In this sense, **the reinforcement of industry, and consequently advanced manufacturing as a key enabling technology, should be included amongst the grand challenges.**

Ensuring that R&I have a clear impact on market and society **requires bringing the knowledge generated into the market** through actions –market uptake, demonstration- that enables the **“optimum exploitation of research and innovation findings”**, going well beyond the classical idea of **“dissemination and use”**.

It is crucial for the European competitiveness to recognise **SME as a key actor for innovation** and FP8 should ensure adequate levels of participation by **keeping the 15% target for SME participation** and extending it to the mobility actions.

Although excellence should continue to be the main selection criteria in the evaluation process, **relevance and expected impact** becomes of key importance when looking for solutions to these grand challenges.

Finally, it is necessary to have a sound measurement system, based on indicators which will be able to effectively assess the evolution of science and innovation systems in Europe.

Finding the right balance between continuity and renewal

Spain believes FP7 has proven to be an effective tool for supporting excellent collaborative research throughout Europe, and in this sense, supports an **enhanced Cooperation-like programme** as a key component of FP8, in which there should be more room for **bottom-up** initiatives as well as for SMEs specific measures. In very limited cases, mainly due to its expected impact on GDP and employment creation/preservation, selected industrial research actions through Public Private Partnerships should be also covered but without outsourcing public funds.

It is important to maintain efforts on **Frontier Research**, putting the focus on young researchers and in coordination with the FET Flagship initiatives. Also important is the promotion of an **open and excellence-based access to Research Infrastructures**, strategic instruments to develop the scientific and technological integration of Europe. In this respect, the Spanish model could serve as best practice, as all Spanish infrastructures² are

² Unique Spanish Infrastructures

a totally open-to-use by the entire scientific and industrial community, at international level.

Mobility activities continue to be an asset within the FP, although efforts should be made to bring the programme closer to the industry needs and to open some co-funding regional, national and international schemes to early stage training, also in industrial environments. Mobility programmes could, on the other hand, dedicate part of its efforts to the promotion of an attractive career and better working conditions for researchers (e.g. social security coverage to all researchers). Actions could include coordination and best practice initiatives, as well as any relevant further measures.

Regarding **International Cooperation**, opening the ERA to the world requires the definition of a **clear joint strategy** with specific priorities on a bilateral and regional basis, in order to be applied in a common way for all themes. A new classification of what it is now known as “third countries” will help to establish a coherent strategy.

Additionally, although the relevance of the **social dimension of Science and Innovation** has been widely recognised, a clear and realistic strategy for its enhancement has not yet been implemented at programme level. It is necessary to take executive initiatives for implementing this horizontal aspect

The market perspective demands the insertion of public procurement actions naturally inserted in thematic calls with the presence and the commitment of public procurers wherever appropriate. Venture capital should not be seen as an independent policy but rather connected to FP8 by instruments like RSFF, and furthermore with calls for entrepreneurs, by stimulating cross border national venture capital with EIB top-ups

Spain also believes it is necessary to put more effort to foster design of smart specialization processes for regions.

FP8 Contributing to the ERA

Future FP8 should be designed to facilitate the alignment of the different ERA-related initiatives. In this regard, the following concepts could be explored:

- **Plug-in of ERA instruments with FP**: ERA initiatives based on mobilisation of national funds (JPIs, Infrastructures...) that use common management standards, and structures (e.g. evaluation process and facilities) financed at EU level.
- **Topping-up National Programmes with FP funds**: National (including Regional Programmes) meeting criteria of Europeanization and opening-up will receive FP Funds following a scheme similar to COFUND.
- **Excellence uptake by National Programmes**: Excellent proposals that cannot be funded by available funds in FP programmes could be supported at National level.

FP8 in a wider European context:

The architecture of the future FP must enable its interoperability with other European Programmes, thus ensuring its contribution to the EU2020 strategy. In this regard, a number of connections of FP8 and other EU funds are desirable:

- **Excellence as a driver for Cohesion:** Using Structural and Social Funds to foster excellence by making available these funds to States and Regions subject to the achievement of ERA and Innovation Union targets
- **Innovation funds (CIP)** should be naturally connected to the FP funds, enabling the generalization of technology pilots and market uptake of FP8 projects. These funds should also support public procurement of innovative products through competitive calls where the R&D phase is linked to procurement, and encourage cross-border venture capital oriented to innovative SMEs through similar mechanisms to those of the RSFF
- **Alignment** of consolidated and underway initiatives of the ERA landscape in order to make possible the implementation of the European innovation partnerships
- **Education and Training:** Topping up calls for education and training activities within FP projects could be implemented.

2. Efficient, Seamless and Transparent IMPLEMENTATION

Major barriers to participation in the European Framework Programmes must be overcome. Otherwise, researchers and innovative companies- SMEs in particular- will be more and more reluctant to participate in the different schemes, undermining the excellence and the relevance of FP. This calls for an **effective simplification** that must be bold and three-folded:

On one hand, there is an urgent need to reduce **the current complexity of the EU landscape** of programmes and instruments, avoiding overlapping and ensuring their mutual **interoperability** and synergistic combination. The aim has to be to simplify, looking at ways to optimize and streamline the use of existing instruments and synergies between them, and to fill the gaps

On the other hand, a radical **simplification in the operation modes** should be put in place. This includes:

- o Moving towards a **trust-based system**, in which usual accounting practices of participants would be accepted and where the focus is put on the outputs of research, taking into account its risky nature
- o Defining a **limited common set of rules**- clearly interpretable-, that would apply to **all programmes and instruments**
- o Accelerating procedures: Establishing a **target for the average time-to-contract** (six months)

Thirdly, the use of **public money requires maximum transparency:** Programme management should be always kept under the control of the Commission (either by its central services or its Research Executive Agency). This will also facilitate harmonization of rules and procedures.

More precisely, PPPs and JTIs are addressing an equal nature of challenges. But PPPs have understood the weaknesses offered by a number of years of JTIs operation. In a scenario of budgetary stagnations, the PPP's philosophy should prevail over that of JTIs, i.e. the Commission keeps the management of the money attributed to the PPP, using a standard mechanism common to all PPPs, irrespective of the topic.

Additionally, **reporting to Member States** and Associated Countries should be streamlined and clarified. The **role of Programme Committees should be reinforced**.

3. A reasonable level of FUNDING

Without prejudging the negotiation of the future Financial Framework, it is important to reflect on the **appropriate level of funding** needed to ensure not only the survival of the RTD&I European Programmes but also their capacity to solve the Economic and Societal Challenges. In this sense, and as it has been signaled by the **Interim Evaluation of the Seventh Framework Programme**, a reasonable level of funding per year could be the one reached in the last year of FP7.

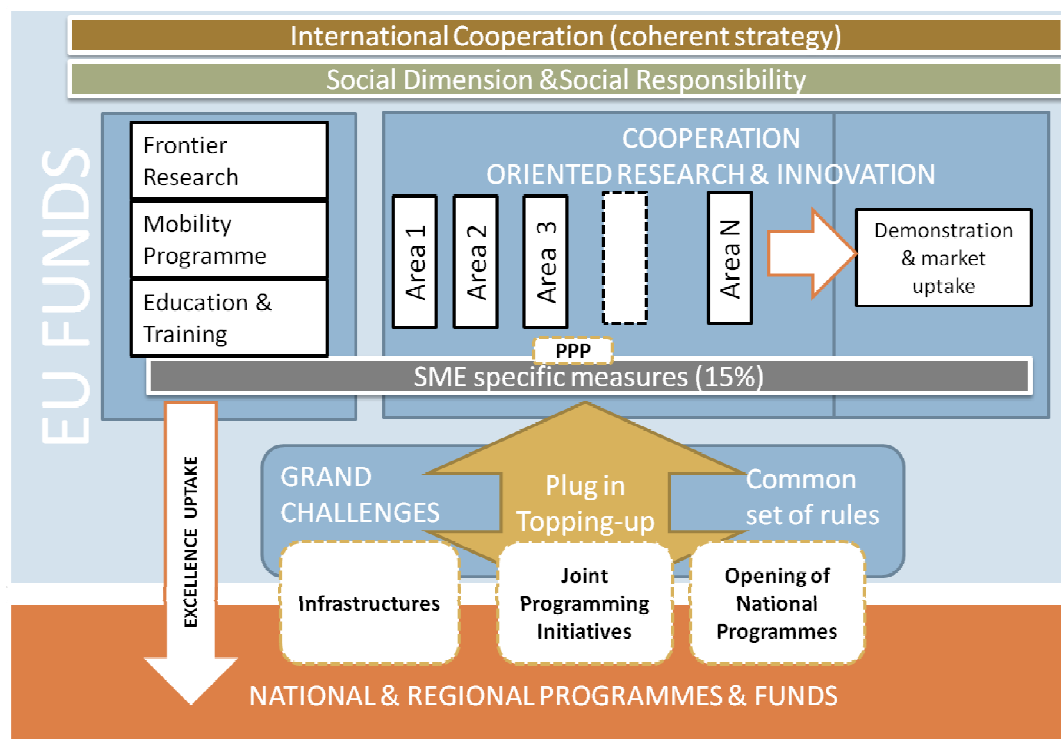
Also, it would be desirable to maintain a **similar weight distribution** among the key programmes that have proven to be successful in the past.

In this regard, the European budget allocated to **new ERA-initiatives should be limited** to a maximum of 15% of the total budget devoted to RTD&I cooperation projects.

Finally, Spain strongly believes in the need to look for synergies among the different funds available at EU level –Structural Funds but also CIP or the EIB instruments-. Any substantial increase could come then from these “new financial sources”

4. Schematic proposal

In order to favour an evolution from FP7 while facing new challenges, the following conceptual structure for FP8 is proposed:



Annex

This annex is attached to the working document *Spanish inputs for the next Framework Programme. December 2010.*

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1. Towards FP8: Continuity, evolution, revolution.

Through FP7 implementation and its previous editions many formulae to accommodate the European research and innovation strategy have been developed. At this stage, the set of running or proposed programmes and initiatives, all of them aiming to coordinate European R&D civil strategies, face the risk of creating the opposite effect: confusion and lack of coordination. It is not time to reinvent the wheel but to extract the best experiences and joint efforts to maximize the impact through an **evolution**, taking advantages of the lessons learnt while proposing new measures. It is time to **maximize EU research impact through simpler and fewer programmes and instruments, while broadening the scope for further bottom-up initiatives beyond those currently defined**. The new Framework Programme for Research and Innovation should consider the following:

1.1. An enhanced Cooperation programme

Spain is in favour on maintaining a solid cooperation scheme, having as a major driver the boosting of the competitiveness of the European industry and bringing Europe to a world leading position. The principle of collaboration amongst different European actors (research groups, industry, users...) remains one of the best ways to share and transfer scientific and technological advances. The enhanced Cooperation should guarantee **market uptake of R&D results** by industry and society in a much more efficient way. Thus, successful and stable alliances between research groups and industry should be further encouraged, introducing more demonstration and innovation elements through complementary approaches of the different Community instruments, including SMEs' specific actions and more bottom-up initiatives in order to accommodate its priorities. Considering the Cooperation's budget³, at least it should maintain its actual value of 65% of the total FP, from which a minimum of 85% should be dedicated to public calls⁴.

1.2. Mobility and frontier research

The efforts in **mobility and frontier research** (European Research Council - ERC) should be maintained, as well as the improvement of the coordination with Future and Emerging Technologies activities (FET) being implemented in ICT, Energy and other fields. **ERC should concentrate its activities mainly in the starting grants** and the slowly opening to transnational collaborative initiatives and contact with industry. Collaboration and mobility should go beyond pure academic exchange: the exchange should also take place between scientists and technicians belonging to both academy and industry having as its ultimate purpose to facilitate transfer of knowledge. A good **connection** of these mentioned frontier-oriented activities with the related strategies in the Cooperation Programme such as the **FET Flagships** initiative should be ensured. Additionally, and in relation to mobility, **the COFUND scheme should be extended** as far as possible as an example of a best practice.

In a similar way, a better connection of mobility programmes and horizontal programmes activities with the set objectives for Research and Innovation should be assured. The participation of SME in these activities should be reinforced.

³ Those figures are without including the Specific measures for SME actually within the Capacities programme.

⁴ Those public calls should be managed directly by the Commission or its Research Executive Agency (REA).

Links between programmes need to be reinforced, such as international cooperation, social dimension of the European Research Area, and other programmes.

2. Innovation strongly connected to R&D activities.

According to the Europe 2020 strategy, the innovation dimension should be pursued connecting research and innovation activities in a more effective way. Actions should foster the importance of the “optimum exploitation of research and innovation findings”, going well beyond the classical idea of “dissemination and use”⁵.

CIP instruments could become the natural follow up of the most successful projects/initiatives for maximizing the integration of the research and innovation support. It could be implemented via opening the possibility of joint measures between FP8 and CIP or integrating CIP activities as part of a new “cooperation-like” programme, providing continuity to European Research and Innovation Projects.

The budget for CIP projects should be significantly incremented in order to cover effectively demonstration and trials, as well as implementation roadmaps for those FP projects showing promising results. In addition, technology developed within FP projects could be extended through CIP projects in at least three important ways:

1. Spreading its use to other industrial and service sectors
2. Opening up its geographical implementation: for some technologies, (e.g. in the fields of energy, life sciences, materials, advanced production, environment and water, amongst others).
3. Developing further additional applications in related or complementary fields.

The proposed approach would present the following main advantages:

- Encouraging participants in Framework Programmes to undertake risky RTD initiatives with the guarantee that successful projects will have an opportunity to end up closer to their market and societal objectives, ensuring that public funded research projects are useful and that the European society can take advantage of innovative outcomes in a faster way;
- Improving the conditions of the risk management of R&D projects, both for the participants and for the funding bodies by means of an increase on the certainty on the implementation of results

Being **SMEs essential actors to achieve innovation**, their involvement in research and development must be increased with the urgent need to shorten the time between research and practical application. SMEs participation should be encouraged with specific measures in collaborative projects covering the whole value chain, incrementing the topics of SME interest, avoiding the creation of “ghettos” of activities for SME, while maintaining the traditional bottom up activities as well as EUROSTARS. For this purpose, the target that at least 15 % of the funding of the Cooperation programme is allocated to SMEs should be maintained and extended to the Mobility programme in order to enhance industry-academia cooperation in terms of research training, career development and knowledge sharing.

3. Simplification and better coordination

The ongoing debates addressing the need of simplification of the rules and participation procedures for the Framework Programme are welcome. Nevertheless, simplification

⁵ Innovation as well as valorisation of research results clearly oriented to exploitation will result in economic benefits, job creation, international competitiveness and the global well being, addressing today’s societal challenges.

should also cover the clarification of the research and innovation programmes and initiatives at European level. This document will propose to deepen also the rationalization of the associated policy initiatives (see section 4. “Structure and contents”) when designing FP8.

3.1. A more clear European Research and Innovation Landscape

The proliferation of ERA-related instruments and schemes⁶ already put in place during the late period of former FP6 and the implementations of the current FP7, are generating the adverse effect of introducing confusion to participants, National Contact Points and programmes’ managers involved, in the following aspects:

- Overlap of S&T contents in calls across these new initiatives, besides possible overlaps with standard FP calls.
- The opportunity costs related to different participation rules or funding schemes that have to be learnt by all involved agents.

Synergies of programmes and instruments, leading to minimizing the risks of inefficiencies, fragmentation, lack of coordination and minimal impact shall be sought by reducing and streamlining the already too large portfolio of policy objectives and related instruments at EU level and by harmonizing and providing coherence to the rules and procedures across all funding mechanisms.

3.1.1. Optimization of the EU RTDI portfolio

The principle of proportionality and best-use of public funds should be respected before an “experiment” or pilot is definitively incorporated in the official EU-portfolio of policy instruments.

A critical analysis of all the initiatives / schemes already in use (or upcoming) must be conducted before launching new ones, especially before starting the design process for FP8.

New relevant initiatives could be:

- the exception, not the rule;
- very well justified and
- their foreseen impact quantitatively sized in advance.

Otherwise, the signals transmitted to the constituencies may indicate that the aim is to satisfy internal political needs rather than market and system failures in terms of competitiveness and RTDI investments.

The assessment carried out should take into account, amongst other factors, S&T content and scope (“avoid overlapping”) and excessive regulation (“avoid unnecessary complexity”), as well as the “proportionality” between goals and means.

At present, there are several large scale initiatives on preparation: SET Plan spearheads projects, nine new Joint Programmes of Members & Associated States, European Large Scale Actions (ICT sector) and more recently the European Innovation Partnerships. Spain considers that in order to really clarify the EU landscape, the **European Innovation Partnerships (EIP)**, as something more ambitious, the EIPs should merge and bundle up the previous three action lines.

⁶ JTIs, Initiatives based on Article 185 (ex-169), ERA-NET + PPPs, Joint Programming, European Industrial Initiatives (EII) within SET Plan, “European Large Scale Actions” (ELSA) within the ICT sector and more recently “European Innovation Partnerships” (EIP), etc.

3.1.2. Harmonization of the rules and procedures across all mechanisms financed by FP through all policy instruments

The issue of a European system with common participation rules is of paramount importance. Now the lack of harmonization is creating misunderstanding and discouraging the users community.

Spain fully supports a **common set of simplified “FP-like” rules**, procedures and legal provisions regarding participation (openness, equal treatment, transparency and basic common set of evaluation criteria), financial (personal costs, flat rates on overheads, lump sums, in kind contributions) and IPR aspects, etc. All those initiatives that benefit from Framework Programme’s funding (EIP, JTI, PPP, Art. 169, ERA-Net / ERA-Net+, etc.) should follow this common set of rules. This would represent a great simplification both from the point of view of the participants and from the management of these instruments as well as contributing to avoid any misinterpretation and/or mismanagement of projects. A reasonable balance between a “one-size-fits-all” versus a “tailor made” scheme must be sought. But in any way, **every line of action or instrument should follow the same conditions for participation and governing rules.**

3.2. A simplified Framework Programme

A number of initiatives to simplify the implementation of FP7 in a far more fundamental way than in past editions have been undertaken⁷, and although some progress has been made towards the simplification of processes, there is still room for improvement in this field.

The reduction of unnecessary intervention and the (still heavy) administrative burden should lie in two basic principles:

- To achieve a more trust-based and risk-tolerant approach in European research funding mechanisms, ensuring at the same time a correct use of public money.
- To facilitate access to FP to all potential beneficiaries while improving its transparency.

a) Introduction of a more intensive control by objectives achieved (result-based payment versus cost-based payment), placing the **emphasis on the fulfilment of scientific or technological milestones** and the tangible results of the exploitation of projects, rather than in administrative tasks.

b) An issue to be taken into consideration is the importance of **using a unified and common wording and acronyms in all the actions and EC Units**. In this line, the consistency of the terminology used should be reviewed in all the relevant documents (Work Programmes, Guides, Grant Agreements, etc.); introduction of a **stable calendar for calls** well known in advance to all participants; substantial **reduction of the time-to-contract** period with clear implementation targets, (six months as achieved in some FP7 Themes).

c) Introduction of **digital signature** and development of sustainable and efficient partnering web-tools in all FP7 NCP Network projects.

⁷ A simplified Framework Programme. A number of initiatives to simplify the implementation of FP7 in a far more fundamental way than in past editions have been undertaken or under way such as Certification of costs - Fewer audit certificates; Fewer ex-ante financial capacity checks and protective measures – Introduction of the Participants Guarantee Fund; Unique registration of participating legal entities; Certification of methodology for calculating cost rates; Streamlined amendment process; Streamlined project reporting; Better IT systems for proposal and grant management; Use of lump sums or flat rates where appropriate.

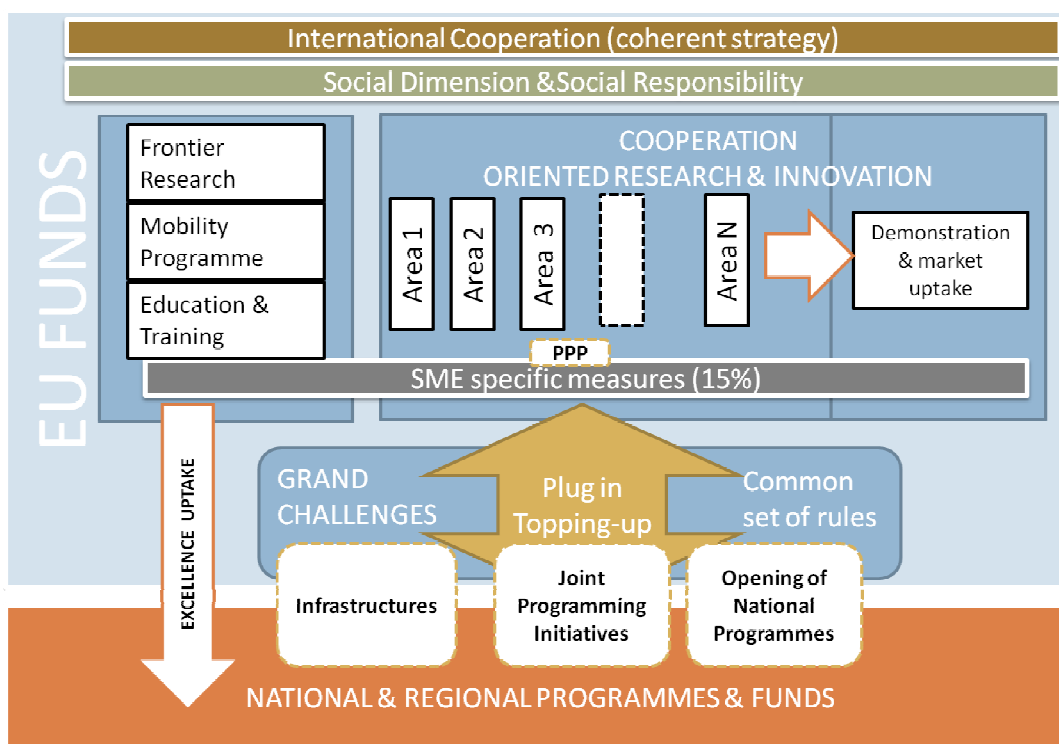
3.3. A simplified ERA and Innovation landscape

Participation rules granting access to Structural Funds, FP and CIP should be designed in such a user-friendly way that they will facilitate the connection between different phases of projects through the above mentioned programmes. The fact of using similar rules should not necessarily mean that funding rates should be identical.

4. Structure and contents

Recalling the considerations stated in section 3.1. ("A more clear European Research and Innovation Landscape"), any structure proposed for FP8 should include transversal actions that guarantee the coordination, connection and coherence amongst programmes and activities, providing the proper response to the global strategy. Different actions should serve common objectives, fostering collaboration and cooperation networks through simple plug-in mechanisms.

In order to favour an evolution from FP7 while facing new challenges, the following conceptual structure for FP8 is proposed:



4.1. Cooperation Programme

Spain supports the continuation and reinforcement of the Cooperation Specific Programme oriented to boost the sustainable competitiveness of Europe.

4.1.1 The matrix for cooperation

It should widely cover major technological demands through key enabling technologies (Nanotechnologies, Advanced Materials, Biotechnologies, ICT, Advanced Production Technologies, Life Sciences, ...) establishing the basis for the main Themes/priorities, while grand challenges related to sustainability strategies affecting many sectors should be introduced transversally (health, agro-food, environment, energy, transport including aero, reinforcing European industrial base with high added value products and services of common use,...). Specific strategies as for instance the Set Plan for energy or PPPs can be easily adapted to this structure. Grand Challenges should be in line with the three interlinked priorities of the EU 2020 Strategy: smart, sustainable and inclusive growth, fostering a high employment economy delivering social and territorial cohesion. In this line, **adding value and advanced knowledge to traditional industry, including eco-innovation** should be considered as a Grand challenge also due its high impact on employment creation and maintenance

The complete innovation life-cycle, ensuring the economical impact of the knowledge generated and focusing or even increasing the budgets dedicated to linking R&D and innovation, should be specifically addressed.

4.1.2 Collaborative/cooperative research for SMEs

Collaborative and cooperative research for SMEs needs to be included in this programme since its nature fits well within Cooperation. In selecting themes/priorities and industrial activities to be targeted, not only highly sounding emerging fields should be considered, but already existing technology fields willing to overcome the economic crisis through R&D and Innovation activities should be taken into account, giving added value to already existing industry, processes, services and products, increasing their corresponding bottom-up activities.

4.1.3 Demonstration and innovation elements

They should be linked as previously stated through plug-in mechanisms. In order to pave the way for the future, some pilot actions through **extended calls for already FP7** funded projects could be introduced in the coming calls. These calls would be open to already running projects willing to extend the industrial participation and commitment including demonstration and innovation activities with the ultimate objective of exploitation of EU funded research.

The proposed mechanism for extending calls could be: all proposals coming from successful FP projects would be directly eligible to be granted for further trials and demonstration. It would be implemented through an international evaluation process but without fund competition, since it would be previously assumed that the budget has been already reserved for this purpose. Additional project funding could come from FP or CIP with estimated amount 30% of the original project funding. Following this action line around 60% or 70% of the funded projects could result in promising close to market products and services.

4.1.4 Public Private-Partnerships

In very specific cases, selected industrial research actions through Public Private Partnerships (PPPs) under a common umbrella (common house) should be covered by this Cooperation programme respecting the above mentioned structure. PPPs are an opportunity to face grand European socio-economic challenges, providing coverage of Europe at large, favouring the widest incidence of the initiative in geographical terms. PPPs are important tools to enhance the competitiveness of European industry in **selected and limited sectors** with relevant contribution to social needs and productivity, maximizing EU industrial capabilities, paying special attention to SMEs and with a clear expected impact on GDP and employment creation/preservation.

It is mandatory, for the sake of simplification and the need of maximum transparency and equity, to **establish a common specific framework for all PPPs, with a clear set of conditions and rules and simplified**, common and streamlined procedures. **Outsourcing of public money to external bodies should not be an option**: control of public money expenditure should always be kept by public authorities. Private sector should contribute defining the required roadmap as well as annual priorities while public sector should be responsible of implementing calls through transparent processes.

As general principles, the PPP should follow the conclusions from the Conference held in Valencia (Spain) "From Economic Recovery to Sustainability"⁸ PPP initiatives should ensure: accessibility and fairness of the process, with non discriminatory principles, representation of Member States at the level of Management Committee for a maximum acceptance of the initiative and coordination with national initiatives.

The running model established for Factories of the Future (FoF), Energy Efficiency Buildings (EeB), Green Cars (GC) and Future Internet (FI), seems to be satisfactory and could be the right option for FP8.

Finally, since several key technologies would be needed by every single PPP, it is proposed to fund them through different Themes/Priorities using coordinated/ joint calls as it is made through FP7.

4.2 Frontier research programme

This programme, based on a bottom up approach, has been widely accepted by the constituency, which demands continuity and the focus of additional resources devoted to starting grants in order to support the efforts of the most promising researchers that indeed represent the future.

Nevertheless, even in this area it is proposed to emphasize transnational research collaboration. From the users' point of view it would be important to easily identify a one-stop shop to apply for basic (for instance FET type initiatives or strategically oriented long term research) and frontier research. In that line, the coordination of these activities should be strongly recommended.

In addition to that, frontier research activities under FP8 should expand its scope by giving the possibility to research-performing enterprises to participate and facilitate knowledge exchange between scientists/technicians belonging to academy and industry.

⁸ IV Conference on FP7 in Spain: The European RTD Framework Programmes: From Economic Recovery to Sustainability. 12-16 April 2010/Valencia-Spain Conference Proceedings

4.3 A single and simplified programme devoted to national programmes coordination (ERA Net, art 185 (ex-169) and Joint Programming)

The challenges identified in the EU2020 Strategy require a new ambition of the RTDI policy. New approaches in the design of the actions aimed at fostering linkages and harmonization of national and regional programmes and their relation to UE initiatives should be foreseen, as national budgets represent around 60% to 70% of the funds devoted to competitive RTDI projects in Europe.

The challenge is how to widen the current perimeter of coordinated RTDI at European level. The wide perception today is that these ERA “structuring measures” are becoming a source of further fragmentation as, contrary to the original idea, Member States and Associated States are creating new programmes and instruments in order to make their participation possible, thereby amplifying the existing array of national and regional schemes.

ERANETs have helped to “shake the system”, building mutual knowledge amongst policy makers and programme implementers as well as creating the consensus that coordinated calls for proposals in variable geometry are possible. ERA-NETs have provided a set of best practices and lessons learnt that constitute a valuable basis for the way forward, however their implementation needs to be facilitated from both the potential participant and the tax payer point of view.

Today, support to Europeanization of existing national and regional programmes through their “coordination” via networks and calls involves too many different rules and too many different settings and organizations working within different actions with similar targets. Clear structures and substantial clearance of the way national and regional programmes are linked to Europe via EC funding are required. Based on previous experiences and trust on existing instruments, R&D funding agencies from Member States are in the right position to propose a step forward towards a much simpler model able to benefit participants and tax payers. The leverage effects of EC funding should be based on efficiency and effectiveness.

Grand Societal Challenges to be faced by RTDI policies are prone to have a European dimension, meaning that no proliferation of different initiatives tackling similar challenges (different ERANETs, Art. 185-ex169- or JPI structures, for instance) is necessary. Since the significance of added value of actions at European level is growing due to the increasing global nature of the Grand Challenges, a common holistic approach is to be sought at European level. Completely exploiting European potential in RTDI means seeking and exploiting synergies and complementarities between Member States, in a similar way whatever the RTD challenge is.

Synchronization and coordination between National Programmes / Agencies would happen within a clear and **unique framework of rules**, fostered by the European Commission and based on the best practices of the European Framework Programmes. **Opening up national and regional programmes of EU interest would mean a complementary Community support in the form of a top-up funding** for the nationally managed projects, adding a European dimension to National Programmes willing to seek further synergies amongst Member States in their national operations, whatever the content of the call is.

Thus, **Spain proposes to follow a Plug-in Principle**: Interoperability between instruments should be a guiding principle in a “Plug-in” way. Financial framework and criteria should be compatible as much as possible and administrative barriers should be decreased.

A user-perspective is needed, SMEs and emerging research groups should be supported by a seamless set of interworking instruments (one step approach in combination with a single set of rules for project that are eligible to apply to several programmes). The lead principle could be to design policies and instruments able to match the needs of users / beneficiaries.

4.4 Mobility

Mobility activities are to be a strong asset within Framework Programme. The implication of the industrial sector in the activities included in the People programme under FP7 has proven to be rather low. Efforts should be made to bring the programme closer to the real needs of the industrial sector in terms of research training, career development and knowledge-sharing with the academic sector. In particular, a specific action to allow for the incorporation of qualified researchers to industry should be put in place. The current schemes that allow industry-academia cooperation should be simplified and should be made more attractive to the private sector. Additionally, the COFUND scheme, which we support, could be open to early stage training including training in industrial environments.

At the same time, mobility programmes could dedicate part of its efforts to the promotion of an attractive career and better working conditions for researchers (i.e. social security coverage to all researchers). Actions could include the promotion of coordination and best practice, as well as any relevant further measures.

4.5 Education and training⁹

In FP8, education and training should also be connected to other programmes (Cooperation and Frontier Research) introducing plug-in mechanisms through topping up calls for successful and strategic projects/initiatives covering the whole value change and taking into consideration research, innovation or employment policy needs.

In this regard, topping up calls for education and training work packages within running projects in FP7 could be implemented as pilot actions in preparation of the coming Framework Programme.

4.6 Horizontal Issues

4.6.1 Regions

Proposed mechanisms like **Topping-up** (EU funding of Europeanised programmes) and **Plug-in** (connection of National/regional programmes with EU funds through standard management and quality standards) offer a simple way for national and regional programmes to better align their operation and objectives with the EU programmes and initiatives.

⁹ Education and training have always been considered as basic pillars for social advances and, in particular for research. On the other hand, the Innovation Strategy recognizes the need of major efforts to favour the integration of business innovation and entrepreneurship in the fields of education and research as a major "raison d'être".

Furthermore, Spain has deployed novel strategies to coordinate regional and national policies through mutual agreements that make conditional the national funding to the achievement of previously agreed indicators towards the excellence in RTD and Innovation. Thus **excellence acts as a driver for cohesion**.

At the European scale, a similar mechanism could be implemented, the EU funding being mobilized according to the performance of RTD&I programme owners in achieving quantified objectives. An important feature of this type of mechanisms is that those farther from EU standards have more room for improvement and, thus, higher likelihood for scoring higher progress and, ultimately, to get a higher share of these funds.

In addition to what it is said above and elsewhere in this document, we believe it is necessary to put more effort to foster design of **smart specialization** processes for regions. This smart specialization should not only look for specificities assuring a different competitive niche to regions, but also to look for **complementarities with other European clusters** where synergies of their respective capacities would provide all partners a higher competitive edge.

The WIRE conference, held under the auspices of the Spanish Presidency in March 2010 and co-organised with the European Commission, has produced very concrete conclusions and findings that should be considered when designing the future FP.

4.6.2. International Cooperation

In relation to International Cooperation, opening the ERA to the world requires the definition of a clear strategy with specific priorities on a bilateral and regional basis, in order to be applied in a common way for all themes. Its specific actions would be transversally introduced in the specific programmes, ensuring coordination, avoiding duplications and assuring the right coverage of items.

The common term “third countries” should be replaced by a more realistic classification, attending to the different research and innovation needs of each country or region; e.g. industrialised countries, developing countries and growing countries. A new classification will help to establish a coherent strategy in international cooperation.

In addition to this, more efforts are still needed to foster R&D cooperation in key regions for Europe, such as the Mediterranean basin, in order to reduce fragmentation and reinforce strategic potential. Some key issues to be considered are environmental technologies (waste, water, pollution prevention), marine ecosystems, and agriculture.

4.6.3. The social dimension of Science

The Framework Programme will not be able to optimize its potential impact without the full integration of all actors involved and therefore ERA cannot be achieved without including the social dimension of Science and Innovation. This is not a matter of more money, but better alignment of existing funding to cover social needs. The social dimension of science should be considered a transversal issue to be invoked wherever applies, as for example the Ethics Committee does throughout the current Framework Programme.

4.6.4 Compact measurement system to evaluate European evolution

Moreover, to lead next FP towards a real impact it is necessary to have a sound measurement system, based on indicators which will be able to effectively assess the evolution of science and innovation systems in Europe.

5. Operational aspects

When **using public money, the whole process should be clear, transparent and according to the principles of fair competence**. In this context, for instance, reporting becomes a critical issue. In addition to that, the proper flow of information facilitates better coordination amongst different actions at national and European level. In this regard, Spain highlights the following considerations related to programme committees' role, externalisation measures, participation rules, etc.

5.1 The role of Member States representatives

As stated before and in order to ensure the required impact of actions and coordination with national and regional activities, **the role of Programme Committees (PC) should be reinforced**. Demands for simplification do not justify any reductions in the role of Member States. For example, delays related to the need of PC approval are minimum, and in any case the European Commission can prepare the negotiation processes in parallel (as it is already being done).

In addition to its strategic role for defining priorities and lines of action, FP's Management Committees should regularly be informed on the evaluation results, while maintaining the good practice of monitoring the implementation of the evaluation through independent observers. On the other hand, data on applicants, projects and participants should be systematically sent in electronic format by the EC to States representatives: the data is crucial to activate policies, facilitate lessons for future calls and to link national and European actions. This principle should be strictly applied to any programme or initiative stemming from FP.

Other ways of reinforcing the role of the Programme Committee (some of them already being put in practice in some specific configurations) are: information/debates about the final evaluation of projects, contribution to midterm reviews of programmes and initiatives (taking into consideration evaluations made by panels of independent reviewers), participation in strategic consultations, exchange of information amongst committees on issues affecting several committees, better overview of the entire FP8 and, in general, of EU policies impacting R&D and innovation.

Each Programme Committee specific configuration should be directly informed on the developments and call results of ALL activities financed, totally or partially, with the budget of each configuration.

5.2 Externalization/Outsourcing

When deciding externalization of activities as currently done by the European Commission to implement parts of FP, **the principle of separation of private and public roles must be strictly followed**. This principle would substantiate confidence and trustworthiness of potential applicants and tax payers, something that in some cases have been questioned during FP7 implementation, in particular in the case of some JTIs (IMI, Clean Sky).

Regarding Public Private Partnerships created to implement strategic research and innovation initiatives, **private sector should lead technological research and innovation strategy** and provide advice on annual and pluri-annual priority lines. This would ensure their proper interaction to facilitate the private investment without jeopardizing basic principles that should be always applied to any public investment.

On the other side, public sector must lead the matching of the strategy with policies, the implementation of calls, i.e., call releasing, evaluation process and project follow up. This way, accessibility and fairness, based on non discriminatory principles, should be guaranteed making a proper use of the public funds based on previous experience. That means that outsourcing public money to external privately controlled bodies should not be an option. These issues will imply that the Research Executive Agency (REA) under the control of the Commission should extend its scope to these initiatives.

5.3 Participation rules

As a matter of principle, all FP activities should follow common participation rules (guaranteeing openness, equal treatment, transparency and basic common set of evaluation criteria), with very limited and duly justified exceptions. Management as well participation structures should be valid for any thematic prioritization.

Bearing in mind that **evaluation criteria and procedures** should be common for any initiative, the proposed criteria are: Excellence, **Relevance**, Management, and Impact (social, environmental, economical impact...). Related to impact, the importance of the **“optimum exploitation of research and innovation findings” should be stressed**, to market and to society, going well beyond the classical idea of “Dissemination and Use”. In this regard, it will be required to count on evaluators with a strong industrial profile. Prioritizing RTD projects with greater focus on solving societal and market problems assures that the complete science-to-market life cycle analysis of the project is accomplished.

It is also important to recall that **the size of a project is not necessarily correlated to its excellence or impact**. Taking this into account, artificial barriers to participants should be avoided, facilitating at the same time the management of projects