

IRELAND'S PRIORITIES FOR FP8

Preliminary Irish Paper on the Eighth European Framework Programme for Research and Technological Development - FP8

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Preliminary Paper on Ireland's Priorities for the Eighth European Framework Programme for Research and Technological Development

1 Summary

This preliminary paper outlines the views of Ireland on priorities for the Eighth European Framework Programme for Research and Technological Development (FP8).

This document has been prepared by the Department of Enterprise, Trade and Innovation (DETI) and Forfás, the national policy advisory body for enterprise and science, in consultation with the Department of Agriculture, Fisheries and Food, Enterprise Ireland, the Environmental Protection Agency, the Higher Education Authority, the Industrial Development Agency (IDA), Science Foundation Ireland and the Irish Universities Association.

The EU Framework Programmes have long been the main element in the internationalisation of Irish research and technological development and, building on national investments in research in recent years in both the public and private sectors, Ireland is now participating in the Framework Programme from a far stronger research base than ever before.

Since the commencement of the Seventh Framework Programme (FP7) in January 2007, Irish researchers have been active and enthusiastic participants in proposals requesting European funding, with 2965 applicants from Irish-based organisations up to April 2010. The level of activity of Irish researchers (academic, industry and public sector) in European research and the higher than average Irish success rate (24%, the European Member State average being 22%) are very positive indications of the importance which Irish researchers place on international collaboration through FP7 and future Framework Programmes.

This paper provides a preliminary overview of Ireland's key priorities and objectives for the Eighth Framework Programme (FP8). A separate more detailed national position paper, informed by the current National Research Prioritisation Exercise¹, will be prepared in response to the publication of the Commission's Communication on orientations for the future of EU research funding, release of which is anticipated in early 2011.

It is Ireland's view that the next Framework Programme should:

- Retain trans-national collaborative research as a core competitive component, based on defined key thematic areas.

¹ Approval was given by Government in April 2010 for a National Research Prioritisation Exercise to identify a number of priority areas and/or approaches to tackling national challenges/opportunities to be underpinned by the future investment in publicly funded STI. The project will take account of fields of research activity where Ireland has built significant strength to date. It is anticipated that majority of the Irish State's public investment in research will be focused on these priority areas, with scope also to pursue other policy focused and evidence-based research. The exercise is led by a High-level Group of key stakeholders led by industry.

- Maintain a strong emphasis on human resources (Marie Curie Actions) and measures to support the development of researchers and their careers. The specific action COFUND should be extended to allow full enterprise participation and also support doctoral training programmes.
- Enhance measures to strengthen the links between academia and industry, as partners of equal esteem in developing strong projects and initiatives which should, in turn, demonstrate the potential for commercialisation of appropriate research outputs.
- Support increased innovation and sustainability of European industry, especially SMEs, and incorporate a strong focus on industry-driven, applied research.
- In tackling grand societal challenges for sustainable development and socio-economic goals (such as climate change, energy, water, food security, health and an ageing population) through Joint Programming Initiatives, the Commission's role should ensure access to and transparency of the JPIs so that all Member States have the opportunity to benefit, including those not directly involved in the programmes. There is a continued role for the Framework Programme in supporting collaborative research in areas complementary to the research topics being addressed through national funding which is expected to be brought together in the JPIs.
- The opportunity to reduce the complexity of the R, D & I funding landscape in Europe and simplify and streamline administration in order to enable greater participation must be seized in FP8.

2 Changed Context and Environment since FP7

The environment in which research and innovation policy is being developed and implemented has changed significantly since FP7 was designed and launched in 2007. The financial and economic crisis has resulted in slow economic growth, increased unemployment, tightening public budgets, and difficulties, particularly for SMEs, in accessing finance. The EU average expenditure on R&D remains around 2% of GDP, below the 3% Lisbon target set for 2010 and Europe continues to be faced with growing competition from emerging countries such as China and India.

At the same time, the European Research Area (ERA) initiative has gained momentum since the publication of the Commission's Green Paper² in 2007. The Lisbon Treaty has made achieving the European Research Area (ERA) an explicit objective of the European Union's research policy, while the partnership of the Member States and the Union in the achievement of the ERA has been clarified and enhanced. New political orientations have recently been adopted through the EU2020 strategy, which focuses on economic growth, sustainable development and emissions reduction and on the need to tackle grand societal challenges such as healthy ageing, energy security, climate change, environmental protection, etc.

There is also a growing recognition of the need for much greater attention to be focused on developing an integrated policy approach between research and innovation. In this context, Ireland notes that the new flagship initiative - the "Innovation Union" - has recently been elaborated, highlighting the need for continued investment in key areas of education, research and innovation coupled with targeted reforms and the removal of barriers to a successful

² Green Paper: European Research Area: New Perspectives – Inventing our Future Together (2007)

European research and innovation area. All of these developments must influence the objectives, design and shape of policy for research, innovation and sustainable development into the future and the Framework Programme needs to adapt its orientations and funding mechanisms to cater for this changing environment.

Activities at European level, including trans-national collaborative research, funding of frontier research, support for researcher mobility (trans-national and inter-sectoral) and careers, measures to enhance knowledge transfer and initiatives to facilitate the tackling of important societal challenges, contribute directly to the achievement of national objectives as set out in our national strategies. These are articulated in the *Strategy for Science, Technology and Innovation (2006)*, *Building Ireland's Smart Economy - A Framework for Sustainable Economic Renewal (2009-2014)* (December 2008) and *Innovation Ireland – the Report of the Innovation Taskforce* (March 2010). Similarly, the activity stimulated in Ireland through our initiatives in science, technology and innovation and our continued commitment to investment in this area, as indicated in the recent announcements of capital and sectoral investment priorities to 2016, as well as the investment of €359 million through the Programme for Research in Third Level Institutions to 2016, can play a part in the collective effort to strengthen the European research and innovation system, which will be further focussed following the outcomes of our National Research Prioritisation Exercise. National activities are supporting and underpinning European objectives whilst also leveraging international funds and alliances thereby enabling the Framework Programmes to complement the national research framework.

Ireland welcomes the ways in which the Framework Programme has evolved and especially appreciates the continued sound balance between continuity and change. While recognising that there is more to the ERA than the Framework Programme, the Programme provides the means to implement Union policy in this critical area and we believe that many of the objectives of the ERA can be successfully addressed within the context of the Framework Programme.

3 Ireland's Key Principles for EU Research and Innovation Policy to 2020

Ireland holds fast to a number of key principles in research activity, through the Framework Programme, which leverages not just national funds but also national expertise and ideas to build a stronger European research community. These include that:

- Excellence, as appropriately defined for both academic research and for industry-related research, development and demonstration, should be the guiding principle for all research activity, central to projects and collaborations across the Framework Programme in both the public and private sectors. Through research excellence we can achieve the highest impacts in meeting economic, environmental, employment and development goals;
- Within the overall funding for FP8 there must be an appropriate balance between funding for basic research and funding for applied research, development, commercialisation and innovation;
- Industry / academic partnerships should be fostered to ensure that the drive towards sustainable socio-economic goals is maintained;

- The enterprise sector has a strong translational role to play in ensuring that significant socio-economic benefits result from research;
- Small and medium-sized enterprises (SMEs) are critical to the economies of many, if not all, European countries and require European support through special measures to enable them to be created, grow and contribute fully to the economy and employment;
- Policy-oriented research (e.g. addressing climate change challenges) should – within thematic priorities – continue to contribute to creating a scientific, technological and socio-economic basis for decisions in the various policy fields, including sustainable development from local to global levels.
- Global challenges require global solutions which we all need to contribute to through a combination of appropriate mechanisms, in order to achieve development and sustainability objectives; and that
- There is great added value in taking action at a European level, combining resources and adopting a common partnership approach in certain areas, but that we must continue to retain the flexibility which also allows Member States to pursue their own strategies and priorities as appropriate.

4 **Key Elements of FP8**

It is the Irish view that FP8 should be based around the following core elements:

Trans-national collaborative research

Ireland values the role of the Framework Programmes in providing the enabling systems, environment and ethos for thematic collaborative research, a mechanism which it is hard to envisage existing on such a scale through other means. The activities undertaken together create significant added research value and knowledge, skills and experiences which underpin the European Research Area and, through their utilisation and exploitation, provide opportunities for the research community and industry alike and support decision making on public policy options.

Trans-national research in thematic priority areas fosters linkages between European researchers in academia and in industry and it should remain a dominant feature of FP8. While the precise identification of thematic priorities should be informed by consultations with stakeholders, Ireland supports a strong degree of continuity between FP7 and FP8. The National Research Prioritisation Exercise will enable the identification of thematic areas which will be of priority to Ireland.

Given the important roles for Europe which are played by international R & D organisations such as the European Space Agency and Eureka it will be important to ensure synergies between these organisations and FP8.

Strengthening innovation and innovative organisations

Ireland sees a strong need to mainstream innovation and to ensure that it permeates, to the appropriate degree in each mechanism, all areas of the ERA, i.e., not only in instruments specifically targeted at innovation but incorporated into the full range of instruments in the Framework Programme.

To support the orientations in the EU2020 strategy, enhancements of measures for increased innovation of European industry are essential. Where there are successful enterprise-related measures in FP7, we should seek to grow these and to build on progress so far in linking research and industry, with particular emphasis on SMEs.

Support schemes such as Research for the Benefit of SMEs and the Industry-Academic Partnerships and Pathways (IAPP) in the People programme, which link the research base of the public and private sectors are important and we believe that efforts should continue to be made to create stronger bridges and to increase and improve exchanges between academia and industry. In this fostering of partnerships between the education sector, the public sector and the business and venture capital communities to develop a world-class ecosystem for innovation to drive enterprise development, the aim should be to avoid any gaps in the innovation cycle which might prevent the use of the knowledge generated, use in research or in commercial applications. Partnership formation is the first important step. Ireland has taken its own measures to support that, including the funding of Innovation Vouchers with which Irish industry can purchase research support and would welcome similar European activities.

Enterprise innovation could be further supported under the People programme. The pioneering Marie Curie COFUND action of FP7 funds regional, national and international fellowship programmes and we see it as an appropriate mechanism to support innovation across academia and industry by enabling mobility of expertise and experience.

Actions within Europe to enable mobility of workers and streamlining of employment conditions for researchers are important elements of the environment for research and development in European industry as well as the academic research community.

SMEs are central to employment in many European countries. We would welcome greater clarity on the definition of SMEs in order to reflect their importance within research and the sustainable economic development of Europe, to ensure that they can engage on an equal footing to the rest of industry despite their size and that they are not constructs by which large industry engages in research programmes which aim to support smaller enterprises. It is important that SMEs are encouraged to participate as equal partners in research where it is appropriate and benefits the SME as well as their collaborators. In some cases it may be more beneficial for the SME to work as a subcontractor, and the role of subcontracting in funded projects should be reconsidered in this regard. SMEs must remain a priority in the Framework Programmes and therefore consideration should be given to raising the 15% target for SME participation.

Ireland would welcome an examination of the potential for better linkages between the Framework Programme and the Competitiveness and Innovation Framework Programme

given the importance of focusing on excellence and innovation across the spectrum of research, development, demonstration and deployment within the ERA.

Maintaining a strong emphasis on human resources

We place great value on the development of human resources and acknowledge the role being played by initiatives such as the Marie Curie Actions in strengthening skills and enhancing experience in the research community, in both the public and private sectors. We support the continuation and even growth of such activities. Ireland recognises the importance of ensuring full support for researcher career development and mobility, with issues of social security, pensions and employment conditions being addressed as appropriate, taking due account of national competence and policy in these areas.

The Marie Curie Fellowships and other initiatives in the area of researcher mobility and training are an essential component of the Framework Programme and complement national actions, including measures to enhance the research base of industry. They are also a direct mechanism for implementing the European Partnership for Researchers (EPR). Furthermore the programme should support innovation training and skills development within individual awards. The Marie Curie COFUND action should be extended to include the funding of schemes for structured PhD education and training programmes which would encompass innovation and commercialisation training. It is important that the researchers of tomorrow have these skills so as to minimise the barriers between higher education research and research in the private sector in particular.

There is much to be gained by linking to the activities of the European Institute of Innovation and Technology (EIT) to demonstrate how the new generation of researchers can be equipped with the right skills to be able to transform ideas into business opportunities. All Member States must continue to have the opportunity to participate in this significant European mechanism as it develops.

Continued focus needs to be centred on developing initiatives to stimulate and develop the careers of researchers and by removing obstacles to mobility. It is important to acknowledge and build on the significant initiatives that have been introduced in recent years through the combination of member state initiatives underpinned by Commission support (e.g. EURAXESS network of mobility centres, third country visa arrangements etc.).

Strengthening scientific excellence

The European Research Council is one mechanism which is supporting research excellence at the highest level in Europe. We continue to encourage the participation of Irish researchers, both in academia and in industry, through the existing ERC mechanisms. It will be important to ensure that within the overall funding for FP8 there is an appropriate balance between funding for the ERC and funding for other instruments which address basic and applied research, development, commercialisation and innovation.

Capacities

Ireland welcomes the support at European level for the preparation phases of international research infrastructures through ESFRI and other mechanisms. As projects move forward, the following aspects should be supported within infrastructure measures:

- Co-ordination and preparation;
- Access by researchers across and from outside of Europe;
- Networking between existing infrastructures; and
- Sustainability and future planning.

Ireland has made many significant investments in infrastructure over the last number of years which provides an opportunity for Irish researchers to collaborate with those in other European countries. By implementing a programme which supports key points in the life cycle of infrastructures, European funding and national funding can complement one another thereby increasing their overall value.

Supporting co-ordination of national programmes

ERA-NETs are operating across a wide range of research areas and strengthening research through joint funding of projects, exchange of good practice and other collaborative efforts. Support to establish ERA-NETs in key areas is welcomed by Ireland although they may be difficult for countries to engage in where they lack strong thematic programmes nationally. Measures should be included to encourage participation by Member States with less developed research and innovation systems and those with smaller economies.

Ireland welcomes the progress that has been made in developing Joint Programming Initiatives, as cross-sectoral initiatives which complement thematic aspects, and is committed to working with other Member States to tackle grand challenges that impact on society at large in a timely manner. Some initiatives will need to be given enough time to mature, such as those with smaller funding available to them. There may be valuable learning from the ERA-NETs which can usefully be applied to the Joint Programming Initiatives. We believe that, while the JPI activities must continue to be led by the Member States to ensure real commitment and genuine partnership, it is important that the facilitation role of the European Commission is maintained in the process, with a view to good co-ordination and streamlining.

The Commission's role should ensure access to and transparency of the JPIs so that all Member States have the opportunity to benefit, including those not directly involved in the programmes. Given the growing number of initiatives involving coordination of national programmes, including Article 185 initiatives and ERA-NETs as well as JPI's, Member States with limited capacity have to prioritise their engagement. It will be appropriate to ensure mechanisms to enable Member States to participate in such programmes when they are in a position to do so as well as in the exploitation of the results of the programmes.

Complementarity of measures under the Framework and other programmes is crucial to the optimal use of national and European funds. There is a continued role for the Framework Programme in supporting collaborative research in areas complementary to the research topics being addressed through the national funding which is being brought together in the JPIs. This support is highlighted in the Council Conclusions of December 2009 which invites

the Commission to explore how best to contribute with complementary measures to the strategic research agenda of a JPI and to its implementation plan via EU funding instruments.

Joint programming has come about as Member States have identified certain areas of research as being of key societal importance as well as underfunded relative to the impact on society. Therefore joint programming should add resources to the research area in question, and should not lead to that broad area being excluded from consideration as the research agenda for FP8 evolves.

5 Governance and Management Issues

We must take account of the potential for researchers, enterprises and indeed policy-makers to absorb new instruments and initiatives at the European level. Ireland would not welcome the introduction of further mechanisms and measures in FP8, unless this fulfils a clear need and is accompanied by appropriate rationalisation of other mechanisms.

There have been many changes in recent times (for example, the new European Institute of Innovation and Technology, the Joint Technology Initiatives, Article 185 initiatives, ERA-NETs, the European Research Council etc.) and there is a danger in introducing further new initiatives that we may create a new type of fragmentation detrimental to European research goals. It is important to consolidate and reap the benefits of existing mechanisms, some of which are quite new, adding only any which are considered and agreed as being essential for the securing of a strong and sustainable ERA. We welcome the initiatives of ERAC to explore the scope for synergies among policies and programmes within the knowledge triangle, and between those and cohesion policies, as well as ERAC's review of ERA-related instruments and we look forward to the findings and conclusions of these initiatives.

In terms of administrative mechanisms, we acknowledge and appreciate all the efforts which have been and are being made by the Commission to streamline and simplify the administration in all areas of the Framework Programmes, with the aim of avoiding any potential confusion, duplication or backlogs, enhancing understanding of the programme and its attractiveness to researchers, in the public and enterprise sectors. Transparency is always valued and should continue to be promoted as an essential characteristic within FP8. Reducing the time to grant and ensuring streamlining within the Programme and within the broader research and innovation agenda of the ERA and the Innovation Union will benefit researchers and the ERA. It is important that the outcomes of this work be felt all across the Framework Programme.

Issues of inconsistency in interpretation across services should be addressed during the development of the new FP, with consideration being given to the creation of an ombudsman type function to handle grievances or disputes.

Ireland acknowledges the important role of National Contact Points (NCPs) who provide support to researchers in relation to participation in the Framework Programme. To take advantage of this important position it would be useful to build on their role and enable them to monitor and support projects, including offering, where possible, expert guidance on opportunities for further development of the results of the project.

In order to maximise the value of the investment in research, the implementation of a research information management system would be a way to help to ensure that the outputs of previously funded EU projects are accessible for future use.

Ireland supports the role of the programme committees and their dual role of monitoring the funding of R&D and designing, with the Commission, the annual work programme should be maintained.

In relation to governance, we should consider carefully the positive and negative aspects of devolving functions to agencies.

6 Conclusion

This is a preliminary overview of Ireland's key priorities and objectives for the Eighth Framework Programme, focussing on the key Irish priorities of transnational collaborative research; human resource development; industry-academic linkages; support for SMEs; excellence throughout the research career; balancing basic and applied research; and access and transparency. In 2011, Ireland will provide a response to the publication of the Commission's Communication on orientations for the future of EU research funding, informed by a national consultation process.