



An Roinn Post, Fiontar agus Nuálaíochta
Department of Jobs, Enterprise and Innovation

HORIZON 2020

SCIENCE | INDUSTRY | SOCIETY

EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION (2014-2020) IRELAND'S STRATEGY AND TARGET FOR PARTICIPATION



Horizon 2020 national support network led by Enterprise Ireland



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Horizon 2020

EU Framework Programme for Research and Innovation (2014-2020)

Ireland's Strategy and Target for Participation

1. Background and Context

Research and innovation are of major importance given their potential role in contributing to economic recovery, competitiveness and growth across the EU. Research and innovation help deliver jobs, prosperity, quality of life and global public goods. They generate the scientific and technological breakthroughs needed to tackle the urgent challenges facing society. Investment in this area also leads to business opportunities by creating innovative products and services. Research and innovation have therefore been placed at the centre of the Europe 2020 strategy to promote smart, sustainable and inclusive growth.

It is generally accepted that international collaboration on research brings together resources and pooling of knowledge, enhancing scientific excellence, thus achieving greater success in addressing research problems as well as greater efficiencies. Participating in international research programmes facilitates inward and outward mobility of researchers, access to trans-national collaborative networks, access to research facilities not available in Ireland and commercialization of ideas and know how etc.

Horizon 2020 is the main EU funding programme for research and development for the period 2014 to 2020, following the ending of the 7th Framework Programme for Research, Technological Development and Demonstration Activities 2007-2013. Horizon 2020's objectives are to enable a world-class research system for Europe, support European leadership in industrial development and address grand challenges affecting society.

Ireland has done well under previous EU Research Framework Programmes. We are currently on track to reach our target of €600m from the current FP7 Programme, with awards totalling €572m to July 2013. The EU Framework Programmes are an important element in providing international linkages and enhancing the excellence of the Irish R&D system. They provide Ireland's SMEs, multinationals, and research institutions valuable opportunities to participate in high-calibre research collaborations with our European counterparts. Based on national investment in research in recent years, Ireland is participating in the current Framework Programme from a far stronger position than ever before. A critical mass of research activity has developed in both the public and private sectors and we are well positioned to perform very strongly under Horizon 2020. We see Horizon 2020 as an opportunity to further deepen our engagement in collaborative European and international research.

2. Areas of Irish Strength in FP7

In the period from commencement of FP7 in January 2007 to July 2013 Ireland has secured awards totalling €572m. The areas in which Ireland has been most successful, in terms of amounts awarded, are:

1. Information & Communication Technologies (€120m)
2. Marie Curie (€83m)
3. Health (€78)
4. Nanoscience, Nanotechnology, Materials & Production Processes (€48m)*
5. The European Research Council (€43m)
6. Food Agriculture and Fisheries, Biotechnology (€41m)
7. Research for the Benefit of SMEs (€34m)

*Does not include latest call. Substantial increase in this amount of funding expected.

For comparison, in terms of funding obtained as a percentage of the budget available to participants across the thematic areas, the top four are repositioned as follows:

1. Science in Society (2.82%)
2. Research for the Benefit of SMEs (2.73%)
3. Marie Curie (2.29%)
4. Food Agriculture and Fisheries, Biotechnology (2.24%)¹

Other areas which secured significant funding were:

- Security (€27m)
- Energy (€21m)
- Transport (€20m)
- Environment (€19m)
- Research Infrastructures (€16m)
- Science in Society (€10m)
- Socio-Economic Sciences & Humanities (€4m)
- Space (€3m).

¹ As Marine Research and Innovation is not a specific programme within FP7 (it is, however a cross-cutting priority, e.g. Ocean of Tomorrow Calls), performance indicators are not routinely collected for this sector. However, the Marine Institute has reviewed Irish performance of all the marine/maritime research projects funded under FP7 and identified 118 projects drawing down grant-aid of over €40 million. This would put Marine Research on an equal footing with the Agrifood Sector.

3. New Challenges and Opportunities arising in Horizon 2020

There will be a substantial budget increase in Horizon 2020, of the order of 30% compared with FP7. In FP7 up to July 2013, over 8,000 applications were submitted by Irish-based researchers, companies and other entities. However in targeting participation in the next round, it is not necessarily optimum to proportionally increase the number of applications- this represents a substantial effort on the part of applicants. A more strategic approach is required, aimed at participation in larger scale projects as well as playing a larger role on projects generally. The National Support Network will work with research performers to build consortia and partnerships to step up the scale of participation.

Another necessary step in the light of the increased budget is to bring in new participants – existing participants can only manage a certain number of projects at a time. The National Support Network will include a focus on introducing new participants to Horizon 2020 and in particular explaining the opportunities for Horizon 2020 to support the strategies of potential participants. Relevant Departments and their agencies will be asked to do the same with their own client bases. As part of this, the IDA and Enterprise Ireland will target their client companies through their client support teams to engage with Horizon 2020.

As every country participating in Horizon 2020 will be targeting increased participation and funding from H2020, the level of competition will be intense. Only top quality projects will win funding. This requires that our national research and innovation system performs at a top internationally competitive level. Ongoing national funding of research and innovation will be required. As H2020 is a competitive funding process, it will not be possible to use Horizon 2020 funding as an opportunity to reduce national funding, i.e. to substitute Horizon 2020 funding for national investment. However, all available opportunities will be used to leverage national investment to maximise funding from Horizon 2020. National funders are putting significant focus on funding nationally in areas likely to win further funding from Horizon 2020 and other sources.

The experience and track record of Irish researchers' and companies' participation in FP7 will be valuable in enabling Ireland to participate strongly in areas of Horizon 2020 which are similar to those in FP7. However, Horizon 2020 represents a radical departure from previous EU Research Framework Programmes in the following ways:

- greater focus on **excellent science** (€24.4bn or 31% of the Horizon Budget) and in particular the European Research Council; this pillar includes further support for the successful Marie Skłodowska Curie Actions (formerly Marie Curie Actions), Future and Emerging Technologies and Research Infrastructures;
- focus on developing **leadership in enabling and industrial technologies** (€13.5bn budget)
- provision of access to risk finance (€2.8bn budget)
- new measures to assist innovation in SMEs (€0.6bn), together with €2.8bn earmarked from LEIT and Societal Challenges through a dedicated SME Instrument.
- the previous thematic-based, prescriptive calls for research will be replaced by a new challenge-based approach which will invite researchers to propose research solutions to defined major societal challenges (€29.7bn budget); the multi-disciplinary nature of these broad **societal challenges** will require new team based approach by the NCPs to deliver the maximum participation from Ireland.
- the adoption of a multiannual work programme approach underpinned by Strategic Programmes; the first Strategic Programme covers the first three years and identifies 12 focus areas of high potential aimed at building critical mass to address the societal challenges and to help kick-start the economy and deliver jobs and growth. This requires a cross-disciplinary team-based approach by Irish participants and the national support system.
- at least 60% of the overall Horizon 2020 budget will be related to **sustainable development**. It is also expected that **climate-related expenditure will exceed 35% of the budget**, as part of the Multi-annual Financial Framework commitment to allocate 20% of EU spending to main-streaming of climate action. A significant challenge for the Horizon 2020 programme will be to meet the targets set for climate change and sustainable development related research. In addition, 10 of the 12 focus areas for the first two years of Horizon 2020 explicitly support climate action and sustainable development objectives,

- The European Institute of Innovation and Technology (EIT) (€2.7 bn) has been aligned with the Horizon programme. The budget for EIT has increased significantly and provides another vehicle for Ireland to become involved in large-scale innovation partnerships.
- FET Flagships represent a significant opportunity in which there has been no strategic involvement by Ireland to date. This is an area that needs to be addressed through strategic targeting in conjunction with relevant research centres to build a multi-partner approach.
- the growth in strategic public-private partnerships and co-funded measures (ERA-NETs, Article 185 Initiatives, Joint Programming, European Technology Platforms, Joint Technology Initiatives, Public Private Partnerships, Key Enabling Technologies, FET Flagships, Marie Curie Co-Funds, Innovation Partnerships, European Institute of Innovation and Technology Knowledge Innovation Communities etc.) is expected to continue in Horizon 2020. There is a need for better targeting of these opportunities (across all programme areas) i.e. to increase engagement of national research funding budgets and a need for coordination of their use across research funding organisations.

4. Strategy for Individual Elements of Horizon 2020

4.1 Excellent Science

Ireland's focus on the Horizon 2020 Excellent Science Priority will be strengthened significantly through the actions described below. This Pillar has potential to assist in maintaining and developing the broad science base in Ireland, across all disciplines.

Multi-Agency Response

- Moving from single agency responsibility for these areas to **multi-agency responsibility** with substantially enlarged resource allocations through hands-on support by all thematic NCPs;
- Led by the Excellence NCPs, all thematic NCPs will, in addition to having targets for their thematic areas, also set targets for use of this part of Horizon 2020 by their client bases and provide assistance in proposal writing i.e. NCPs will be expected to cover thematic interests in the Excellent Science Priority as European Advisors as part of their thematic ownership and responsibilities;

Build on Marie Curie Success

- Marie Skłodowska Curie Actions (formerly Marie Curie Actions) are expected to continue to form a core part of Ireland's use of the programme (with Marie Skłodowska Curie funding being industry-relevant and second only to ICT during FP7). The Irish Research Council will continue its role as the funder of the National Marie Curie Office which is managed by the Irish Universities Association (IUA) and SFI will also partner with the IUA to provide greater support to the Marie Curie NCP office.
- SFI will, in collaboration with the IUA, apply for co-fund awards for an Entrepreneurial PhD Programme and Industry Fellowships.

Address underperformance in ERC

- In contrast Ireland's under-performance in the European Research Council Advanced Grants has been widely acknowledged and needs to be addressed. The ERC will account for 17% of the Horizon 2020 budget. Given recent European Commission statistics that demonstrate that Marie Curie Fellows have demonstrated high success rates in the ERC, Ireland's Marie Curie Fellows (and external Fellows) will be specifically targeted for ERC participation;
- Science Foundation Ireland, in consultation with other key stakeholders, is implementing a strategy to increase the quantity and quality of the applications submitted to the ERC Advanced, Consolidator and Starter grants. This will include schemes to support promising young researchers as a feeder for ERC Starter / Consolidator applicants. SFI will continue to monitor the number of applications made to each of the ERC programmes and evaluate the success rates for Irish based Investigators and if appropriate take additional measures to increase the success rates.
- Science Foundation Ireland and the Irish Research Council will provide local resources to encourage further ERC participation by researchers and will work with the Irish Universities Association to source Marie Curie Skłodowska Co-Funds for growth in the numbers of fellowships awarded. SFI and the IRC will act as National Contact Points in respect of the ERC.

- Current ERC grantees will be showcased to encourage more applicants.

Pursuing opportunities for Research Infrastructures

- It is considered that potential for research infrastructures exists in a number of areas linked to opportunities for Ireland, such as: atmospheric observations of GHGs and air pollutants (e.g. Mace Head), ecosystems and ecosystems change, peatland and restoration resource potentials, wastewater research, marine resources; smart bay concept; smart grid demonstrations by utilities; smart city concept, agriculture field testing sites (livestock and arable); nutrition and food consumption databases; humanities and social sciences. Consideration of this potential, and how and by whom it might be pursued will be addressed by the Horizon 2020 High Level Group.

Future and Emerging Technologies

- The FET programme, including the bottom-up FET Open and FET Proactive elements as well as the grand scale FET Flagships, represent a significant opportunity in which there has been no strategic involvement by Ireland to date. This is an area that needs to be addressed through strategic targeting in conjunction with relevant research centres to build a multi-partner approach.

4.2 Industrial Leadership Strategy

4.2.1 Mobilising Industrial Development Agencies

Indigenous industry participation in FP7 has been a success story for Ireland with more than 4 times the funding of the previous programme coming into the country. Horizon 2020 will be even more industry relevant and there is a role to be played by the industrial development agencies (Enterprise Ireland and IDA Ireland) in engaging their key client companies in targeting Europe's largest public-private partnerships e.g. Joint Technology Initiatives, Energy Efficient Buildings, Factories of the Future.

4.2.2 Key Enabling Technologies

Ireland's lead industries will be encouraged to take advantage of the new Horizon 2020 focus on Key Enabling Technologies and the linkage of research and innovation. Participation in Horizon 2020 will give companies access to the latest technologies and enable them to enhance their

competitiveness. Opportunities in these areas will be focussed in particular on Ireland's key manufacturing sectors : pharma, medtech, food and ICT.

4.2.3 Dedicated R&I Industry Team

The National Support Network for Horizon 2020 will include an R&I in Industry team. It will substantially increase the resources allocated to company participation to maintain and grow this activity significantly. It will comprise: NCP-ND for SME, NMP, Food & Transport, Legal & Financial, EEN.

The R&I in Industry team will aim to make SME participation, in particular, business friendly across all parts of the Horizon 2020 programme (where around 20% of the total budget of the societal challenges and LEITs will be earmarked for SMEs). The R&I Industry Team will work with Enterprise Ireland and IDA Ireland Development Advisors and other relevant agencies and Government Departments to develop a database of innovative companies and target appropriate opportunities. The Team will work with the Institutes of Technology which have a proven model of engaging SMEs in innovation for the first time through small, focused solution-based projects and building these relationships into longer-term research collaborations. Such partnerships would be ripe for targeting via Horizon 2020. The IOTs' close working partnerships with industry in their respective regions, extensive enterprise and incubation facilities which host over 300 companies at any one time, and experience of running the largest start-up programme in the country, New Frontiers, will also contribute to the development of a database of innovative companies.

SFI will undertake a number of initiatives to increase the number and success rate of proposals led by SFI-funded investigators in the Industrial Leadership and Societal Challenges pillars.

4.2.4 Focus on Commercialisation

Using the Enterprise Europe Network, the R&I in Industry Team will have a primary focus on project outcome and commercialisation i.e. covering the full research to innovation cycle. This will be a new remit for Enterprise Ireland to monitor project progress with a view to exploiting funding for innovation in Horizon 2020.

4.2.5 Accessing Public-Private Partnerships (including Joint Technology Initiatives)

The team will respond to the growing importance of Public-Private Partnerships and Joint Technology Initiatives in areas such as Transport, Nanotechnology, Health etc. and develop an approach for overcoming barriers to entry of such large scale initiatives. It will commence with a review of Ireland's access to initiatives to date under FP7 and will include representation in Brussels to showcase Ireland's offerings and to highlight any issues for participation.

4.2.6 Access to Risk Finance

Ireland will vigorously pursue the new Access to Risk Finance opportunity, ensuring that all financial intermediates (banks and venture capital companies) are actively leveraging national investments at European level.

This represents a new activity for the network and will require interaction with the Enterprise Ireland Banking Relationships and Growth Capital team.

4.2.7 Support for Innovation in SME's

20% of the total combined budget for the Leadership in Enabling and Industrial Technologies and Societal Challenges is to be allocated for SME's. A minimum of 7% of the budget for these 2 areas will be allocated to the new SME Instrument. Ireland's SME's have performed very well in FP7 and the National Support Network will work to build on this success in H2020.

4.3 Societal Challenges

The new challenge-based approach will require researchers to propose research solutions to defined major societal challenges; the multi-disciplinary nature of these societal challenges will require a new team based approach by the NCPs to deliver the maximum participation from Ireland. The multi-disciplinary research and innovation required to effectively tackle these challenges in a sustainable way entails pooling complementary knowledge and resources, including the active involvement of socio-economic disciplines. This will include bringing HSS into all societal challenges. There will also be a strong focus on ICT in all of the Challenges. The dissemination and uptake of research and innovation results by policy-makers, businesses and society at large will be enhanced by empowering actors at all levels of society to actively participate in this process.

4.3.1 Multi-disciplinary ICT Application Team

Ireland will prioritise ICT participation in Horizon 2020. Of all FP7 programmes, ICT accounted for the highest funding to Ireland. The network will substantially increase the resources allocated to ICT and specifically address the cross-cutting nature of ICT across all Societal Challenges (e.g. ICT and the Sea; SmartOcean concept, etc.), as well as addressing dedicated ICT funding in the industrial leadership pillar.

The ICT Application team will include the ICT, Health, Security and Societies NCPs in a team-based approach to hands-on support for clients.

It is anticipated that a central activity of the ICT Application Team will be the mobilisation of Ireland's ICT stakeholders and their introduction to application area teams within the European Commission and across Europe.

4.3.2 Health, Demographic Change and Wellbeing

The challenge based approach, including a focus on Connected Health and Independent Living, Medical Devices and Diagnostics, will provide a new opportunity for research groups in a wide range of fields including nanotechnology, ICT networking and software to play leading roles in Health calls. The development of the HRB Clinical Trials Network and the HRB Clinical Research Facilities should provide increasing capacity for clinical trials. Centres addressing health-related issues should also be able to build on their expertise to avail of further opportunities under this Challenge.

4.3.3 Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the bioeconomy

The significant broadening of the AgriFood challenge to include food security, marine (blue growth) and the bioeconomy fits well with national policy.

There is a growing opportunity for Ireland's SMEs and largest agri-food companies with specific attention to this sector introduced only in the latter stages of FP7.

The inclusion of Blue Growth as one of 12 Horizon 2020 Focus Areas represents an important opportunity to build on the very positive performance of the marine/maritime sector in FP7 and to contribute to the aims and objectives of the national marine policy "Harnessing Our Ocean Wealth"

as well as delivering the EU Atlantic Action Plan (2014-2020) and Galway Statement on Trans-Atlantic Research Cooperation in which the 2013 Irish-EU Presidency played a leading role.

4.3.4 Secure, clean and efficient energy

This Challenge provides opportunities to support national policies, including:

- Delivering (and linking with) national research prioritisation initiatives in areas of smart-grid, smart cities and marine technologies
- Opportunities across the programme to stimulate and achieve collaboration, especially concerning energy efficiency in buildings and products, smart electrical grid and energy storage
- Emerging opportunities from inclusion of close to market initiatives in H2020
- Emerging initiatives specifically in energy efficiency innovation such as skills development, building retrofitting and demand response technologies.

4.3.5. Smart, green and integrated transport

Due to the very diverse nature of the smart, green and integrated transport objectives under H2020, there are opportunities for participation of academia and public research organisations across a wide range of disciplines including material technologies, ICT, sensors, social sciences, environmental science, logistics and civil engineering. However, a significant proportion of the Transport budget is to be allocated to both new and continuing JTI/JU's and this will present a challenge in terms of competition for available funding. The National Support Network will work with relevant stakeholders to maximise available opportunities.

4.3.6 Climate action, environment, resource efficiency and raw materials

The aim is to support businesses in developing and bringing to the market eco-innovative solutions and to encourage their take-up by public authorities in their procurement practices, while also helping to move towards a new era of climate information systems and services, which can provide accessible, high quality and ultimately useful data for the public sector, business and society.

There are specific opportunities for Ireland's researchers and companies in the areas of waste as a resource and water (where Ireland already ranks 36% above world average in terms of scientific output). There is significant opportunity to transform societal challenges (Climate, Water etc) into innovation opportunities for businesses, communities etc. This would involve networking our social

scientists, engineers and innovators to influence positive behavioural change to enable us to become a resource efficient society.

Cross-over opportunities will include Blue Growth, Disaster Resilient Society, Smart Cities and Communities and Energy Efficiency.

4.3.7 Europe in a changing world - Inclusive Innovative and Reflective Societies

This challenge will be important for Europe particularly as within it funding is being targeted at research to assist in the overcoming of the economic crisis and the learning of lessons for the future. Ireland's strong performance in the FP7 Science in Society Theme will provide a good platform to participate in this challenge.

4.3.8 Secure societies - Protecting freedom and security of Europe and its citizens.

This is another growing opportunity for Irish enterprises, particularly SME's, building on the positive performance of this sector in FP7 projects.

4.4 European Institute of Innovation and Technology (EIT)

New Knowledge Innovation Communities (KICs) will be awarded in the areas of Healthy Living and Active Ageing, Raw Materials, Food, Manufacturing and Urban Mobility over the lifetime of the programme. Ireland has the potential to be involved in a number of these, with Irish partners already involved in prospective bidding consortia. Enterprise Ireland will act as NCP to promote and support Irish participation.

5. Cross Cutting Areas

5.1 Arts, Humanities & Socioeconomic Sciences (AHSS)

Supporting the AHSS Community

Ireland's approach to AHSS will be based in the first instance on supporting the AHSS community to make applications across all instrument including Challenges, Excellence and LEIT. The AHSS community will be supported to lead projects in all areas. Furthermore the community will be supported to engage in interdisciplinarity across the instruments. The Irish Research Council will play a particular role in supporting the AHSS community in addition to supporting and cultivating the broader community across all disciplines to engage in cross and interdisciplinary research. The Irish Research Council will work in partnership with other NDs and NCPs.

Working with European Commission to improve access

The National Support Network for Horizon 2020 will work with the European Commission to ensure that new client cohorts can readily access cross-thematic opportunities.

5.2 Co-Fund Initiatives

Exploiting Co-funding Opportunities

Horizon 2020 will enhance the use of the Co-fund system used in FP7 whereby FP funds are granted to top-up national funders' schemes and other national funding arrangements. There are growing opportunities for Ireland's research funding organisations to participate in Horizon 2020 to co-fund their national programmes. The remit of the National Support Network for Horizon 2020 will be expanded to include coordination of Co-funded European initiatives involving Irish research funding organisations.

The network will work to optimise targeting and use of co-funding opportunities. This will be achieved by:

- Networking activities to facilitate learning and exchange of experiences between organisations that participate in Co-fund opportunities
- Bringing potential Co-fund opportunities to the attention of relevant funding agencies
- Examining and where possible addressing barriers arising in connection with the national contribution to Co-fund opportunities.

More generally, there is now a political requirement to combine EU funding sources supporting Research and Innovation between Horizon 2020 and EU Structural and Investment Funds.

Opportunities for such co-funding will be examined by the Horizon 2020 High Level Group and by the National Support Network.

6. Implementing the Strategy

National Support Structure

The National Support Structure for Horizon 2020 will build on the experience of the support structure for FP7. As with FP7, Enterprise Ireland has been invited by the Department of Jobs, Enterprise & Innovation to provide the lead national role, across all research funding organisations (see Appendix 1 List of National Contact Points), for promoting and supporting Ireland's participation in Horizon 2020.

The key elements of the national support structure are summarised briefly below:

- **The National Director for H2020** will lead a team based in Enterprise Ireland ensuring that a coordinated and coherent approach is adopted towards H2020 across all of the Government Departments, agencies and other organisations involved.
- Enterprise Ireland has a **Brussels office** which (amongst other activities) provides a “brokering” service to help researchers and enterprises to identify potential partners in other member states. The Brussels office also facilitates links to key individuals in the European Commission and in other EU institutions.
- **National Delegates** have been appointed to each of the configurations of the Programme Committee that will operate in H2020. The role of the national delegate is to represent Irish views at Programme Committee meetings and to work closely with the **National Contact Points** (NCP) in their area to identify and facilitate strategic opportunities for Irish involvement in their own part of the programme and in H2020 generally. NDs will be part-time and, apart from the Strategic Configuration, based at research funding organisations of most strategic significance. In-depth knowledge of the client base and potential for identification of those ‘ripe’ for leverage of national funding lies within the organisations responsible for national strategy. FP7 experience has shown the effectiveness of such close linkage of the national and EU agendas in areas such as Health, AgriFood, Environment (including Marine) and Energy. The European Commission's new streamlined use of Programme Committees (moving from annual to two year work programmes) will ease the burden on national funding organisations in this context.
- A network of **National Contact Points (NCPs)** covers each of the subject areas in H2020 to ensure that researchers and enterprises have a nominated individual who they can turn to for practical advice and assistance with regard to availing of H2020 opportunities. NCPs will be

full-time for all Horizon 2020 areas for which there is adequate justification. NCPs will be part-time for several other areas.

Increased support for proposal preparation

- The European Commission has recommended a step-change or ‘professionalisation’ in provision of support services for Horizon 2020. Our interpretation of a step-change in the Irish context is:
 - Support by hand-holding through proposal preparation across a broader range of research areas than achieved in FP7; and
 - Improved consistency in terms of the support offer across all areas.
- The network will ensure coverage of areas identified in the National Research Prioritisation Exercise but will also provide access to those areas outside the prioritisation where non-exchequer funding becomes critical.
- NCPs will be automatically nominated to relevant Programme Committees as National Experts to work closely with NDs on strategic approaches to their areas.

Representation on Programme Committees

In view of the greater strategic approach to be taken in relation to the role of the Programme Committee overseeing the various elements of H2020, the Irish delegate to the Strategic Committee configuration will, in the first instance, be a senior official of DJEI. Other National Delegates for the thematic configurations of the Programme Committee will be based on relevant national roles.

The arrangements above are provided in the context of European Commission standards and guidelines for National Contact Points (NCP) and Comitology for National Delegates (ND).

The arrangements are made under the principles that:

- The structure of the national support network should closely reflect the final structure of Horizon 2020;
- Even though NCPs and NDs should be nominated for each part of Horizon 2020, it is a national prerogative to combine the tasks of any NCPs or NDs and nominate the same person(s) for different fields should this be deemed appropriate.

The aim of these arrangements is to significantly enhance the operation of the network with the aim of providing hands-on support to Horizon 2020 applicants across all parts of the programme.

The National Support Network for Horizon 2020 will be represented on the Informal Group of Liaison Officers in Brussels. This activity will include the Joint Research Centre NCP role.

Shared Services Support

Shared support services will be provided by Enterprise Ireland and include a web-based platform and event management structure accessible to all members of the National Support Network for Horizon 2020, financial supports and training for applicants, and a national monitoring activity.

7. Enhancing engagement by HEI's and Research Centres

Higher Education Institutions

The higher education institutions will be invited to develop strategies for participation in Horizon 2020. NDs and NCPs will invite HEIs to set targets in parallel for cross-reference with those of the individual NCP-ND teams. The Higher Education Performance Framework can provide a framework for monitoring participation in Horizon 2020. A specific metric on Horizon funding has been included in the framework and each HEI will be required to set targets for Horizon income in its performance compact. The HEI targets will include a focus on their research centres.

Research Centres

Research Centres, many based within HEI's, will be encouraged to adopt a more strategic approach to international engagement, in particular regarding participation in Horizon 2020. Horizon 2020 has a major emphasis on coupling research to innovation and as such the SFI Research Centres and Spokes should be ideally placed to compete and win funding in each of the 3 Pillars. Therefore, it is important from the outset that each Research Centre defines their strategy and targets for Horizon 2020, agrees these with SFI, and they then form part of the SFI annual review.

- Each SFI Research Centre to agree with SFI its strategy for engaging with Horizon 2020 and provide SFI with a set of realistic targets.
- SFI to facilitate the engagement of the Research Centres in Horizon 2020 by funding EU Grants Managers in each (if required) through the provision of a supplemental award.
- A key metric of the success of an SFI Research Centre will be their ability to lead and win initiatives that result in the leveraging of significant non-exchequer funding. SFI to closely

monitor the success of each Research Centre in leveraging non-exchequer funding and incorporate this in to the review/evaluation of the Research Centre's performance.

8. Linkage with Northern Ireland

The National Support Network for Horizon 2020 will operate on an All-Island basis. Both Ireland and Northern Ireland are set to reach their target drawdowns from the FP7 programme. The deepening collaboration between the two jurisdictions that emerged in the latter part of the FP7 programme has contributed very positively to that. The work of InterTradeIreland and the All-Island Steering Group has stimulated a move away from ad-hoc North/South collaboration to a more focussed, coherent approach to cooperation that will be mutually beneficial. This work is paying dividends. The number of North/South collaborations has been rising steadily.

These collaborations are generating economic value. A total of 89 successful North-South projects have mobilised funding valued at €80.5 million from FP7.

The All-Island Steering Group and InterTradeIreland will build on this success to further increase the level of cooperation for the Horizon2020 programme. InterTradeIreland has developed a suite of supports dedicated to facilitating and supporting North/South cooperation and will continue its integration role with the National support Network in Ireland and the newly established Northern Ireland support structure (which consists of a Horizon 2020 manager and a contact point network which is supporting dedicated EU funding staff in Invest NI, University of Ulster, Queens University Belfast and the Agri-Food and Bioscience Institute).

In addition, Science Foundation Ireland will partner with agencies in Northern Ireland to promote all-island collaboration with a view to strengthening future Horizon 2020 initiatives.

Horizon 2020 North-South Steering Committee

Close cooperation with InvestNI, InterTrade Ireland and the newly appointed NICPs at Queen's University and the University of Ulster will continue with high level interaction through the Horizon 2020 North-South Steering Committee.

Specific opportunities may include:

- Bilateral industry partnerships under the EUROSTARS II programme (with Ireland committing 3 times the national funding of the previous programme, in keeping with the

three fold increase in scale of the programme and the European Commission contribution to it);

- Opportunity to build on the EPA's and DAFM's funding of Northern Irish researchers in its STRIVE and Stimulus programmes respectively; opportunity to match up interests in Transport-aerospace;
- Significant opportunities for electricity grid and marine technology collaborations, especially concerning all-island market opportunities;
- FP7 Security has been a North-South success story. Already there are multiple joint North-South proposals under consideration for H2020.

9. Initial Actions

9.1 Communication Campaign

National Launch

The National Support Network for Horizon 2020 will undertake a nationwide communication campaign, including in particular a national launch on 10 December 2013, aimed at highlighting the opportunities for Ireland through H2020, particularly for those who have not previously participated in Framework Programmes.

Showcasing Projects

The higher education institutions will be requested to showcase FP7 projects at industry-academia partnering events as a core part of this activity i.e. in a series of 'find your first partner at home' activities as a prelude to subsequent European Commission brokerage events.

Campaign to recruit new applicants

The campaign will use national press and social media to 'recruit' potential Horizon 2020 applicants.

Applicants will be invited to a recruitment event focussed on ‘the challenges facing citizens of Europe and how you can be part of the solution’. They will have the opportunity to meet the members of the National Support Network for Horizon 2020, their European Advisors, to discuss their ideas and develop first leads.

The event will include the new Northern Ireland Horizon 2020 NICP team.

10. Target for Participation

It is estimated that Ireland’s average contribution to the EU Budget over the period 2014-20 will be of the order of 1.2% .

On that basis a *juste retour* figure of €953m (i.e. €79.4 bn x 1.2%) would represent what would be required to break even compared to Ireland’s estimated contribution to the EU’s overall budget for 2014-2020 (Multi-annual Financial Framework). However, the *juste retour* figures do not reflect past performance or areas of strength/ weakness.

In contrast, analysis of individual elements of H2020, taking into account the specific circumstances of Irish research strengths and opportunities provides a more realistic view of Ireland’s performance by programme area based on knowledge of FP7 history and the national investment in R&D capability.

Taking into account this analysis as well as the value of adopting an ambitious approach to engagement with Horizon 2020, in order to drive the fullest engagement by both the public and private sectors and maximise the benefits for Ireland, a target of €1.25bn for Ireland’s drawdown of funding from H2020 is adopted.

11. Performance Monitoring

Organisation-specific Analysis

Ireland's participation in Horizon 2020 will be monitored routinely using national access to the European Commission E-CORDA database and its bi- or tri-annual reporting periods. Key stakeholders in Ireland will be provided with organisation-specific analysis and the underlying data to allow for further localisation of that analysis.

Reporting to Horizon 2020 HLG

The monitoring activity will include presentation to members of the Horizon 2020 High Level Group, specifically aiming to inform leverage of national investment at a higher strategic level.

New monitoring aspects will include:

- Reporting of Research Excellence horizontally by thematic area;
- Reporting of project implementation and outcomes; and
- Preparation of a publicly available version of the monitoring report.

Focus on Job Creation and Employment

One new element of the monitoring will focus on the impact of Irish participation in Horizon 2020 on job creation and employment. The assessment will use the NEMESIS system of detailed macroeconomic models developed under the European Socio Economic Sciences and Humanities programme. It will consider the leverage effect of public organisations and private companies and their cumulative effect on employment.

12. Strategic Oversight and Direction

Horizon 2020 High Level Group

A Horizon 2020 High Level Group will be established under the chairmanship of the Department of Jobs, Enterprise and Innovation to oversee national strategy for engagement with H2020 and particularly to identify and champion potential 'big wins' for Ireland. All Government Departments and Agencies whose remit includes research and innovation will have a role in implementing this strategy and securing the maximum benefits for Ireland.

APPENDICES

APPENDIX 1

National Contact Points

APPENDIX 2

National Delegates

Appendix 1 National Contact Points

National NCP Coordinator	Dr	Imelda	Lambkin	Enterprise Ireland
Legal and Financial	Ms	Jill	Leonard	Enterprise Ireland
SMEs	Mr	Sean	Burke	Enterprise Ireland
Access to Finance	Ms	Evelyn	Smith	Enterprise Ireland
European Research Council	Dr	Graeme	Horley	Science Foundation Ireland
	Mr	Paul	Kilkenny	Irish Research Council
Future and Emerging Technologies	Mr	Stephen	O'Reilly	Enterprise Ireland
Marie Skłodowska Curie actions (skills, training and career development)	Dr	Jennifer	Brennan	Irish Universities Association
European Research Infrastructures	Dr	Michael	Ryan	Science Foundation Ireland
Information and Communication Technologies (ICT)	Mr	Stephen	O'Reilly	Enterprise Ireland
	Dr	Gerard	Kennedy	Enterprise Ireland
Nanotechnologies, advanced materials and advanced manufacturing and processing	Dr	Liam	Brown	Enterprise Ireland
	Dr	Sergio	Fernandez-Ceballos	Enterprise Ireland
Space	Mr	Barry	Fennell	Enterprise Ireland
Health, demographic change and wellbeing	Ms	Kay	Duggan-Walls	Health Research Board
	Dr	Ciaran	Duffy	Enterprise Ireland
Food security, sustainable agriculture, marine and maritime research and the bio-economy; & Biotechnology	Mr	Dale	Crammond	Department of Agriculture, Food & Marine
Secure, clean and efficient energy	Mr	Philip	Cheasty	Enterprise Ireland
Smart, green and integrated transport	Dr	Bob	Flynn	Enterprise Ireland
Climate action, resource efficiency and raw materials	Dr	Alice	Wemaere	Environmental Protection Agency
	Mr	Mark	Sweeney	Enterprise Ireland
Inclusive, innovative and reflective societies	Mr	Paul	Kilkenny	Irish Research Council
Science with and for Society	Ms	Alva	O'Cleirigh	Science Foundation Ireland
Spreading Excellence & Widening Participation	Ms	Catriona	Ward	Enterprise Ireland
Security	Dr	Michael	Murphy	Enterprise Ireland
Euratom	Dr	Ciaran	Duffy	Enterprise Ireland
Joint Research Centre	Dr	Imelda	Lambkin	Enterprise Ireland

Appendix 2 National Delegates

Mr	Aidan	Hodson	Strategic configuration	Department of Jobs, Enterprise and Innovation
Dr	Manus	Ward	ERC*	Science Foundation Ireland
Dr	Conor	O'Carroll	MSCA*	Irish Universities Association
Mr	Stephen	O'Reilly	FET	Enterprise Ireland
Dr	Michael	Ryan	Research Infrastructures	Science Foundation Ireland
Mr	Stephen	O'Reilly	Information and Communication Technologies	Enterprise Ireland
Dr	Liam	Brown	Nanotechnologies, Advanced materials, Biotechnology, Advanced manufacturing and processing	Enterprise Ireland
Dr	Sergio	Fernandez-Ceballos	Nanotechnologies, Advanced materials, Biotechnology, Advanced manufacturing and processing	Enterprise Ireland
TBC			Space	Enterprise Ireland
Mr	Sean	Burke	SMEs and access to Risk Financing	Enterprise Ireland
Dr	Patricia	Clarke	Health, demographic change and well being	Health Research Board
Mr	Richard	Howell	European Bioeconomy challenge	Department of Agriculture, Food, and the Marine
Mr	Geoffrey	O'Sullivan	European Bioeconomy challenge	Marine Institute
Mr	Matthew	Kennedy	Secure clean and efficient energy	Sustainable Energy Authority Ireland
Mr	Philip	Cheasty	Secure clean and efficient energy	Enterprise Ireland
Dr	Bob	Flynn	Smart green and integrated transport	Enterprise Ireland
Dr	Brian	Donlon	Climate action, Research Efficiency and Raw materials	Environmental Protection Agency
Dr	Gemma	Irvine	Europe in a changing world – Inclusive, Innovative and Reflective societies	Irish Research Council
Professor	Sean	Ryder	Europe in a changing world – Inclusive, Innovative and Reflective societies	NUI Galway
Dr	Michael	Murphy	Secure Societies – Protecting Freedom and security of Europe and its citizens	Enterprise Ireland

*Dr. Gemma Irvine, Irish Research Council, will serve as National Expert