EU Framework Programme: Call for Evidence response form

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The closing date for this call for evidence is 4 January 2011

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☐	Government Department or Agency
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☐	Universities
☐	Industry
☐	SMEs
☐	Individual researcher from a university
☐	Individual researcher from industry
☐	Other (please describe):

Question1: What should the UK's high-level objectives be for FP8?

The high level objectives should be:

- **To maximise the repatriation of FP funding to the UK in those areas of strategic importance which support the objectives of the UK's economic growth and recovery plans. These topics should support the UK's Innovation and Growth Strategies and the roadmaps and agendas for the Knowledge Transfer Networks and Technology and Innovation Centres for example.**

- **To correct the imbalance in the UK return between academia and UK industry, with its current disproportionately low industrial return in comparison to a number of other advanced European Member States.**

- **To support the UK's economic growth by stimulating new products, technology applications and services.**

- **To ensure that the access and application processes are as simple as possible with a minimum of necessary bureaucracy.**

It is important also to ensure that:

- **Europe and the UK in particular have the ability and capacity to gain substantial economic and societal benefit from the work supported.**
- **The FP programme is complimentary to and not a replacement for national R&D programmes and that it is subject to appropriate limitations when it is not appropriate to collaborate across the EU.**

It is noted that EU Member States contribute to the EU budget in proportion to their share of EU GDP. The UK's funding returns from FP7 are currently below the level of its input. There is room to increase the return therefore and, as noted above, there is an imbalance in the UK return between academia and industry, with a disproportionately low

industrial return. The UK needs to address measures to encourage and facilitate industrial engagement.

The UK should seek to ensure FP8 comprises of a range of instruments that address the whole innovation cycle from base research, technological development, demonstration and validation to the rapid deployment of results into markets. Coordination between these Instruments, their continuity from previous FP cycles are all key in order to commercialise research effectively and efficiently.

The UK should emphasise that the economic benefits of FP8 will only be realised if the Programme focuses on areas where:
• There are substantial global market opportunities.
• EU member states have technical leadership and a defensible competitive position
• Significant parts of value chains can be anchored in the EU

Question 2: How can FP8 help deliver economic growth throughout the life of the programme and beyond?

There is substantial evidence showing that innovation is connected to economic growth, and breakthroughs in knowledge from R&D underpin long-term productivity and competitiveness.

It is important for the UK to remain a country of choice for inward investment by high-value industries. Increasing the UK's R&D intensity through the FP programmes will encourage such lasting industrial presence in the UK.

In R&D, public funding, such as that provided by the FP, leverages private sector spending and is a stimulant for private investment. Focussing public R&D spending (both EU and national) in areas where there is substantial global market opportunity and exploitable commercial leadership from Europe will anchor significant parts of the lasting value chains within Europe includin the UK.

FP8 can deliver long-term economic growth well beyond specific project lifetimes by focussing its investment in robust industrial sectors.

Question 3: How should FP8 support the wider European context including Europe 2020 and the European Research Area?

There are many challenges in Europe, including many societal needs, but primarily there is an over-riding need for excellence, competitiveness and leadership in industry and commerce. These are addressed through a range of stratgies, including those outlined in Europe 2020. Research and innovation will be a key component in addressing these challenges, placing FP8 in an important position which will require it to deliver appropriate and timely outcomes.

Industries that are technological and innovative are at the heart of the Europe 2020 strategy. They are needed to deliver at least four of the seven Flagships: Innovation Union; Industrial policy for the globalisation era; Resource efficient Europe; the agenda for new skills and jobs. Ensuring the right level of focus from FP8 into research that supports these industries intrinsically supports the Europe 2020 vision.

One of the key indicators for the success of the ERA is the strength of the business research base in the EU. This is best measured by the business expenditure on R&D in relation to GDP. The performance of the ERA is therefore best supported by focussing FP resources in R&D intensive sectors. These are also the key sectors required for delivering the 'Manufuture' vision for knowledge-based manufacturing in Europe which seeks to help rebalance the EU economy.

Question 4: The study *Impact of the EU RTD Framework Programme on the UK* has indicated a number of broad benefits to the UK of the programme. Are these benefits identified appropriately and there other impacts that should be considered in addition?

The report states that strategic alignment between the FP and national strategies is beneficial. In austere times, it is imperative that R&D resources are further focussed in the highest priority areas to ensure maximum societal and economic benefit. In assessing the quality of proposed projects, greater credence should therefore be given to FP projects that clearly align, underpin or deliver against agreed national strategies.

However, UK national strategies and strengths should be used to shape FP content and participation, rather than shaping national programmes to complement wider European strategies and objectives as is sometimes indicated in Commission documents.

Question 5: How can FP8 make a positive contribution to the UK economy – and the low-carbon economy in particular?

FP8 can positively impact the UK economy by supporting sectors that are leading the way in rebalancing and growing the economy. High value manufacturing and advanced engineering sectors for example will be crucial contributors amongst others to the Government's ambitious plans for the UK to increase exports as part of its campign to reduce its debt and borrowing requirement. Technological leadership through innovation and R&D will provide the competitive differentiator for the UK.

A significant part of the UK's strategy is to boost its position in the low carbon economy. FP8 can help bring that about by incorporating topics, technologies and appications that impact on the reduction in carbon emissions. A way of encouragng this would be to require some assessment of carbon impact as part of the process for establishing the

content of the FP8 programme and in the assessment of individual project proposals.

Question 6: How can FP8 support innovation in the UK?

The need to maximise draw down of available EU RTD funds and ensure alignment and complementarity between EU and national research strategies in order to support innovation in the UK has already been commented on.

Funding received by UK industry represents only 20% of UK's total draw down from FP7, lower than the share of funding obtained by European industry across FP7 as a whole. UK universities have faired comparatively better, but business participation continues to lag behind academic involvement. To ensure better exploitation of research outputs, it is vital the Industry's participation is maximised and brought up to a level that is commensurate with that of academia.

With respect to the diversity of programmes available through FP beyond Cooperation (i.e. Ideas, People and Capacities), the UK does not seem to access them very effectively, apart from SME specific programmes under the Capacities component. Some further key aspects of infrastructure could be supported under the Capacities programme.

Industry would welcome access to the existing European Strategy Forum on Research Infrastructures, in order that technology application oriented research infrastructure can be considered therein - this currently is not covered appropriately in FP7.

Specifically, the following should be considered as means of supporting innovation and its uptake in the UK economy:

- **Risk funding should be pushed as far along the TRL spectrum as possible**

- **Access to FP 8 funding streams is likely to be an important factor for the proposed Technology and Innovation Centres and should be included in their planning**

- **Operating closer to market will attract more private funding and the results of projects will be more readily exploitable. The emphasis in FP8 should therefore be moved towards proof of principle and technology and application projects.**

Question 7: What are your views on the split of the FP7 budget between these specific programmes? Should this change in FP8?

- **The Co-operation component should be as well funded as possible and not reduced in any adjustment to the profile used for FP8 . Broadly, the current split between specific programmes is probably**

correct, the vast majority of funding being in the Cooperation area where the collaborative R&D projects lie.

Question 8: Which areas of Framework Programme funding provide the most EU added-value (see paragraph 6)? And which the least?

The Cooperation Programme provides the most added value as this is source of collaborative R&D projects. Such collaborations have a range of benefits:
• they reduce the cost and risk of many technology developments and critical mass and scale are acheived
• they increase collaboration with higher education institutions, maximising the pull through of academic research
• they showcase UK capability, making industry an attractive partner

• The Cooperation Programme should receive the most support and Capacities should receive the least, subject to the comments above in Q6.

Question 9: Can efficiencies be found in the Framework Programme because of overlaps between different areas of funding?

Efficiencies can undoubtedly be achieved by bringing together the various elements of the programme, e.g Cooperation, Ideas, People and Capacities. However, application to each individual programme component is already a complex and consuming process, but one with which participants are already familiar. There would be concern over the creation of a new process to bring those elements together, which is likely to add yet further complexity and bureaucracy for applicants.

Continuity of the existing instruments (e.g. for level 1, 2 and 3 projects) is important. Industry is already familiar and broadly content with the existing instruments of Collaborative R&D plus Integration and Demonstration activities. SMEs improve their position in the supply chain by participating in the FP and the range of instruments available encourages SMEs participation. A significant shift from these would disrupt participation and increase the administrative burden for all.

In order for FP to address the whole innovation cycle from base research, technological development, demonstration and validation to the rapid deployment of results into markets, coordination between the various instruments is key however.

At a more detailed level:

• Joint calls could reduce overlap between different areas of funding, but we should be aware that this lengthens application processes.

• Overlaps in areas of interest between Directorates can be difficult to deal with. Joint initiatives should in principle solve the problem but

the processes and procedures involved can make the bureaucracy and selection/decision even more complicated and lengthy.

Question 10: What are the arguments for and against FP8 moving towards funding research and development which addresses grand challenges?

While it is accepted that EU RTD funding plays a role in addressing societal and other grand challenges, for such R&D programmes to contibute to European competitiveness and prosperity it is essential that R&D support for these challenges be able to create substantial business opportunities, otherwise companies will not be make the investment in the appropriate collaborative projects.

There is some concern that industry's more specialised priority technological topics are becoming progressively more deeply embedded within more broadly defined themes or challenges with each FP cycle. Further aggregation in FP8 will disadvantage some research, which will have to compete with very different areas of work and be assessed by generalist rather than specialist experts.

However:

- **Grand challenges have a distinct advantage in providing a means for stimulating multidisciplinary working.**

Question11: Which grand challenges (see above) are best tackled on an EU-wide rather than a national level? Within these areas which particular aspects would benefit from an interdisciplinary focus?

It is largely a question of which aspects of each challenge should be tackled at the EU or national level. Each area has aspects that are best tackled EU wide; for example where critical mass and scale are required to realise the objective. Specific technologies however may be best developed at national level in order to secure maximum advantage for the UK.

There are also grand challenges where national infrastructure differs across the EU-27. For these topics (health, transport) underlying technologies can be addressed at the European level, but application will be a matter for national programmes.

Question 12: How should FP8 engage with countries outside the EU or associated to the Framework Programme in addressing global challenges?[1]

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[1] FP7 participants can in principle be based anywhere. There are different categories of country which may have varying eligibility for different specific and work programmes: the EU-27; associated countries– with science and technology cooperation agreements that involve contributing to the framework programme budget; EU accession candidate countries; and third countries whose participation is justified in terms of the enhanced contribution to the objectives of FP7.

Industry recognises and is extremely supportive of the EU's key role in stimulating international collaboration with the US, Canada, China, Russia, Japan and others. EU instruments (such as supportive actions) and target markets need to be based on clear EU policy and strategy, and the imperatives for international cooperation need to be based predominantly on business, commercial or technical capability factors - not on political drivers alone. Opening access to EU RTD programmes must ensure reciprocity.

Question 13: Should FP8 still provide some thematic focus e.g. in areas such as space and transport? Should any of the current themes be re-visited over the course of FP8 – and if so, how?

To reiterate the response to question 10 above, thematic focus in certain areas is vital, particularly in areas where there are unique R&D models and technology lifecycles.

Revisiting themes requires specialist expertise to monitor and evaluate progress, performance and impact. This should perhaps be reviewed during FP8 but using realistic benchmarks for the time taken from get from R&D to eventual social and economic impact.

Question 14: What should be the role of key enabling technologies e.g. ICT and nanotechnology in FP8?

While enabling technologies should cut across sectors to encourage 'develop once, use many times' approaches and to foster knowledge and technology transfer between sectors, it should be recognised that there needs to be strong sectoral focus in R&D programmes to maximise industrial engagement and subsequent commercial, economic and societal benefit.

The focus should be on developing the technologies that would have a big enabling effect, in addressing the Grand Challenges for example. Although technology driven research has a place in FP8, the majority of the underlying technology programmes should be driven by specific objectives and applications.

Question 15: Services form a crucial part of the UK economy. Should research into services be addressed specifically in the Framework Programme, and if so, how?

- **Unequivocally Yes. This is where much of the UK growth agenda will be realised.**

Question 16: What are your views on how the Framework Programme allocation for collaborative research should be apportioned between

themes; enabling technologies and underpinning areas of research e.g. social sciences and humanities?

Allocation should be across the range from underpinning research to application development. However, in keeping with the current EU objectives, the emphasis must be on activities that will build a strong, sustainable European economy.

Question 17: To what extent should ERC funding focus on supporting frontier research? Are there other areas in which ERC could add value?

As discussed above, frontier research should be targeted on specific applications. More academic research is appropriate to single institutions and national funding, or European programmes outside of Framework.

Question 18: Should ERC's current emphasis on funding a single investigator continue into FP8?

Funding a single investigator should continue, but should be augmented by funding to encourage co-operation between organisations.

Question 19: Are there any options that could better link ERC activities with private sector interests?

By programmes targeted on placing researchers in industry, and on linking research organisations to industry by supporting secondments in both directions.

Question 20: What priority should researcher mobility and skills development have in FP8? What is the best way to address this?

These should be secondary to technology development programmes.

These facets of the programme should be integrated into co-operative projects to encourage cross-border recruitment.

Question 21: The capacities specific programme currently covers several policy initiatives relating to capacity-building. Which of these are of most value? Are there other areas which would merit funding?

See response to Q6 in relation to SME programmes and infrastructure.

Question 22: What should the relative priority be for the Joint Research Centre under FP8? On which activities should it focus?•

These Centres should provide facilities and expertise that is not available in other organisations in Europe, and should not use their position to provide unfair competition.

The JRCs should not undertake research than can be executed more efficiently in the Member States.

Question 23: Please comment on the COST framework and its links with the Framework Programme

No specific response

Question 24: Should FP8 directly support activities aimed at integrating the three sides of the knowledge triangle e.g. KICs?

Yes, but development of technology must be the leading criteria.

Question 25: Which instruments (e.g. JTIs, article 185 initiatives) should be retained for FP8? Are any new instruments required?

In terms of mechanisms and instruments, Level 1, 2, and 3 projects under previous Framework Programmes have provided good opportunities for delivering the strategic agenda. Clearly, the administrative burden needs easing. An incubation phase, level 0, should also be encouraged for FP8. JTI's, with adequate funding, provide good integration opportunities to demonstrate innovative solutions but can be cumbersome.

The UK should encourage the Commission to permit work as close to market exploitation as possible, i.e. to support industry in transitioning technologies and applications through 'the valley of death'.

Continuity of support instruments in the EU is important; industry, including SMEs, is now familiar with and broadly content with the existing instruments for Collaborative R&D and sor Integration and Demonstration activities. A significant shift away from these would disrupt participation and increase the administrative burden for all.

- **In terms of additional instruments, an instrument to support aggregation of demand to stimulate the development of services and investment from the private sector would be welcome (eg. to roll out satellite broadband across the EU to deliver Universal Services).**

Question 26: Please comment on the Risk Sharing Finance Facility. Should a scheme of this kind be included within FP8?

Yes but it needs to be better advertised and more actively promoted. This type of facility is already available for close to market developments via the EIB, and the UK has a low take-up of this funding.

Question 27: What should the balance be between funding large-scale programmes e.g. the article 185 *programmes* above and smaller *projects* individually administered by the Commission?
The balance should be reviewed on a case by case basis.

Consideration should be given to larger projects where the Co-ordinator has the ability to bring in new partners as the project progresses, and partners can leave once their work has been completed. These projects will need substantial autonomy.

Question 28: What should be the role of public-private partnerships in FP8?

Public Private Partnerships (PPP) in FP8 would focus funding on specific themes and demonstration of results in projects which are constructed around large funding levels, bringing together the critical mass and scale required to execute strategic research. However, practice to date shows that the overall funding and annual funding distribution can be uncertain. PPPs could be adapted to delivering the research required sectors if an overall management structure were put in place to plan and monitor progress.

Consistency in the funding scheme is needed, and the full cost of research needs to be recognised. Currently, an artificial overhead rate of 20% is used that excludes many organisations.

Question 29: What lessons from evaluations of previous framework programmes can help with the development of FP8?

The streamling of bureaucracy has not taken place and is now an urgent priority.

This bureaucracy results in very long timescales from call to active project, which is unacceptable to industries with short product cycle times.

A system based on trust, where transgressors are penalised, should be instigated.

Question 30: What steps could be taken to ensure that knowledge gained from FP8 is disseminated and exploited – and remains easily accessible over time?

It is important to ensure continuity of funding for specific topics in order to allow all the stages of a development to be undertaken.

All proposals commit to dissemination actions. These should be encouraged and facilitated by the EC.

Question 31: Would any proactive effort to alter the current balance of funding between universities, research organisations and businesses be appropriate or effective? If so, what might be involved?

Yes. There needs to be initiatives to stimulate project proposals and provide assistance with bids (e.g. via the TICs and KTNs), especially to assist industry, both SMEs and LEs. The UK should build on the

successes of its universities and research organisations by catalysing contacts between these organisations and industry. This will enable t he UK to take a larger role in FP8, and realise its intention to be a true knowledge economy.

The private investment dimension creates a 'glass ceiling' for private partners, which is a constraint not affecting the public partners and can act as a real barrier to industry engagement in the Programme. Any measures to improve the risk/investment burden for industry would be welcome. This could be via support to qualified intermediaries as noted above.

Support for the National Contact Points needs to be increased rather than reduced as is currently happening. Their role should be much more pro-active, rather than reactive as at present.

Question 32: What could be done at EU level to encourage more businesses – especially SMEs - to apply?

The following would assist:

Including topics aimed at delivering innovative services, as well as manufactured products, will attract more businesses to apply.

Encouraging better engagement on the part of industry with the preparation of calls e.g. through participation in the development of technology roadmaps used to inform the content of calls, so that calls are then aligned to the interests of industry (not just of academia).

Encouraging more open calls

Introducing a European equivalent of SBRI.

Enlarging SME-dedicated calls.

As discussed above, enhance the role of the National Contact Pints, rather than reduce it.

Question 33: What could the Commission do to reduce bureaucracy of FP8 over and above the current simplification proposals (including changes to the Financial Regulations and Implementing Rules)?

The overall level of bureaucracy and reporting involved is excessive, requiring significant time, effort and cost from all participants, with a disproportionate burden on smaller organisations and new entrants. SMEs often resort to third party consultancies to aid them through this complexity, using valuable budgets that would otherwise be better directed at R&D itself.

The current system must be modified to place greater trust in the participants, with appropriately balanced administrative control. Taking the labour rates as an example, the administrative burden can be reduced if the EC accepts certificates of average rates based on those agreed through national governments or other EU bodies (e.g. ESA).

Furthermore, consistency of approach between the various DGs would simplify matters greatly.

Bureaucracy and complexity are the barriers for many SMEs and consequently a pragmatic shift toward overall simplification of the process must be a high priority to create the conditions for SMEs and industry in general to engage more enthusiastically in the Programme.

Additionally, the excruciatingly drawn out process of bid writing, evaluation and negotiation is excessively burdensome and must be a priority for reform. This lengthy process in turn causes the need for considerable re-writing and updating of proposals.

Question 34: Is there a role for a two-stage applications process analogous to that used by the Technology Strategy Board[2]?

- **Yes, this should also help SMEs, provided that the effort required to make the initial application is limited AND that the proportion of projects funded at the second stage is sufficiently high. Properly implemented this measure could serve as part of the drive to simplify the overall application process.**

Question 35: Should the programme move away from a cost/input-based funding model to one based more on results/outcomes/performance?

- **Yes. Industry would welcome an agreed funding level for each project at the start, to be paid on delivery of milestones/reports etc… with no resort to subsequent audits that can retrospectively alter funding levels and allowable rates, sometimes many years later.**

Question 36: Should the rules on intellectual property in FP7 be changed for FP8?

- **No**

Question 37: Is the proportion of overheads funded by FP7 appropriate? Should this be adapted in FP8 to create more consistency with other sources of funding?

- **The restriction of overheads to 20% for support actions should be removed. The limit of 20% makes these funding instruments unattractive and often no better than R&D instruments.**

[2] For details of Technology Strategy Board processes see www.innovateuk.org

Question 38: Within the current UK public expenditure constraints[3], could the UK do more on a cost-neutral basis to encourage participation in FP generally?

- **Yes. The TSB should fund preparation on project ideas to help to increase industrial return. The TSB could also provide a support office in Brussels and make better use of the Research Councils' Brussels office.**

Question 39: How effective are the current UK support services?

- **Resources are limited to providing information. This is an area that could be improved in places. Contact points provide information but perhaps sometimes could offer greater insight beyond the published material and in some of the less tangible aspects of engaging with the FP community's agenda. A stronger presence in Brussels and influence over programme formulation would be beneficial to the UK.**

Examples of best practice in Europe, for example the Eindhoven region, should be studied and actions taken in the UK to emualate the effective activities.

Question 40: What could be done at UK level to encourage more businesses – especially SMEs - to apply?

- **See responses to Qs 32, 33 and 34**

Question 41: Are there any lessons from other countries that could help raise UK participation?

See Q 39.

The UK takes a detached stance, rather than learning and emulating best practice.

For example, Fraunhofer Institutes in Germany provide help with proposal preparation and coordination, supported by their core funding.

Question 42: Please add additional comments here in relation to UK interests in the Framework Programme.

- **No further comments**

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[3] See http://www.hm-treasury.gov.uk/spend_index.htm

Do you have any other comments that might aid the consultation process as a whole?

Please use this space for any general comments that you may have, comments on the layout of this consultation would also be welcomed.

Thank you for your views on this consultation.

Thank you for taking the time to let us have your views. We do not intend to acknowledge receipt of individual responses unless you tick the box below.

Please acknowledge this reply ☐

At BIS we carry out our research on many different topics and consultations. As your views are valuable to us, would it be okay if we were to contact you again from time to time either for research or to send through consultation documents?

☐ Yes ☐ No