

1st Conference

Innovation & Competitiveness

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1.

Introduction

This document provides a report on the 1st COFET Conference on the subject of 'Innovation & Competitiveness in the Context of FET' that was held on the 20th and 21st June at the Big Innovation Centre, 21 Palmer Street, London.

2.

Objectives

The objective of Future and Emerging Technologies (FET) research is to foster radically new technologies by exploring novel and high-risk ideas building on scientific foundations. The radical and long-term nature of FET makes it difficult to devise straightforward strategies for innovation.

The objective of the Conference was to solicit views from academia, industry and selected stakeholders on how Innovation and competitiveness could be addressed within the context of FET in Horizon2020.

3.

Format

The format of the Conference was split over 2-days in in particular the afternoon of day one was dedicated to providing a contextual overview of Innovation & Competitiveness in the Context of FET. This was followed by a session to identify and shortlist potential breakout themes through group contribution and discussion. The first day ended with an early evening networking dinner and reception drinks. Day-2 comprised of three breakout sessions to discuss the breakout topics, followed by a report back sessions and closing remarks from Wide Hogenhout of the European Commission.

4.

Findings

A plenary working session on the first day stimulated some discussion involving all participants on potential areas that would merit further discussion via Breakout Groups on how to embrace innovation and competitiveness in the context of FET. The first task was to solicit opinion on what makes a research project a FET project. The group discussion proposed the following:

- A FET research project adopts a problem driven approach ie it has commercial / application relevance right from the start and this provides a gateway for post project innovation activities.
- It is not limited to ICT but is open and encourages a multi/inter disciplinary approach
- It is radically innovative at its core
- It is flexible and allows the freedom to explore – although caution should be noted that this may have a negative effect on deliverables
- It includes a community of people ie industry and academia that form a working relationship and have the knowledge to take further post research
- It should include a balance between road-mapping (technology and society) and innovation/serendipity/flexibility
- FET projects are high risk so sometimes you don't know where you will end – contractual approach to deliverables not appropriate.

We then followed this up with a discussion on the factors that should be considered to ensure that innovation and competitiveness are maximised from FET research projects. This resulted in a variety of topics / comments that were clustered into themes for further consideration during separate break out working group sessions. These were:

- Innovation Management
- Innovation Communities
- Innovation Technologies

We have summarised the outputs from each of the working groups in the sections below.

Innovation Management

The Innovation Management group considered aspects of managing research projects to maximise innovation outcomes. It was identified that the core project should be complemented by mechanisms that are focused on innovation and commercialisation and pick up on ideas as and when available.

Considering a typical three-year project as the norm, simply adding a fourth year at the end to accommodate innovation was not the way ahead; innovation management starts when a call is announced.

It was considered that a research project consists of three main phases:

- Phase-1 is the science phase where the research is carried out and some 'ideas' for applications / commercialisation identified.
- Phase-2 is the involvement of industry to validate the ideas and to further develop (although it should be recognised that not all research will translate into innovation activities)
- Phase-3 is the application phase where ideas are fully developed

Opportunities include:

Project Level

- Good ideas are not lost or side tracked by other project deliverables set in the project plan. It is important to have mechanisms to ensure that such ideas are developed in a timely manner.
- Flexibility should be inherent to allow for new / leaving partners and possibly subsets of partners to exploit particular applications
- Help is provided for IPR and commercialisation funding from around 30 months onwards within a project
- After the first year of a project there should be some activities running in parallel to the project to provide legal / commercial support to assist and prepare for commercialisation

Programme Level

- Ensuring mechanisms are in place to quantify innovation impact throughout the project and post project (say 5 years+)
- Incentives should be considered for innovation and in particular for identifying and exploiting ideas as a result of the research project
- Matchmaking events to bring together the various players that can commercialise technology is a potential opportunity.

Innovation Communities

This group considered how the role of communities of various stakeholders at various stages of the research and innovation cycle could be or should be involved to maximise innovation.

It was cited that there is a weakness in the connection with commercialisation post-project and that industry participation is key to bridging this, as is the involvement of commercial funding sources.

There was a perceived lack of interest from smaller companies (SMEs) in participating in research in general although it was recognised that there should be mechanisms to give SMEs the chance to benefit from their involvement. In fact it was recognised that there is a need to involve industry in research projects, but the question remains one of timescales.

An underlying theme was to involve various players at an early stage in the process i.e. at the development of research visions and to include the various players at this stage.

Opportunities include:

Project Level

- Increased use of open data – although issues such as security, privacy and a lack of common standards are a potential barrier currently that need to be addressed
- Individual fabrication crowd sourcing – to engage an open community and to catalyse innovation
- Tools should encourage interdisciplinary involvement and facilitate a holistic approach to problem solving, and offer a balance between blue sky research and goal-oriented project management.

Programme Level

- The emphasis should be on the transfer of knowledge from fundamental understanding to technology through to application
- Involve a community of people i.e. industry and academia to form a working relationship and have the knowledge to take further post research
- Strike a balance between road-mapping (technology and society) and innovation/serendipity/flexibility

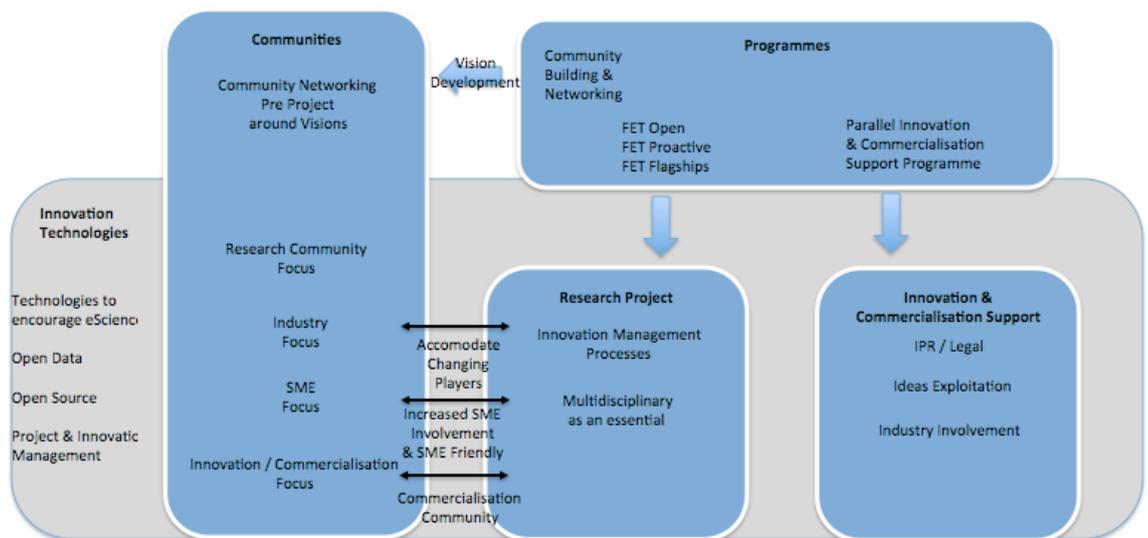
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Conclusions

The views from scientists suggest potential for important value adding changes to programme and project set-up. Many of the points addressed focus on the issue of collaboration with other scientists and collaboration of academia with industry. Researchers with a longer-term view emphasize the issue of involving the right mix of people. Also, the researchers emphasize the efforts and time required for building partnerships before calls for proposals.

The issue of raising awareness of innovation based funding options outwith the EC Horizon2020 programme was one that appeared to garner favour. There is a need for greater flexibility in project set-up and management for both the project and programme managers. Scientists formulate demand for novel ICT tools to support the collaborative processes including early stages in the identification of potential project and programme foci.

By considering the key points arising from the breakout group discussions and pulling these together into a holistic overview we can represent the main findings of the conference by the diagram below.



At a programme level some community building activity could facilitate the development of teams around a central 'vision' which is jointly developed by the EC, academia and industry.

Such networking could enable proactive team building in advance of calls and improve the quality and variety of teams carrying out research projects, minimise duplication and parallel activity and proactively accommodate innovation principles. Arrangements should be made to flexibly accommodate changing partners especially toward the mid/end of projects for SMEs and innovation stakeholders. Parallel programme to support innovation could allow non-core ideas to be developed as they arise by providing information and knowledge support and connecting to the innovation community.

Underpinning all activities is the potential for a series of open-based innovation technologies that facilitate knowledge exchange and optimise project and innovation management.