

FET-Open Workshop Report¹

Monday 2 February 2015, FWO – FNRS, rue d’Egmonstraat 5, 1000 Brussel-Bruxelles.

Main Workshop Objectives²

- ✓ Clarify the scope of the FET Open programme and the type of projects that are relevant for the scheme and to illustrate this by concrete examples;
- ✓ Increase the understanding of the participants on how to integrate the parts ‘Excellence’, ‘Impact’ and ‘Implementation’ into the proposal;
- ✓ Provide concrete advice to the participants on drafting certain subsections of the proposal form;
- ✓ Share best practices on dealing with ethics, dual use, gender analysis, risk management, project communication etc. in the proposal form.

Workshop implementation

- ✓ Using project ideas presented by researchers as a starting point for a brain-storming exercise;
- ✓ Digging into specific questions in the proposal form and to apply these to the project ideas;
- ✓ Linking the sections in the proposal form to the evaluation criteria.

Participants:

- ✓ Members of the Research Administrations of Belgian Universities with various scientific backgrounds - they are multipliers of information within their institutions and are the first contact persons for researchers interested in the FET Open programme.

Workshop implementation

- ✓ **Introduction:** PowerPoint presentation about the FET Open Programme under Horizon 2020, FET-specific evaluation criteria; scope and modalities of the FET Open Programme by Walter van De Velde (DG Connect) and Roumen Borissov (REA). → See ppt. in annex I.
- ✓ **Presentation of project ideas:** three researchers briefly presented their project idea for a FET Open project.

¹ This report was written by Freia Van Hee (FNRS), with contributions from Margo Baele (UGent), Véronique de Halleux (ULB), Dries Tiry (FWO) and Man Hei To (FWO).

² The workshop was organised by the Belgian (FET) NCPs: Wim Schreurs (FWO), Dries Tiry (FWO), Man Hei To (FWO) and Freia Van Hee (FNRS).

- ✓ **Interactive sessions:** development of the presented project ideas during sessions in small groups. The aspects ‘Impact’, ‘Scientific Excellence’ and ‘Implementation’ were discussed and looked at by the participants and suggestions were written down on a flipchart.
- ✓ **Final plenary session:** the researchers summed up the elements they found useful to enhance their proposal in terms of lessons learned and best practices.

Workshop contents

General introduction to FET Open

FET Open projects are **collaborative**, based on a(n) (ad-hoc) consortium of partners needed to achieve the expected impact. There is no pre-requisite to the composition of the consortium other than the rules for participation in H2020. Partners do not need to prove a longstanding collaboration and completely new collaborations are also possible regardless of country-balance.

The **scope** of FET Open is not thematic, but defined by the ‘6 FET gatekeepers’:

What the Work Programme states	What was discussed in the Workshop
<p>Long-term vision: the research proposed must address a new, original or radical long-term vision of technology-enabled possibilities that are far beyond the state of the art and currently not anticipated by technology roadmaps.</p>	<p>Long-term vision: this is the ultimate goal one wants to achieve or contribute to on the long-term (in the next 20 years), for example: establish brain-to-brain communication, launch a completely novel cancer-treatment, produce artificial body-parts in a lab for human face/limb transplants, restore a real-time sensory feeling in (hand) prosthesis, etc.</p>
<p>Breakthrough S&T target: research must target scientifically ambitious and technologically concrete breakthroughs that are arguably crucial steps towards achieving the long-term vision and that are plausibly attainable within the life-time of the proposed project.</p>	<p>Breakthrough S&T target: The long-term vision should be boiled down to concrete technological steps that one can take as a researcher in working towards the vision; the FET Open project is the translation of one concrete intermediary step, for example: toxin binding on receptor of cancer cells; tissue engineering for facial reconstruction, etc. In other words, a FET project should aim at solving a concrete problem (it is not blue-sky research).</p>
<p>Foundational: the breakthroughs that are envisaged must be foundational in the sense that they can establish a basis for a new line of technology not currently anticipated.</p>	<p>Foundational: opening up new research directions.</p>
<p>Novelty: the research proposed must find its plausibility in new ideas and concepts, rather than in the application or incremental refinement of existing ones.</p>	<p>Novelty: non-incremental research, (for example developing a radically new biomedical technology - a project aiming at a simple increase of bandwidth by 10% is probably not suitable for the scheme)</p>
<p>High-risk: the potential of a new technological direction depends on a whole range of factors that cannot be apprehended from a single disciplinary viewpoint. This inherent high-risk has to be countered by a strongly interdisciplinary research approach, where needed expanding well beyond the strictly technological realm.</p>	<p>High-risk: Risky proposals can be submitted but the risks should be assessed. The risks that are meant here are S&T risks and not project management risks etc. The risk should be supported by a plausible argumentation that the project can succeed.</p>

<p>Interdisciplinary: the proposed collaborations must be interdisciplinary in the sense that they go beyond current mainstream collaboration configurations in joint science- and technology research, and that they aim to advance different scientific and technological disciplines together and in synergy towards a breakthrough.</p>	<p>Interdisciplinary:</p> <p>The most important aspect is that the project should reflect joint work prompting the different teams to interact. A FET project is expected to explore ways of working and learning together.</p> <ul style="list-style-type: none"> ✓ Synergies between disciplines are sought for, going beyond multidisciplinary teams of the 'usual' players. ✓ The drafting of the proposal should reflect this: involving all partners and disciplines in the writing process. ✓ Mono-disciplinary proposals are not excluded per se, but all sub-disciplines needed to achieve the objectives should be included, involving both theory and experimental research for example.
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The example was given during the workshop of a researcher that had submitted his brilliant idea to a national funding agency and was refused because of the high- risk nature of his project; he then considered submitting it to FET Open.

Some practical points:

- ✓ FET Open calls are highly competitive, but the proposal is quite short to write (15 pages for the S&T part including impact and implementation);
- ✓ The writing process is found to be an enriching learning experience.
- ✓ Re-submission of proposals is possible.
- ✓ The average requested budget of the FET Open proposals was 3.2 M EUR in the last call (cut off Sept 2014) with an average of 5 to 8 partners.
- ✓ NB! Excess of page length is a reason for exclusion (non-eligibility).
- ✓ The evaluation takes place in two steps: a remote evaluation by 4 experts consolidated by a panel discussion with other designated experts in Brussels to establish final scores and a ranking of the proposals.

How to fill out subsections of the proposal form

Excellence

✓ **Relation to the Work Programme:**

- In order to fill out the section 'Relation to the Work Programme', you should refer to the 6 FET gatekeepers (cfr. supra).

✓ **Interdisciplinary:**

- Describe in the proposal how the different disciplines will learn from each other in addition to being at the service of one another, in this sense, a synergistic approach should be aimed at. Unusual collaborations are welcome.
- One of the examples discussed at the workshop was a project that involved not only exact and natural sciences (biomedical sciences, material sciences), but also social sciences and humanities (anthropology, philosophy/ethics). It was the first time for the researcher to involve all these disciplines in one project.

✓ **Research methods:**

- Where relevant, you should describe how sex and/or gender analysis is taken into account in the project's content. Think about this carefully, because research topics that do seemingly have no link with sex and gender on first sight may have some, for example in the variables you include in pre-clinical trials etc.

The coordinator of one of the projects thought there may be gendered implications for his research project, but did not have the expertise to dig into this further, nor did his partners. He was then advised to subcontract a gender- expert that could provide training to the project teams as this is an eligible cost under H2020.

Impact

- ✓ When describing the **societal and technological impact**, be concise and write the non-obvious, do not give the evaluators the feeling they could have thought of the impact themselves. General statements such as 'improvement of well-being for patients' or 'enhanced integration of physically deformed patients into society' are to be avoided. The concrete impact of the project on the shorter-term is important. Focus on impact on technology and society, less on science. Scientific papers are an essential outcome of a scientific project but the emphasis when describing the impact of the project should be on technology. The results should be spread to potential users. Explain how project participants will be trained (summer schools, conferences, etc.), be specific and original.

- ✓ The impact on **technological breakthroughs** is also important, think for example of the transferability of your proposed technology to other applications/domains.
- ✓ **Empowerment of new actors** towards technological leadership: FET Open is not only aiming at new ideas but also at involving new actors, with the potential of becoming possible leaders. If your proposal contains new actors, or involves researchers from the categories: women, young researchers and high-tech SMEs, this is something you should highlight. Young researchers can and should take responsibilities in the project. Your project can also aim at developing a spin-off company.
- ✓ The **added value** of a FET Open project for academia is quite obvious, but less for participating SMEs, and this should be highlighted.

Implementation

- ✓ **Project objectives:** should be clear and measurable. One way to define your objectives could be to start with an exercise thinking of how you want to implement the expected impact of your project. A general advice that is often given is that objectives should be SMART (specific, measurable, attainable, realistic and timely).
- ✓ **Project tasks:** what concrete steps are needed, think short-term, what will you do tomorrow?
- ✓ The structure of your **work packages** could be around the main objectives and/or developments. The interrelation between work packages should be highlighted, a milestone could be seen as a point where work packages come together. A simple graphic can help to illustrate your implementation structure. The management should be kept lean and simple, since FET Open projects are small to medium-size projects.
- ✓ Describe also **how the partners of the consortium will work together:** (virtual) meetings, exchange of PhD students or staff exchange, online tools (forum, intranet, etc.), organise collective readings, etc.
- ✓ **Deliverables:** do not propose too many deliverables (e.g. one case known with 24 deliverables), but keep your proposal lean, only propose what you want to deliver.
- ✓ **Risk management:** (only S&T risks): be convincing in your arguments that the project is feasible/plausible. As contingency measures, you can think of parallel concepts, if one doesn't work, there should be an alternative.
- ✓ All consortium partners should have a clear and substantial **role in the research project**.
- ✓ **Communication:** think also of how to engage with the general public, going beyond your usual stakeholders. You could also involve the Communication Department of your university; work with the Science Communication teams who can help with vulgarisation or addressing the general public. → See also FET guidelines for Project Communication in annex II.

- ✓ If you include an **SME** into your proposal, the SME should be a key partner (no alibi-SME) and the project should play a role in the development of that SME. One way to put this into practice would be to design the project around the SME. If the SME is merely a service provider, it is better to subcontract it. In this respect, the Work Programme states:

“Supporting a large set of early stage, high risk visionary science and technology collaborative research projects is necessary for the successful exploration of new foundations for radically new future technologies. Nurturing fragile ideas requires an agile, risk-friendly and highly interdisciplinary research approach, expanding well beyond the strictly technological disciplines. Recognising and stimulating the driving role of new high-potential actors in research and innovation, such as women, young researchers and **high-tech SMEs**, is also important for nurturing the scientific and industrial leaders of the future.”

Concretely, in case of equal score of 2 FET projects, the presence of the SME could be an advantage. An adequate **gender balance** among the personnel named in the proposal also comes into play as a ranking factor to prioritise ex aequo proposals.

- ✓ **Ethics:** this section in the proposal form is not part of the scientific evaluation and the page limit does not apply. Only if your project is retained after scientific evaluation it will be submitted to an ethical review.

One of the researchers anticipated ethical issues for the implementation of his project including stem cell research. He was then advised to indicate in the 'Ethics' section of the proposal form the regulatory framework that applies, and as such demonstrate that he was well aware of all rules and regulations. He was also advised to notify his institution's ethics committee of the submission of his proposal.

- ✓ **Security and dual use:** this section in the proposal form is not part of the scientific evaluation. If your research is in the area of robotics for example, the issue of military use of the technology could be raised. Another point to note here is the choice of your consortium partners. If you choose to collaborate with SMEs or institutes that also develop technology for military use, the risk of dual use of your research results is of course higher. Therefore you should carefully select your consortium partners and build in targeted measures to circumvent dual use.

During the workshop, a researcher in robotics explained that his way to deal with the potential dual use of robotics technology was to actively engage in the societal debate around robots by writing articles, blogs and opinion pieces to inform the general public and contribute to the debate and as such demonstrating that he was aware of the responsibility that comes with developing such technologies.

Disclaimer

This report was prepared as an account of the FET Open workshop that took place on 2 February 2015 in Brussels. The advice and information in the report do not replace the guidelines given in the H2020 FET Work Programme 2014-2015 and its General Annexes, available at: <http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/11052-fetopen-ria-2014-2015.html#tab2>

Annexes

- FET Open Programme under Horizon 2020

http://www.ncp.fnrs.be/files/FET_Open_Programme_under_Horizon_2020.pdf

- FET Guidelines for Project Communication

http://www.ncp.fnrs.be/files/FET_Guidelines_for_Project_Communication.pdf