

Position Paper – Horizon 2020 Interim Review

Improving Impact in Horizon 2020

Horizon 2020 has given greater prominence to the impact of research funding than previous Framework Programmes, but improvements remain possible for increasing exploitation of publicly funded research results. It is only if exploitation is fully supported that societal challenges can be answered and Europe's 2020 Strategy can be achieved.

Recommendations

- Better define Innovation Actions with industry and society, targeting higher TRL technologies to produce directly exploitable results;
- Make call topics for Research & Innovation Actions broader to encourage bottom-up, innovative applications;
- Deliver more detailed evaluation reports, to help consortiums to understand the weaknesses of their proposals and prepare for re-submission;
- Support the involvement of dedicated exploitation experts in projects, and insist on robust exploitation activities;
- Provide 100% funding for Management, Exploitation, Communication and Dissemination activities – activities that do not create value for those who perform them;
- Revert to actual cost overheads for research centres rather than a flat rate;
- Give greater guidance and training to SME Instrument evaluators, to ensure that evaluations are consistent;
- Reinstate a fully-fledged Eco-innovation Programme to support new environmental products and services.

Project Proposals and Selection

The most effective way to improve the impact of public funding is to ensure that the right projects are selected in the first place. As far as possible, the Commission should ensure that the topics selected for calls are in line with industry and societal requirements, that evaluation criteria are robustly and uniformly applied, and that evaluations give clear feedback to applicants on why they have not been successful, to encourage resubmission and avoid the loss of quality proposals.

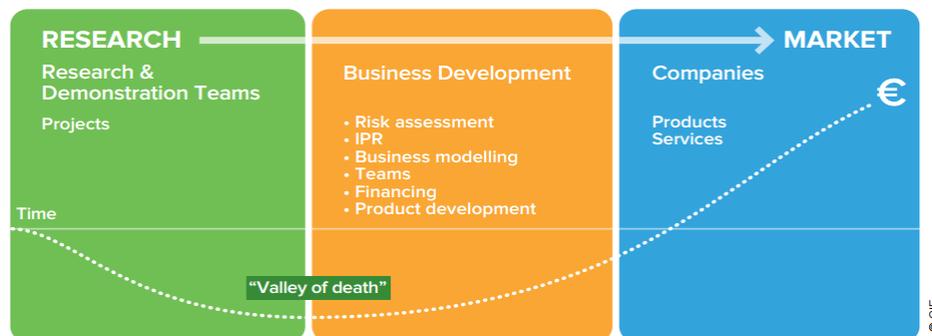
It is currently not clear how TRLs are taken into account when defining if a project is an Innovation Action or a Research and Innovation Action. The scope of Innovation Action call topics should be defined with greater involvement from industry, ensuring that the results that arise meet their needs and can be directly exploited. This would require greater elaboration of expected outcomes from projects, working on higher Technology Readiness Levels (TRLs) and accounting for other readiness levels (manufacturing, system integration, etc.). Call topics should be more precise,

defining what exactly should be expected at the end of the project. Considering co-financing requirements, it should be clear to businesses and SMEs exactly what is expected from the project at the application phase. Research and Innovation actions, for lower TRLs, are less focused on close-to-market technologies, and these should have fewer call topics, but ones which are also wider in scope and more open, in order to embrace innovative bottom-up ideas.

Oversubscription to Horizon 2020 has been an ongoing problem, with low success rates proving to deter organisations from submitting proposals. The amount of work required for a project application means that smaller organisations can easily be put off from applying a second time after a project has been unsuccessful. Evaluators should be required to explain clearly what they consider to be the weaknesses of the proposal, in such a way as to enable the proposers to efficiently resubmit them. The removal of the negotiation phase makes this all the more important as otherwise strong proposals can be failed based on single misunderstandings from the call text.

Exploitation Support

Researchers often lack the expertise required to communicate their results in a manner that is understandable to non-technical experts, including businesses, investors and the public. Additionally, they do not have the necessary skillset for planning business strategies to overcome the ‘Valley of Death’, that is, the period after research and demonstration funding is spent, and before income is generated by first sales for new products and services.



Too often, the results generated by European research are developed into products or services outside of Europe, due to a failure to focus on commercial end-use. To this end, the quality of exploitation activities need to be given greater weight when proposals are being assessed. To improve the quality of the exploitation, each R&D project is obliged to compose an exploitation plan. However, this is often left until the last minute and given little consideration by project stakeholders. R&D projects should instead be required to have a dedicated exploitation partner, able to identify, analyse, value and promote the exploitable results generated by the project.

Exploitation experts should consider all aspects of research exploitation, as it is not only commercially exploitable results that arise from research. Exploitable results can include those with commercialisation potential, those which can lead to further R&D projects, those with implications to

be communicated to society or policy makers, and other results, such as methodologies and indicators.

Funding Rates

Horizon 2020 aimed for 'simplification', however not all simplification measures have been successful. Changes to funding rates are one such example, in particular, the removal of 100% funding for 'other activities', such as dissemination, exploitation and training. The follow-up to Horizon 2020 should ensure that such activities return to being 100% funded.

The vital tasks of preparing exploitation plans, business modelling, communicating R&D results to policy, market and society, and training, do not create value for those who perform them, and these activities must therefore be 100% reimbursed (covering real overhead costs) to ensure quality activities that can lead to the uptake of results. We are already seeing reluctance from some of our member organisations to engage in such activities in Horizon 2020 research projects, as they do so at a loss, generating no exploitable knowledge or results for themselves. The resistance of exploitation professionals to get involved within EU-funded research projects can only hamper efforts to increase take-up of research results.

The same principle applies to Management activities, where there are high expectations for administrative and financial management, which are work-intensive tasks. These often require private companies to be involved, but in the case of Innovation Actions the 70% funding is not appropriate.

Other challenges encountered by our member organisations include further damaging simplification to funding rates. For research centres, the overhead rate of 25% is widely inadequate, given the high-cost machinery required for the operation of technical laboratories. As such, we recommend a return to an actual cost model. For SMEs, the SME owners' rate, based on Marie Curie Rates, are too low for Horizon 2020 activities, discouraging SME involvement in projects. Many SME owners are very experienced, and current rates do not take account of this. Although the rates used may be acceptable for start-ups, there should be higher rates for SMEs that they have existed for some years. SME owners should not have their maximum hourly income capped at such a low rate, which take no account of their responsibilities and experience levels.

SME Instrument

Since early on in discussions about the establishment of Horizon 2020, Greenovate! Europe argued for a dedicated SME Instrument to support SMEs with innovative ideas, and with our members we have played a fundamental role in establishing the evaluation criteria for the instrument. Whilst the instrument is greatly welcomed, there is scope for its improvement.

Through supporting SME Instrument applications, we have found that the scoring evaluation of proposals is far from optimal, with evaluators giving wildly different scores to the same proposal. When a proposal has been modified and resubmitted to remove weaknesses identified by evaluation, sometimes the revised application has been marked lower than the first version of the application, suggesting an inconsistency in marking. We would propose that text in the evaluation forms should be revised and adjusted, to form a clearer guideline for evaluators. Additionally, there should be a formal

training, or certification, of evaluators, to ensure consistency in evaluation, and more time should be allowed for Phase 2 evaluations.

A particular issue of concern is the removal of outlying scores from evaluations. If an evaluator considers an application to be particularly excellent, or especially poor, whilst other evaluators disagree, then the extreme score is simply removed from the evaluation. It could be that the evaluator in question has spotted something that the others have not. Removing outlying scores does not contribute to selecting the best proposal. We propose that such outlying scores should not be removed, and that a better way of ensuring the most innovative projects are funded would be to increase the cut-off level for Phase 2 from 12 to 13.

Eco-Innovation Programme

Given the European Union's dedication to the emergence of a sustainable, green economy, it is disappointing that the Eco-Innovation programme, administered under the Entrepreneurship and Innovation Programme (EIP) of the Competitiveness and Innovation Programme (CIP) was discontinued. The Eco-Innovation Programme was a very popular and very successful programme, with higher SME involvement than other funding programmes.

A report from early 2016 by ICF and VITO has shown that, on average, each eco-innovation project funded between 2008 and 2011 had a 357% leverage factor, created €2.7 million of additional business revenues two years after project closure, and created eight full-time equivalent jobs.¹ Although COSME, and the SME Instrument, are intended to now provide SME support, specific support for eco-innovation is sorely missing. A return to fully fledged eco-innovation programme could help to secure Europe's future growth in environmental products and services.

Greenovate! Europe is a unique Europe-wide eco-innovation consultancy, covering all parts of the innovation value chain. Together we hold the expertise required for technology and service developers to successfully transfer research to market, and for policy-makers to create an environment in which eco-innovative business can thrive. To this end, we bring together over 500 experienced innovation advisers and 2,000 technical experts from 14 countries, providing all of the expertise needed to support the innovation process.

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¹ Analysis of the results achieved by CIP Eco-innovation market replication projects (EACI/ECO/2013/001)