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Explanatory Notes on Open Innovation Test Beds

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5ii Nanotechnologies, Advanced Materials, Biotechnology and
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HISTORY OF CHANGES

Version	Publication Date	Change	Page
1.0	27.10.2017	▪ Initial version	
1.1	22.11.2017	▪ Updated question #18	8
2.0	12.12.2017	▪ Updated questions #3 and #10 ▪ New questions 19 to 25	1 / 4 6-8

1. What are the Open Innovation Test Beds for material upscaling, characterisation, modelling, and safety?

Open Innovation Test Beds are entities, established in at least three Member States or Associated Countries, offering access to physical facilities, capabilities and services required for the development, testing and upscaling of nanotechnology and advanced materials in industrial environments. The objective of the Open Innovation Test Beds is to bring nanotechnologies and advanced materials within the reach of companies and users in order to advance from validation in a laboratory (TRL 4) to prototypes in industrial environments (TRL 7).

Open Innovation Test Beds will upgrade existing or support the setting of new public and private test beds, pilot lines, and demonstrators to develop, test and upscale nanotechnologies and advanced materials for new innovative products and services in some specific domains.

They will be typically run by for profit organisations. Users could be industrial, including SMEs, as well as innovators and start-ups.

2. How many Open Innovation Test Beds will be funded and in which domains?

The call is expected to create about 20 Open Innovation Test Beds for materials development and upscaling in six technology domains:

- Lightweight nano-enabled multifunctional materials and components
- Safety Testing of Medical Technologies for Health
- Nano-enabled surfaces and membranes
- Bio-based nano-materials and solutions
- Functional materials for building envelopes
- Nano-pharmaceuticals production

Four Open Innovation Test Beds for materials characterisation and four Open Innovation Test Beds for modelling will be also funded, in addition to the already existing NanoSafety Platform. These are expected to contribute to setting the foundation for a European ecosystem.

3. Which activities of Open Innovation Test Beds will be eligible for funding?

The Open Innovation Test Beds will cover all activities from the prototyping to industrial production, and especially the testing in an industrial environment, the validation of the characteristics of the materials and the control of the respect of legal and regulatory constraints.

The EU funding will mainly support the above described upscaling and engineering process, support is available also for a number of demonstration cases and dissemination activities to showcase capabilities and services to ensure sustainability. It's up to the consortium to identify the allocation of resources needed to ensure the best possible delivery of the call requirements and show the likelihood for progress towards sustainability.

Eligible costs could notably include:

- Acquisition, adaptation, installation and calibration of upscaling and testing equipment

- Demonstration cases
- Definition of access conditions to facilities and services
- Networking activities between Open Innovation Test Beds and similar initiatives
- Communication and dissemination activities
- Design and Development of OITB Services
 - Technology expertise
 - Legal / regulatory expertise related to materials/products tested
 - Modelling tasks
 - Characterisation tasks
 - Facilitation of access to funding for test beds' customers

The following costs are not eligible:

- Building costs
- Research costs, including acquisition of equipment, if not used for upscaling materials as described in the Open Innovation Test Beds topics
- Costs already paid by a national, regional or European subsidy

4. What is the European added value of Open Innovation Test Beds?

Open Innovation Test Beds, besides being collaborative projects requiring participation from at least 3 Member States or Associated Countries, have the further European Added value of being open and accessible to any interested party from the EU or outside the EU.

On top of that, Open Innovation Test Beds will stimulate collaboration by pooling resources and existing knowledge at the EU level while supporting all kinds of users independently from their geographical location, and thus contributing to the creation of a more open and connected European innovation ecosystem.

Open Innovation Test Beds will also set up networks amongst themselves, to offer additional services, to allow experiments and knowledge to be shared, and to provide users with a single entry point to their capabilities and services in materials development. They are expected to form European networks of competences along the entire value chain, and match the needs of industry by providing users with easy access to facilities, at different locations as needed. These networks should reach out to users across different regions of Europe. This is especially important to European regions that are building up or improving their capacities.

The European added value of the Open Innovation Test Beds can be summarised as follow:

- Single entry point for any user to materials facilities and services across Europe
- Broad access to materials development facilities and services across Europe
- Accelerated maturity of products for a faster market entry
- Reduced costs for accelerating materials production for both industry and users
- Harmonised conditions for testing and procedures for materials upscaling, characterisation and modelling to improve internal market accessibility
- Increased return on investment in materials research
- Early stage access to intelligence on EU regulations making the materials development process more efficient
- Easier marketability of products in Europe (e.g. non-European products to be tested in accordance to EU regulations to enter the market)

5. How will Open Innovation Test Beds become sustainable once EU funding ends?

Proposals should demonstrate that the test beds will reach out and deliver services to users, including SMEs, in a sustainable way and based on market analysis, a business plan and how to attract further investments. The consortium will have to provide own resources from the beginning and pay attention to adjust their services to reach a sufficient number of potential users. Proposals should include an exploitation strategy, together with dissemination actions, to ensure that potential customers will know about the test beds existence, services, and access conditions. After the end of EU funding, the Test Beds will have to operate autonomously on the revenues of the services that they provide.

6. Who are the potential applicants?

Proposals can be submitted by a consortium, which is free to involve any relevant partner from Members States and Associated Countries, provided that it respects Horizon 2020 rules and the conditions specified in the Work Programme. This means that private entities can apply, as well as Research and Technology Organisations, Research Centres, or Higher Education Establishments. While current pilot lines can apply, test beds' funding is not restricted to them.

7. What does open access mean?

Open access in this context means that any interested party, from Europe and globally, can access test beds' facilities and services independently whether they are part of the consortium or not.

It is critical that any interested party from the EU or Associated Countries can access the test beds at fair conditions and pricing and with transparent and mutual obligations with regards to, for instance, security, safety and intellectual property rights.

Open Innovation Test Beds should set a framework for the definition of the access conditions to their facilities and services respecting transparency and fair access conditions.

8. What will "single entry point" mean for the users?

As test beds aim at providing a full service along all steps of the technological development of a physical innovation, all needed expertise has to be provided to users through a single entry point to the OITB. If necessary, each test bed must acquire complementary services from other entities, for instance on characterisation and or modelling, in order to offer a full service package to users.

9. Will SMEs outside the project consortium have access to these test beds?

Yes, SMEs will have access the test beds at the same conditions as any other entity from the EU or Associated Countries. For SMEs as core targeted user group, the test beds will offer a range of services which are of specific interest to them, e.g. regulatory support and the development of innovative materials that SMEs frequently cannot afford on their own. Proposals should demonstrate a solid and measurable outreach strategy towards SMEs and innovators outside the consortium.

10. How do the test beds interact with other test beds funded under the same topic and with other similar initiatives?

The test beds will receive a part of the EU funding for launching cooperation among themselves and with the other existing OITBs, with an aim to make the cooperation systematic and sustainable at the end of the project. Moreover, it will be in the test beds' interest to cooperate in a regular way with other entities to exchange services, as well as the outcomes of their experience in providing services.

Each proposal should include an amount for coordination and networking with other similar test beds as well as with other innovation eco-systems in the EU, whether European, national or regional.

A 2017 NMBP call Coordination and Support Action (CSA) project EPPN has started to map existing services on upscaling of materials across the EU and Associated Countries. This mapping exercise is involving Member States, Candidate Countries and Associated Countries, e.g. through the support of the High Level Group on Nanotechnologies and Advanced Materials (HLG). <http://eppn.eu/>.

The proposers will have to specify the way they plan their cooperation with other OITBs (existing or under establishment). Therefore, this element will be part of the overall evaluation. This will be considered an element of the sustainability analysis.

11. What is the link / synergy with regional funding?

Open Innovation Test Beds should become an element of an overall eco-system on materials upscaling, which already contains some regional facilities, and therefore should cooperate together. The sustainability analysis and the business study which are part of the proposals will ensure there won't be duplication of facilities and activities at the regional level.

When funding facilities and services through Open Innovation Test Beds, the principle of no double funding will apply - <https://ec.europa.eu/research/regions/index.cfm?pg=synergies>

If a Member State or a region wishes to support some entities with the costs for acceding to the Open Innovation Test Beds, this is possible within the remit of the EU and national rules on state aid.

12. What is the link/difference with the Digital Innovation Hubs (DIH)?

Digital Innovation Hubs focus primarily on helping SMEs to master their digital transformation and advice on the choice of technologies for digitisation.

Open Innovation Test Beds are complementary to Digital Innovation Hubs as they concentrate on the upscaling, demonstration, characterisation and modelling of advanced materials, including nanomaterials.

Open Innovation Test Beds could acquire, when there is the need, digital services on a specific technology development. Synergies based on complementarities are possible.

13. Why there are no cascading grants for test beds?

Digital Innovation Hubs operate with cascading grants but their scope is larger than the Open Innovation Test Beds. The cascading grant system ensures that the Digital Innovation Hubs have a stable range of users. Digital Innovation Hubs are technology neutral and provide their users with a neutral opinion on which technology to use. Moreover, cascading grants have to be managed by an entity having a large financial capacity to bear the subsequent financial risk.

Open Innovation Test Beds work on a different scope and a more downstream segment of the value chain, where users of Test Beds will find an immediate benefit, without needing a system of cascading grants.

It is expected, as it is currently the case for the existing Pilot Lines, to have mainly private entities managing the Open Innovation Test Beds.

14. How do the INNO SUP actions relate to the Open Innovation Test Beds?

The INNO-SUP topics (under Horizon 2020) will fund mainly brokerage actions, matchmaking initiatives between innovative SMEs and large entities, but it doesn't fund the development process of the innovation in materials. The new INNO-SUP from 2017 calls foresees a similar approach as digital innovation hubs (DIH), however focusing on manufacturing techniques, therefore a different scope than the Open Innovation Test Beds.

Nevertheless, OITBs, DIH, INNO SUP funded entities, have links and need to ensure coordination as well as cooperation in some domains, as well as a coordination with national and regional structures.

15. What is the link with the Knowledge and Innovation Communities (KICs)?

KICs are partnerships that bring together business, research centres and universities to develop innovative products and services, start new companies and train the next generation of entrepreneurs. Start-ups set up following a KIC partnership could use the Open Innovation Test Beds to upscale their innovation in materials towards reaching the market.

16. Is there a link between the Horizon 2020 programme on Research Infrastructures and the Open Innovation Test Beds?

Horizon 2020 Research Infrastructures programme deals with facilities, resources and services that are used by the research communities to conduct research and foster innovation in their fields. To ensure the implementation and operation of the ESFRI and other world class research infrastructures, including the development of regional partner facilities; integration of and access to national research infrastructures.

Open Innovation Test Beds focus on testing and upscaling equipment as well as modelling, characterisation, regulatory and technology advice for innovative technology products which have already gone through the research process and are at the further step of upscaling. In some specific cases, an Open Innovation Test Bed may acquire a service from an Research Infrastructure for a specific product; however Research Infrastructures cannot be seen as Open Innovation Test Beds.

17. Can Open Innovation Test Beds receive clients against payment; during and after the grant period?

Yes, this is part of the OITBs sustainability model. The business model of the future OITBs should be based on establishing an upscaling and technology transfer service and receiving payments for these services at fair and reasonable conditions.

This provision of such services may start before the OITB grant has finished.

Whereas the development of services and access conditions are part of the grant, the providing of such services falls outside the scope of the OITB grant. Neither the associated costs, nor the income should be taken into account under the OITB grant accounting.

18. How should demonstration activities be defined within the grant?

All project activities, including demonstrations must be planned and budget defined ahead of submission of the proposal. Demonstrations will typically be addressing all major value chains and major markets where the upscaled technology will have importance. The call specifically identifies the technology domain the OITB will be looking at.

Proposals should demonstrate that the test beds will reach out and deliver services to users, including SMEs, within the major sectors and application areas as identified based on a technology and market analysis. Proposals should further include an exploitation strategy, together with dissemination actions, to ensure that potential customers will know about the test beds existence, services, and access conditions.

19. Do Open Innovation Test Beds need to define/create a legal entity?

The OITB must provide access to facilities and services through one single entry point already during the EU grant. The legal structure is up to the partners involved; however, the consortium needs to come up with a convincing structure that show its capacity to work together in order to provide access to services and facilities through a single entry point to all potential users/clients of the OITBs, as well as ensure sustainability during the implementation of the grant.

20. How will the Open Innovation Test Beds demonstrate their impact and sustainability?

Sustainability is part of the call and OITBs have to show sustainability before the end of the project. By the end of the project OITBs should demonstrate the likelihood of an additional turnover of at least 4 times the requested EU funding, within 5 years of the end of the grant. In every periodical review, OITBs have to show progress towards sustainability. OITBs have to demonstrate their ability to attract, and interact with, a community of interest from regional to European level.

21. How should the Open Innovation Test Beds turnover be demonstrated?

As stated in the call introduction, proposals should include a business case and exploitation strategy, as outlined in the LEIT Introduction in this Work Programme. In particular, they should demonstrate the likelihood of an additional turnover of at least 4 times the requested EU funding, within 5 years after the end of the grant.

It means that in the 5th year after the end of the grant, the cumulative turnover should represent 4 times the original grant.

This requirement only applies to the Open Innovation Test Beds and not to their clients.

22. When could Open Innovation Test Beds start providing open, commercial access to their facilities and services?

Open access in this context means that any interested party, from Europe and globally, can access test beds' facilities and services independently whether they are part of the consortium or not.

The business model of the future OITBs should be based on establishing an upscaling and technology transfer service and receiving payments for these services at fair and reasonable conditions. This provision of such services may start before the OITB grant has finished. Whereas the development of services and access conditions are part of the grant, the providing of such services falls outside the scope of the OITB grant. Neither the associated costs, nor the income should be taken into account under the OITB grant accounting.

Open Innovation Test Bed proposals should set a framework for the definition of the access conditions to their facilities and services respecting transparency and fair access.

23. How should demonstrations be planned within the Open Innovation Test Beds scope?

Demonstration cases may be planned in two ways:

1. The demo case is done through a partner of the consortium
2. The demo case is done through an interested party identified by the consortium through an open call for expression of interest

Only in the above two scenarios the costs of the demonstration are eligible.

All project activities, including demonstrations, must be planned and budget defined ahead of submission of the proposal. Demonstrations will typically be addressing all major value chains and major markets where the upscaled technology will have importance.

24. Under the call H2020-NMBP-TO-IND-2018-2020, should Open Innovation Test Beds for characterisation and modelling need to provide a business case and exploitation strategy?

The introduction of the call H2020-NMBP-TO-IND-2018-2020 states that “Proposals for Research and Innovation Actions and Innovation Actions submitted under this call should include a business case and exploitation strategy, as outlined in the Introduction to the LEIT part of this Work Programme except for topics under chapters 1.2 and 1.3”

Nevertheless, proposals for characterisation and modelling test beds submitted under topics NMBP-07-2018 and NMBP-11-2020 must still address the expectations for open innovation test beds, as well as the expected impacts of the corresponding topics. As stated in the call text (page 10): “They will be expected to become sustainable, by making their facilities and services accessible to industry at fair costs and conditions, and to demonstrate their ability to attract, and interact with, a community of users, investors and other stakeholders from regional to European level”.

25. Up to what stage should clinical trials of medical products go: monocentric or multicentric trials?

The answer would be determined by the total EU contribution per project, which would aim to obtain the best value for money.

26. Should the OITB clients only be start-ups or SMEs or also large industrial groups ? Is it simply based on pricing policy?

There is no condition on the size of the users. Users could be any industrial organisation, including SMEs, innovators and start-ups. T. OITBs should set a framework for the definition of the access conditions to their facilities and services respecting transparency and fair access.

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