

THE STAGES IN THE PROCESS OF IDENTIFYING A SUCCESSFUL PROJECT IDEA FOR HORIZON 2020 - THEORETICAL BACKGROUND

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Abstract:

The purpose of this paper is to discuss and provide overviews of books, scholarly articles and other resources related to Horizon 2020, identifying a successful project idea for Horizon 2020. Method of description and compilation were used. Paper presents the stages in the process of identifying a successful project idea for Horizon 2020. The paper's objective is to present summaries and descriptions of the works studied while researching the topic and also to provide their critical evaluation. The paper is written as some kind of a guideline what has to be considered while thinking of applying a Horizon 2020 project. Horizon 2020 is the biggest European Union (EU) Research and Innovation financial programme ever with almost €80 billion funds available for the period of seven years (2014 to 2020). Participation in the programme is open to different types of organizations and individuals from the European Union Member States or countries associated with the programme.

Keywords: European Union (EU), EU funds, grant writing, Horizon 2020, project idea

1. IDENTIFYING A SUCCESSFUL PROJECT IDEA FOR HORIZON 2020

Every project starts with an idea. Given that ideas are vital for innovation, it would be helpful to understand what an idea is. Dictionary.com defines an idea as “any conception existing in the mind as a result of mental understanding, awareness, or activity”. American Heritage Dictionary states it as, “something, such as a thought or conception, which potentially or actually exists in the mind as a product of mental activity.” Neither of the above definitions shed much light on what an idea is. Let us, therefore, turn to Jack Foster’s discussion of the concept: James Wood Young (2010, p. 10), author of the book *A Technique for Producing Ideas*, said “an idea is nothing more nor less than a new combination of elements”.

Robert Frost wrote: “What is an idea? If you remember only one thing I’ve said, remember that an idea is a feat of association” (Foster, 1996, p. 48). Jacques Hadamard, a famous French mathematician who made major contributions in number theory, complex function theory and proved chaotic theory, noted: “invention or discovery, be it in mathematics or anywhere else, takes place by combining ideas” (Foster, 1996, p. 49). The above definitions all recognize new ideas as a new combination of elements of other people’s ideas. If we combine the dictionary definitions and the definitions provided by the famous researchers (discussed above), we can deduct that ideas arise from people (not machines or computers) and are a result of mental activities.

The objective of the innovation process is to develop new products and services, or advance operations, brand, customer’s experience, supply chain operation, and so on. Every one of the enumerated concepts starts with an idea. Ideas are therefore an essential part of the innovation process. Vandenbosch, et. al. stated “each innovation begins with an idea” (2006, p. 259), Jack Foster believes “new ideas are the wheel of progress” (1996, p. 3), and Linda Rochford wrote “ideas are the raw material for product development” (1991, p. 290). Common sense suggests that all of the modern products and services were once merely an idea in somebody’s mind. Steven Covey (2004) calls an idea the “first act of creation” where the second act of creation is the deed of putting an idea into a physical form.

“Obviously, ideas are vital in the innovation process [and] the large amount of books, peer reviewed articles, magazine articles, and private publications on ‘how to generate ideas’ illustrate the pressing need and growing importance of ideas in the innovation process.” (Glassman, 2009, p. 11)

Innovation has since always been part of human’s attempt to adapt to his environment and modify it. Whether we look at the wheel, “the printing press, the light bulb, penicillin, the transistor, and every other great human invention, discovery, or social advance” they all began with a simple idea – how to do something better (Foster, 1996, p. 24). “Yet not all ideas are created equal. Museums, history books, and TV shows all celebrate humanity’s greatest ideas, and yet most people seem to think great ideas are somewhat rare. However, if one looks around and observes the products and services they interact with on a daily basis, one can conclude there have been many great ideas and perhaps great ideas are not as rare as one might think” (Glassman, 2009, p. 10).

What is a good idea for EU funding? One may decide whether a project idea is suitable for the EU funding only after having a clear understanding of the founding source or call requirements. A successful project idea is aligned with the applicant’s business strategy, work programme, call objectives and policies. The EU aims to reward projects that deliver innovation, have a European dimension and advance the goals set forth in the Horizon 2020 programme (these goals are described in the background documents or annexes to calls in more detail). The potential Horizon 2020 project idea formation therefore needs to be performed only after being well acquainted with the documents. With regard to the previously discussed definition of how new ideas are formed (by combining old elements), it might also be useful to study the previously funded projects. The following chapters thus discuss how to study the background documents, how to make use of the already funded projects, how to brainstorm on the basis of these two inputs, approve and reject ideas, how to preserve them, match them with the EU calls and how to form a one-page idea outline.

1.1 Starting from the politics

The potential applicant’s starting point, having identified a suitable funding source to develop his or her idea, is to read carefully the relevant background documentation for the funding scheme on

programme objectives, objectives of the call and the Guide for Applicants. And the potential applicant's philosophy for success at this stage is to know how to interpret those words – it is important to get inside the minds of the programme developers to understand what they want the applicants to achieve with the EU money. It is advisable to carefully study all these documents and highlight the key words, phrases and sentences that the grant writer will need to respond to ensure that the project proposal convinces the evaluators. Dr. Marc Hoffmann, a scientist working on, writing and evaluating proposals, believes that an effective way to produce quality project ideas is to study the background documents to calls (i.e. annexes, which cover the EU policies). By reading the annexes to the calls rather than only reading the calls themselves, Dr. Hoffmann suggests, one can develop ideas which potentially match Horizon 2020 calls and one's personal research agenda. According to him, this method also works because the grant writer can anticipate on future calls which are based on the background documents. (2015, p.32) Additionally National Contact Points should have access to EU policy documents on the development of the research priorities. It is advisable for the potential applicants to obtain access to these and read through them. They will help to put the calls in the right perspective and give additional ideas.

1.2 Profiting from the already funded projects

Potential applicants can also benefit from earlier ideas. The EU research programmes and publications are intended for the use by all EU citizens. All earlier EU funded research is brought together in CORDIS, an online searchable database. Cordis is the Commission's primary public portal and repository to disseminate data on all EU-funded projects together with their results. The Cordis website and repository offer all public information held by the European Commission (this includes project factsheets, publishable reports and deliverables); there is also editorial content which supports communication and exploitation (news, success stories, events, magazines, multilingual "results in brief" for the broader public) as well as links to external sources (e.g. open access publications and websites). CORDIS portal is managed by the Publications Office of the European Union, on behalf of the European Commission's research Directorates-General and Agencies. The portal's content dates back to 1990 (the origin of the service) and the website has been online since 1994.

Potential applicants should have a look at the earlier projects and their information available at the CORDIS portal. This will help them get new ideas. They can develop a project idea by improving or adding to the earlier project, or by using new technology or new scientifically inspired breakthroughs to advance the results and impact of previously funded projects.

Being a researcher the grant writer can (and should) benefit from earlier research. A basic step-wise process that Hoffmann (2015, p. 34) proposes is:

- “Retrieve earlier successful proposals from CORDIS in the grant writer's own area of research.
- Check the call background documentation for pointer to earlier EU projects and consortia.
- Try to work together with the grant writer's national contact points to get more information on why specific information is in this call documents and on who (which organization and country) put forward this information.
- Call on the grant writer's network if they know of earlier research proposals in this direction.”

Often the best ideas are a combination of the grant writer's own thoughts together with an idea from somebody else. However, as Hoffmann explicitly states: “There is one major rule when benefiting from others' ideas: [to] give credit where credit is due.” If an applicant builds a proposal based on earlier research projects, he or she should acknowledge them and cite them in the references. (Hoffmann, 2015, p. 34)

1.3 Creative thinking and forming ideas

“Our brains are naturally predisposed toward a non-innovative mode of thinking. However, it is possible to intervene in our thinking process to trigger more innovative cognitive processes. This "higher-order" thinking should be a vital resource not only for the individuals who want to be more innovative, but also for those who lead innovation management” (Garland, 2016, p. 1).

But there are many activities that trigger innovative thinking (Table 1):

Table 1: Activities that are specifically creative together with their descriptions

| Activity | Description |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Brainstorming | Creating ideas in open discussion, (typically many techniques are applied) |
| Method "6-3-5" | 6 participants write 3 ideas within 5 mins on paper, then pass ideas to next person till one full rotation is made |
| Problem inventory analysis | Generating a list of negatives of a offering then finding solution to eliminate those negatives |
| Visualization exercises | Same as techniques just proceed as a formal activity |
| Experimentation activities | Measure, tests, validate, explore, via physical, virtual, or thought experimentation |
| Scenario activities | Instead of the technique, this a full activity where scenarios for marketing strategy, business unit strategy, tech strategy, were feasible scenarios are thought out |
| Six thinking hats | role based brainstorming activities where each individual plays a different role, Facts, optimism, judgment, feeling, creativity, control |
| Focus group activities | A collected group of individual focusing on giving feedback on a particular, product, service, and process |
| Incubation & relaxation | Relaxing and thinking lightly or not at all about the problem to be solved (sleeping) letting the mind sub-consciously work on the problem |

Source: Glassmann, 2009, p. 87

Horizon 2020 in many of its instruments requires forming a consortium. Participating in a consortium with others is also a great advantage in the idea formation process – it enables to pool the different ideas that individuals contribute to the group. At the start of the idea finding phase it is best to have an open mind and just make a list of all the obtained ideas.

1.4 Approving or rejecting ideas

For grant writers, a common error they make is psychological orientation towards their own ideas, wishes or needs. Successful writers, on the other hand, focus on the sponsor's interests. They take advantage of the intelligence they gather or partnership they build with the grant agency and the various stakeholders during the pre-proposal phases and they write their projects in ways that reflect the donor's values. The first thing to ask before writing the proposal is whether the idea is in accordance with the donors' interests and goals. The idea should fit (or it should be possible to fit it) into a Horizon 2020 call. The challenge it solves should be on the EU agenda, have an EU dimension, solve an issue existing in multiple EU regions, or it should require multinational cooperation.

In addition to clearly understanding the donor's expectations, it is equally important that the grant writer starts developing the idea with a good sense of how the project idea fits into the strategy, philosophy, mission and agenda of the applicant organization. Developing and implementing a project is challenging and time consuming. Therefore, it is imperative to understand what it will require. Successful project could require a commitment of several years and waste a proportion of the personal as well as organizational resources. Besides this, it is highly unlikely that the grant writer will write a good quality project proposal and he or she is even more unlikely to get the support to do something that is outside the scope of his or her competences, capacity, knowledge and strategy.

Being in line with the donors expectations and the grant writer's business strategy are two important conditions to keep in mind when selecting and screening promising ideas. Dr. Hoffmann (2015, p. 36) also proposes the grant writer to answer the following key evaluation questions:

- “Can you formulate the idea in terms of a problem that is solved? If your idea solves no specific problem, it is hard to show its benefits.
- Do you have the drive to work on this idea?
- Can you assemble a partnership to implement the idea and solve the problem? Do you have (or can get) access to the right people, organizations and knowledge?
- Is there urgency to develop the idea now?
- Does the idea have a clear and concrete impact, in combination with users?”
- The last question I would add after reading numerous personal accounts or the EU project participants is: Can your team deliver the project? Project ideas should match with realistic expectations of what a cross-functional team can deliver. Ideas are endless, while a team's time, on the other hand, is not.

The ideas that give affirmative answers to all of the above stated questions are called opportunities. After compiling a list of these opportunities the grant writer should refer to reliable colleagues or experts to discuss and obtain their opinions whether these ideas show enough potential to develop further.

1.5 Having ideas on stock and waiting for suitable calls

As has previously been mentioned, by reading and studying the annexes to the calls the grant writer can anticipate on future calls. The future calls are based on these background documents. After forming ideas on the basis of these resources, the potential applicant should screen them and identify the feasible ones, which should then be stored. In this way the potential applicant can be prepared for and anticipate new Horizon 2020 calls.

1.6 The one-page idea outline

Project plans normally consist of the business case or problem statement, the project plan and the management plan. These plans according to ISO may be separate documents with comprehensive details, but it is strongly recommended during the initiation phase for an EU project to make one brief summary document, ideally —one page proposal.

Once the potential applicant has identified the most prospective idea, the latter should be put to paper in the form of a short outline. A one A4 paper page outline – the optimal option for doing this - is an outline proposal that captures the key concepts of the idea in a way that is easy to communicate. It focuses on the project's fundamental idea and goals. The one page outline allows the potential applicant to share the project idea and get other potential stakeholders interested. This outline is a foundation for further discussion on the project idea, be it technical or in terms of project partners required.

The grant writer should aim at limiting the size of the first draft concept to one A4 paper as this first internal project concept note will mostly serve during the initial project development stage. It will play the role of:

- A safeguard to maintain the team focused on the idea
- A tool to streamline stakeholder's understandings and expectations
- Means of confronting the potential applicant with the unknown – areas that require further research or challenges that need to be addressed.

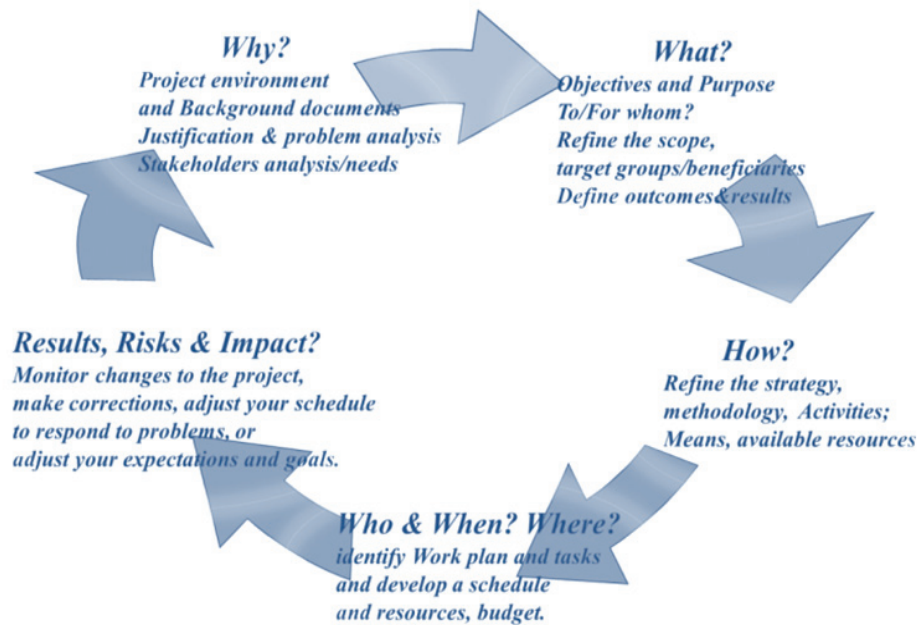
As an example, the one-page outline may contain the following information:

- 0 - Title: a descriptive title and an acronym.
- 1 - Contact: name, email, organisation and telephone.
- 2 - Project idea: description of the idea in no more than 3-5 sentences.
- 3 - Objectives: what do the grant writer want to achieve with the project.
- 4 - European dimension: why this should be an EU/horizon 2020 project?
- 5 - Results: which concrete results will come out of the grant writer's project?
- 6 - Users: who can and will use the results of the grant writer's project?
- 7 - Impact: what is possible once the grant writer's project achieves its objectives and delivers its results?
- 8 - Tentative horizon 2020 work programme, call, and funding scheme: this is needed for partner organisations to evaluate the financial and organisational feasibility.
- 9 - Partners and roles: which functions and roles need to be filled)

10 - Budget and duration estimate: budget in the order of thousands or million', of euro? Project duration in months or years? (Hoffmann, 2015, p. 39)

The same guide also offers an illustration of these most important questions (Figure 1):

Figure 1: Main questions in the project concept note



Source:

<http://www.balkansecurity.net/PDF/BSN%20Guide%20for%20project%20development%20Ver%2010.%20August%202014.pdf>

By providing answers to the above question the one-page project idea generally outlines the requirements for a project and covers its scope. It thus includes the description of the problem or need that the proposal is addressing, its objectives and means of their achievement, brief activities description, key activities timeline; estimates of costs of materials, equipment, staff and other resources; expected results and impact, where the grant writer briefly explains who will be affected with the project and in what way. The one-page idea outlines (and hence clarifies and documents) answers to the most important questions regarding the project: why should the project be carried out; what will be done, how and by whom; how much will it will; and how will project be controlled and closed. The outline should achieve clarity about the project scope (i.e. deliverables, requirements, and boundaries) by precisely defining its beginning and end state. The project scope also explains how the project will contribute to the strategic objectives of the organization as well as wider.

Once the potential applicant begins working with others on this outline with key information, the one-page proposal expands (as more and more information will be added). At later stages - those following the initial one, which is the production of the one-page proposal - the grant writer progressively rewrites the project plan from the initial concept note with only approximate definitions, estimations and allocations of budget, scope, schedule, resources, and other items, into more comprehensive and firmly allocated work packages (which are during the project implementation required for the obligatory level of management and control). The expanded outline afterwards usually serves as a blueprint for a formal Horizon 2020 project proposal.

It might be useful to have a system for keeping track with whom the potential applicant has discussed the one-page outline and he or she perceives as a potential collaborator.

1.7 How to match ideas with Horizon 2020 calls

It rarely happens that all of the details of the grant writer's proposal correspond perfectly to the grant agency's requirements. Grant writers should not feel hesitant to adjust the project goals, within reason, to meet the agency's requirements. It is essential that the applicant's project goals match what the agency is looking to fund. But, it is also necessary to stay within the applicant's limitations and knowledge base, as in the long run, this is what makes execution of the project if not possible at least easier.

Matching the idea with Horizon 2020 calls entails studying the calls and comparing their content with this idea. The calls are not assorted in line with their scientific or business discipline; they are assorted according to the priority areas that are specified by the EU.

Dr. Hoffmann (2015, p. 37) gives an example of the following half-baked idea: The applicant wants to build a new, energy generating building wall. It will use a new type of a pump technology and reduce the energy need of building by simultaneously providing electricity and reducing the impact of warmer summer climates through improved insulation.

As the above description suggests, this idea may in principle correspond to an energy call, and it could also fit into a climate change mitigation action. According to Guide for Project Development and Proposal Writing, the next step is to define the potential impact and users of the idea. The Guide then gives the following impact and users descriptions:

- Impact could be: lower energy bills for home-owners, reduced carbon emissions from building stock, improved technology and business development for heating
- Users could be: home owners and / or builders (via a building standards organisation), heat pump manufacturers, energy utility companies (which could commercialize the generated electricity),

After forming a general idea of users and impact, Hoffmann proposes considering everything from that point that "In general the EU prefers to fund projects with a comparatively larger impact. Some ideas are inherently cross-disciplinary and cross-call in Horizon 2020. [The potential applicant then has] to decide within which sub-programme or call [to] put [the] idea. It is a difficult decision and there are no specific guidelines. There is just the general guideline to choose the call that fits [the] idea best and allows to build a first class partnership with others" (2015, p. 38).

CONCLUSION

Horizon 2020 is the EU programme that offers funding for research and innovation projects. Investing in such project (as the EU leaders have agreed) in turn secures a smart, sustainable and inclusive economic growth. The investment instrument's main goals are strengthening Europe's global competitiveness, making it the best in the world-class science, eliminating obstacles that hinder innovations to get quickly in the market and changing the way in which the public and private sectors work together. Despite the fact that the program has a simple structure and requires less red tape than its predecessor, the applicants still face a lot of challenges when applying with their projects. We thoroughly the stages in the process of identifying a successful project idea for Horizon 2020.

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