How to write a successful proposal in Horizon 2020/Health domain

Caterina Buonocore
Bruno Mourenza

Horizon 2020
Punto di Contatto Nazionale SC1,
Coordinatore dei PCN APRE
AGENDA

1. Define your idea
2. Define objectives, results and activities
3. How to write a successful proposal
   (according to the 3 criteria)
I want to be...

Coordinator

- Define your idea
- Find a funding opportunity
- Write a proposal
- Cross the fingers!

Partner

- Identify your skill
- Promote yourself
- Join a consortium
- Define your activity
Identify the project idea

- Innovation capacity
- Available resources
- Funding opportunity in the WP

Your Idea
Get a clear view of the state-of-the-art

Patent databases
http://www.epo.org/searching/free/espacenet.html

IPR helpdesk
https://www.iprhelpdesk.eu/

FP7 & H2020 projects

YOUR PROJECT MUST BE INNOVATIVE

Check on these databases whether somebody has already developed your same idea and to what extent.
# Suggestion: Keep in mind

- ...proposal must be **relevant to your institutional plans** and direction
- ...**available resources** for sound preparation?
- ...proposal by **researchers that never worked together**? Never met before?
- ...proposal must be **relevant to EU strategies / EU level**
# Suggestion: Keep in mind

Get in touch to talk about the project with:

- Your **research team**
- **Grant office** in your university
- **National Contact Points**
- potential project **partners** (remember the confidentiality)
Define your idea: **ABSTRACT**

two page proposal

<table>
<thead>
<tr>
<th>Topic</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title/ACRONYM</strong></td>
<td></td>
</tr>
</tbody>
</table>
| **Objective** | The aim of the proposal is to...  
The key research question/challenge is to... |
| **Background/short description** | • Why bother? What problem are you trying to solve?  
• Is it a European priority? Could it be solved at National level?  
• Is the solution already available?  
• Why now? What would happen if we did not do this now?  
• Why you? Are you the best people to do this work? |
| **Results/impact** | • Expected results - what will come out of the project? Who will use the results?  
• Why do they want to use the results?  
• How are you planning the transfer of results?  
• What will be changed? Post project situation |
| **Activities/phases (science part)** |  |
| **Project consortium** | pippo, pluto... |
| **Duration/cost** | 3, 4 anni... |
Clear objectives (SMART) and concept, transdisciplinary

Periodic Meetings

Think on evaluation criteria

Remember you may get support: NCP & EC officers

External reviewers
How to write a successful proposal (according to the 3 criteria)
Criterion 1

Scientific and Technological Excellence
Excellence – 4 Subcriteria to address

1. Objectives
2. Relation to the work programme
3. Concept and approach
4. Ambition
Objectives: WHY?

Define the objectives in the European political contest

**General Objectives**

Long term: beyond the duration of the project

*Improve, strenght, facilitate, realize ...*

**Specific Objectives**

To be realized during the project implementation

*Clinically Testing, pilot studies, develop new knowledge, ...*
General vs Specific

General objectives are **broad and long-term**. Specific objectives are short term and narrow in focus. The general objective is met through accomplishing each of the specific objectives.

Example:

General Objective: Tom will increase profits in the lawn care division from ten thousand dollars annually to ten thousand, five hundred dollars by 1/15/2010.

Specific objectives:

- John will increase his monthly customer contacts for 40 to 65 or more by 5/1/08.
- John will circulate 100 promotional flyers in at least 5 new counties by 2/2/09.
- John will make follow up calls to at least 90% of the counties targeted above by 4/1/09.
- John will increase his work hours from 20 to 25 or better beginning 4/1/09.
1.1 Objectives

What is advised

• There is usually one main, overarching goal ("overall objective") and several subordinate, more specific goals ("specific objectives"). You should list both.

• The project objectives are usually already included in the topic text (see: specific challenge, scope, expected impact.), sometimes explicitly listed, sometimes more implicit.

→ The objectives are a result of the selected topic and the concept and approach the consortium has chosen for its project.
1.2 Relation to the work programme

“Your proposal must address a work programme topic for this call for proposals.”

Template: “Indicate the work programme topic to which your proposal relates, and explain how your proposal addresses the specific challenge and scope of that topic, as set out in the work programme.”

There are different ways and structures how to answer this, often this section is about 1/3 to ½ page. Many proposals just make a table, list all relevant elements of the topic text and then show how they plan to deal with them in the project.

Note: the right question is: How does the proposal address the issues raised? And not: how exactly is the approach?
1.3 Concept and approach

**What is advised**

✓ Show the evaluators how your project connects to the rest of the world.

✓ EC and evaluators want to make sure that with the public funding money, you are not going to reinvent the wheel, but that you cross-fertilize with recent and ongoing projects in the field.

✓ Best, if partners in the consortium have already close links to these other projects, e.g., because they participate there as well, and that exchange of know-how will be realized.

✓ If not, create a plan how this could be done (e.g. take other projects in your advisory group etc.).
1.3 Concept and approach

**What is advised**

- Here, it is NOT about *gender balance* in the consortium, but about SCIENCE.
- What would be *scientific/* medical reasons for having a closer look at *gender*?
- Is the condition you are going to work with known for *gender differences*, e.g., in symptoms, treatment options, mortality, success rates etc.? Or do you have a hypothesis?
- **How are you going to address this** in your approach and methodology?
1.4 Ambition - 1

What the EC expects

“Describe the **advance** your proposal would provide **beyond the state-of-the-art**, and the extent to which the proposed work is ambitious. Your answer could refer to the ground-breaking nature of the objectives, concepts involved, issues and problems to be addressed, and approaches and methods to be used.”

“Describe the **innovation potential** which the proposal represents. Where relevant, refer to **products and services** already available on the market. Please refer to the results of any patent search carried out.”
Messages for applicants

1. Many applicants have difficulties to formulate their objectives.
2. **Ask yourself: does chapter 1 of the proposal create curiosity and stimulates to carry-on reading?**
3. Does the **layout** encourage reading (with pleasure)?
4. Check **consistency** across chapter 1, and across entire proposal.
5. Are **abbreviations** explained (when first occurring)?
6. Are **figures** self-explanatory (applicants tend to have too many figures in chapter 1, and also the wrong figures!).
7. Take an Helicopter view on the proposed project: **do you get all required information? What is missing? What is overdone?**
Messages for applicants

8. Do not write a scientific paper for a high-ranked peer reviewed journal (but list them as references, if you have).
9. Remember for whom you’re writing – with very broad topics, the evaluation panel will be mixed with different experts that may not know the particular condition, treatment or technology in detail.
10. Take the readers by the hand and guide them through the proposal.
11. Help evaluators go through your proposal quickly; follow the template and address all points at the place they are expected to be.
12. Create a logical link between objectives, workpackages and deliverables.
13. Do not work to fill the 70 pages! Work to get your ideas across!
Criterion 2

Impact
Reminder: Template Part B

2. Impact

1. Expected impacts  \(\Rightarrow\) 1st stage

2. Measures to maximize impact
   a) Dissemination and exploitation of results
   b) Communication activities

2nd stage
Subcriteria evaluated under Impact

2. Impact

Note: The following aspects will be taken into account, to the extent to which the outputs of the project should contribute at the European and/or International level:

- The expected impacts listed in the work programme under the relevant topic;
- Enhancing innovation capacity and integration of new knowledge;
- Strengthening the competitiveness and growth of companies by developing innovations meeting the needs of European and global markets, and where relevant, by delivering such innovations to the markets;
- Any other environmental and socially important impacts;
- Effectiveness of the proposed measures to exploit and disseminate the project results (including management of IPR), to communicate the project, and to manage research data where relevant.

Comments:
Impact – expectations from the EC

2.1 Expected impacts

Describe how your project will contribute to:
- the expected impacts set out in the work programme, under the relevant topic

**Example**

**Expected impact:**
- Innovative, more accurate, more reliable and cost effective in vitro diagnostic tools and technologies for earlier disease diagnosis, patient stratification and/or prognosis of disease outcome leading to improved clinical decisions and health outcomes.
- Contribution to the sustainability of health care systems.
- Growth of the European diagnostics sector, in particular for SMEs.
Messages for applicants

• **What is the benefit of your project?** (the benefit for SMEs becomes more and more important!).

• Think about the expected **impact in the topic text / work programme**.

• Who are the **users of your results**?

• How will your **project/results strengthen the competitiveness**?

• What is the **social / societal benefit**?

• How will the project **support EU-policies**? (in particular for research, innovation, health, biotech, environment, society, etc.):
  • *Did you consider those political aspects that are announced in the work programme?*
  • *How will the project help to contribute to the goals for the Europe 2020 strategy?*
  • *Why will Europe need the project? What is the added value?*

*Please consider enough time and discussion for all the different aspects around this task*
Impact part 2.2

What the EC expects

2.2 Measures to maximize impact

a) Dissemination and exploitation of results

○ Provide a draft ‘plan for the dissemination and exploitation of the project's results’ (unless the work programme topic explicitly states that such a plan is not required). Path to deliver the innovations to the market. Business Plan (where relevant).

○ Dissemination and exploitation measures should address the full range of potential users and uses including research, commercial, investment, social, environmental, policy making, setting standards, skills and educational training.
Impact – Dissemination & Exploitation

What is advised

• Dissemination & Exploitation as own Work Package
• Dissemination plan: which steps are required to bring your results to the community?

Clear structure about "What would you like to disseminate?"

• To whom (= target group)?
• Why (= rationale)?
• How (= dissemination plan)?
• When (= time schedule)?
Impact - Communication

Ways for communication:

• When to disseminate what (flexibility in the beginning!) -> attract attention in the beginning, sell results at the end of the project!

• Don’t forget about collaboration with other (related) projects.

• Language might be adapted depending on target group.

  • Where to promote the project? (fairs, conferences, workshops, summer schools,...).

  • How to promote via internet? (website, newsletter, webinars, blogs, new social media,...).

  • Material to be generated: flyers, articles,...
Messages for applicants

• **Academic applicants** often have huge problems with section 2.2.

• If there are **commercial partners involved (SMEs)**, they should get **involved early** (coordinators often hesitate to involve too many partners in the proposal preparation phase), especially for section 2.2.

• **For RIA’s**, projects will most likely not cover demonstration or market replication activities, but still they have to see the full picture/ think about the final commercialisation (**as a vision – route to market**).
Exercise for Impact

Topic: Clinical research for the validation of biomarkers and/or diagnostic devices

Some facts from this topic:

• All existing potential biomarkers (prediction, diagnostic, prognostic, monitoring, toxicity, end-point, etc.).
• Both in vivo and in vitro potential biomarkers are eligible.
• Preference will be given to the validation of disease-related biomarkers (i.e. diagnostic, susceptibility/risk, monitoring and prognostic biomarkers), but drug biomarkers are not excluded.
• Validation of the performance of new diagnostic devices (either in combination with the biomarker validation, or against existing standards).
Exercise: Expected impact in topic text:

• Increased clinical availability and exploitation of biomarkers for the benefit of the patient.
• New diagnostic devices.
• Facilitation of entry of improved diagnostics in the clinic and the market.
• Support for the implementation of the Commission proposal for a revised in vitro diagnostic device regulation.
• Enhancing profitability and growth performance of SMEs by combining and transferring new and existing knowledge into innovative, disruptive and competitive solutions seizing European and global business opportunities.
• Contribution to the sustainability of health care systems.
• Increased likelihood of market uptake and distribution of resulting innovations tackling the abovementioned specific challenge(s) in a sustainable way.
• Leveraging of private investment in clinical validation as described above, notably leverage of private co-investor and/or follow-up investments.
Exercise helping to identify Impact

1) Which **results are expected from this project**? Each result should be announced in a new line in your table.

2) Who is the **main user of the result**?

3) What is the **relevance for the dedicated user**, the target group?

4) How can you ensure that the **user knows about the results obtained**?

5) What are your **plans about exploitation of the obtained results**? Which steps do you plan for this after the end of the project?
## Exercise for Impact

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Criterion 3
Implementation
3. Implementation

3.1 Work plan — Work packages, deliverables and milestones (tables)
3.2 Management structure and procedures
3.3 Consortium as a whole
3.4 Resources to be committed
Feedback Evaluators - ESRs

• The proposed **work packages are not fully detailed.**
• Work packages **xx miss details** on user selection criteria, and ... Work package **xx do not sufficiently address** software design and development.....
• WP **xx is overloaded with tasks and resources**
• Some task descriptions have **not been sufficiently elaborated**
• **Project timing is problematic.** There are some tasks built on each other running almost in parallel and overlapped.
• **Resources allocated for equipment and material are not fully justified**
• The **decision making** in their organization structure is not convincingly presented.
• The proposal lists **only 4 milestones**, which seems too few for a 4 year project
• The **contingency planning** does not completely target all risks of all planned complex tasks
Work plan/work packages

Establish plans / structures for the whole project

Lead questions:
• What do I want to do?
• What do I need for which task?
• What to do when?
• How much do I need of what?

Workplan and Workpackages
Partner responsibilities
Time planning
Resource planning
Work plan – Timing => Gantt Chart

from simple/Excelsheet......
Work plan – Timing => Gantt Chart

....to complex management tools....
## Work plan – Work packages

**Tip:** Maximum 3 pages per Workpackage!

Table 3.1a: Work package description (For each work package):

<table>
<thead>
<tr>
<th>Work package number</th>
<th>Start Date or Starting Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work package title</td>
<td></td>
</tr>
<tr>
<td>Participant number</td>
<td></td>
</tr>
<tr>
<td>Short name of participant</td>
<td></td>
</tr>
<tr>
<td>Person/months per participant</td>
<td></td>
</tr>
<tr>
<td><strong>Objectives</strong></td>
<td>SMART, short Bulletpoints, in line with objectives in Section 1,1!!!</td>
</tr>
</tbody>
</table>

**Description of work:** (where appropriate, broken down into tasks), lead partner and role of participants

**Deliverables:** (brief description and month of delivery)

**Detailed description of tasks** (with Taskleader!) to achieve objectives

**Results of the tasks**, optimal 1 Deliverable per Task
Implementation - Evaluation criteria

Coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources

Complementarity of the participants within the consortium (when relevant)

Appropriateness of the management structures and procedures, including risk and innovation management
Work plan – Pert Diagram

PERT - Programme Evaluation and Review Technique

Good or Bad?
Work plan – Pert Diagram

WP1: Project Management

WP2: User Requirements

WP3: System Integration Architecture

WP4: Content Acquisition and Information Indexing

WP5: Memory management and User interface

WP6: Cognition and training games

WP7: User Evaluation Field Trials

WP8: Privacy Integration and Ethical Watch

WP9: Dissemination and Exploitation

Figure 3: PERT Diagram

Good or Bad?
WP5
New clinical trials / Dissemination

WP2
Testing of single and combo approaches

WP4
UM metastases characterisation (’omics and microenvironment)

WP1
Biobank of patient samples

Established models

WP3
Novel models, including transgenic models (zebrafish, mouse)

WP6 – Coordination & Project Management
Consortium as a whole

Questions to ask and describe:

• Describe how the consortium as a whole will **achieve the project aims**.
• Describe **why these partners** are necessary to achieve the project aims.
• Describe the **partner’s special skills** relevant to the project.
• Describe the **complementarity** of the partners.
• Describe the **balance** of the consortium.
• Describe how **many SME/industry partners** are involved: tasks, status, budget.
• Describe how the **(commercial) exploitation of results** will be ensured.
• Describe (if applicable) why **partners from other industrial or third countries** need to be involved – especially if you are asking for funding for third country partners!
Roles in the project

**Official roles**
- Coordinator
- Partner

**Practical roles**
- Technology/solution
- Developer
- End user
- Training specialist
- Project manager
- Dissemination expert
- Clinical
## Consortium as a whole – Skills matrix

<table>
<thead>
<tr>
<th></th>
<th>Coordinator</th>
<th>Partner 2</th>
<th>Partner 3</th>
<th>Partner 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Management</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology Domain 1</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Technology Domain 2</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology Domain 3</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Technology Domain n</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Dissemination</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
MNG STRUCTURE/PROCEDURES

GOVERNANCE

- Decision making and/or executive bodies, composition
- Competencies (coordination, monitoring, decision-making) procedures for appointment
- Timing and modalities for meetings,
- Voting rules (unanimously, majority)

- Procedures for GA/CA revision
- Decisions related to defaulting or leaving parties, access of new beneficiaries
GOVERNANCE BODIES

GENERAL ASSEMBLY
(all partners; the “consortium” in the GA)

EXECUTIVE COMMITTEE (or Management Board)
(coordinator+ WP leaders)

OTHER SPECIFIC BOARDs***
(IPR; GENDER; ETHICAL aspects etc.)
Messages for applicants

In most cases, the **formally required minimum number of partners** is **not enough to fully address and investigate the topic**. Always take the requirements of your project idea as a guiding principle!

Consider involving partners from ‘**Third Countries**’, i.e. countries that are not EU Member States or Associated countries. A [list of countries](mailto:ParticipantPortal) eligible for funding is available on the Participant Portal.

**Do not build ‘artificial partnerships’ just to meet formal criteria.** Select partners who are truly dedicated, and **make sure** that all partners have the **necessary expertise and support from their organizations** from the start.
The risks will be controlled by:

- The coordination responsibility within large WPs being clearly divided up between WP Leaders and Task/Sub-task Leaders that represent the special excellence in the field of the particular tasks.
- Regular intercommunication, review and reporting on progress within WPs (by WP Leaders and Task/Sub-task Leaders);
- The identification and prioritization of risks inherent in the project;
- Selecting the appropriate risk management approaches and avoiding risks that the project is not competent to or willing to manage;
- Implementing controls to manage the remaining risks;
- Learning from experience and making improvements to the project.

### Specific risks and contingency plans:

<table>
<thead>
<tr>
<th>Possible risk</th>
<th>Contingency plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under- or over-estimate workload.</td>
<td>Management team discussion and adaptation of the work plan, in agreement with the scientific officer, for deliverables and milestones.</td>
</tr>
<tr>
<td>Insufficient communication and data/material delivery between partners.</td>
<td>Improved communication infrastructure. Extra meetings (face-to-face, telephone, Skype conferences).</td>
</tr>
<tr>
<td>Conflicts within the Consortium.</td>
<td>Evaluated reasons and try to resolve. If necessary, use of a mediator from outside to solve disagreements.</td>
</tr>
<tr>
<td>Trial site and personnel changes</td>
<td>Commitment letter undersigned by partners. Management team discussions. Reorganization of project activities in agreement with the scientific officers.</td>
</tr>
<tr>
<td>SMEs interests and economical</td>
<td>Careful selection of SME Partners, replacing some of the partners.</td>
</tr>
</tbody>
</table>
Consortium => Chapter 4

4. Members of the consortium – no page limit!

1. Participants

~ 1-2 pages per participant, keep structure the same for all partners:

- **Description** of organisation
- **Main Tasks**
- Profile of main **staff members** (SHORT!! Mini CV in Text- or table format)
- **Previous projects** or activities connected to the project
- **5 Publications and or patents/products** relevant to the project
- **significant infrastructure** and/or technical equipment relevant to the proposed work

2. Third parties involved in the project (including use of third party resources)
What should I consider when forming a consortium?

The most important criteria are excellent qualifications and experience of your partners in their field of research.

- Just like the project itself, the consortium needs to demonstrate its European dimension. Try to avoid strong geographic asymmetries, i.e. the majority of partners coming from one particular country. However, don’t just add partners for reasons of regional coverage.

- The individual partners need to have clearly defined roles and tasks within the project. Their expertise and skills should be crucial and complementary rather than additive.

- Depending on the challenges and requirements of the project, a successful team should consist of partners from different backgrounds (academia, industry, research) to maximize impact.

- Where relevant, cross cutting aspects, such as gender dimensions or the integration of social sciences and humanities should be taken into account.
5. Ethics and Security

5.1 Ethics

If you have entered any ethics issues in the ethical issue table in the administrative proposal forms, you must:

- **Submit an ethics self-assessment**, which:
  
  describes how the proposal meets the national legal and ethical requirements of the country or countries where the tasks raising ethical issues are to be carried out;
  
  explains in detail how you intend to address the issues in the ethical issues table, in particular as regards:
    
    research objectives (e.g. study of vulnerable populations, dual use, etc.)
    
    research methodology (e.g. clinical trials, involvement of children and related consent procedures, protection of any data collected, etc.)
    
    the potential impact of the research (e.g. dual use issues, environmental damage, stigmatisation of particular social groups, political or financial retaliation, benefit-sharing, malevolent use, etc.).

- **Provide the documents that you need under national law** (if you already have them), e.g.:
  
  an ethics committee opinion;
  
  the document notifying activities raising ethical issues or authorising such activities.
Concludendo...
1. Excellence
1.1 Objectives
1.2 Relation to work programme
1.3 Concept and approach
1.4 Ambition

2. Impact
2.1 Expected impacts
2.2 Misure to maximase impact
   a) Dissemination and exploitation of results
   b) Communication activities

3. Implementation
3.1 Work plan – work packages, deliverables and milestones
3.2 Management structure and procedures
3.3 Consortium as a whole
3.4 Resources to be committed

4. Members of the consortium
5. Ethics and Security

And cover page!
- Title of proposal and
- List of participants
Wrap up!

Prima della scrittura:
1. Opportunità per la ricerca in campo HEalth
2. Tempi necessari per l’ideazione e la preparazione della proposta
3. Documentazioni utile (templates)
4. Participant Portal (gateway per varie attività progettuali)

Durante la progettazione: cenni alla scrittura
1 I 3 criteri di valutazione
2. Consigli e dos and dont’s

Come Allargare la propria rete ed essere più visibile!