SCIENTIFIC RESEARCH METHODOLOGIES AND TECHNIQUES

Unit 7: PROJECT PROPOSAL PREPARATION

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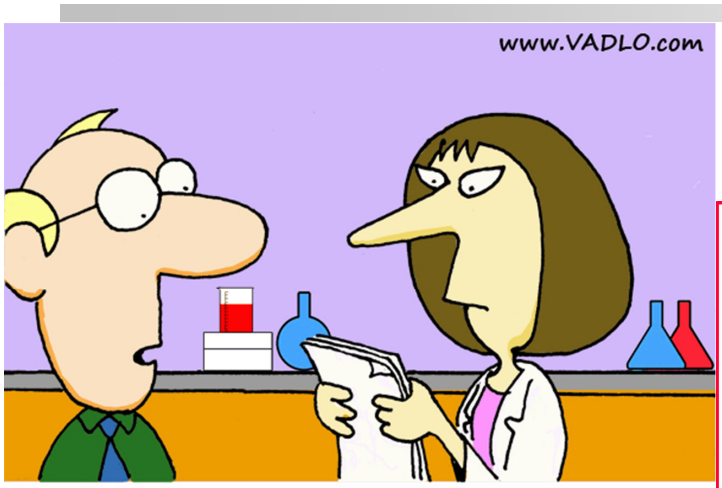
PDEEC - PhD Program on Electrical and Computer Engineering

Why do you need research grants?

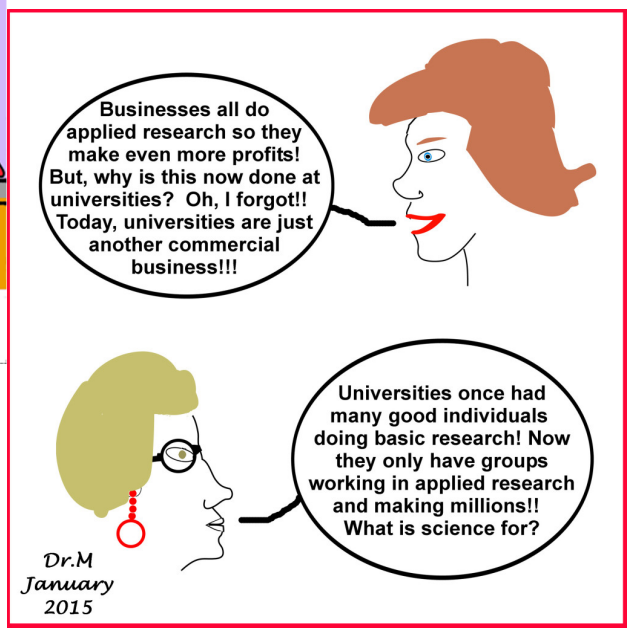


Lab equipment?

Scholarships / labour?

Attending conferences?

Publishing open access?



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1. PRELIMINARIES

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You have an idea

A research proposal should be the result of a "good idea"

Which unsolved problem is the "idea" addressing ?

Why is it important and who will benefit ?

Develop your brilliant idea

Gather background information

Get more familiar with the problem and previous attempts to solve it.

Check the idea with some colleagues

Prepare a synopsis (1 or 2 pages) as a basis for discussion with potential partners and sponsors

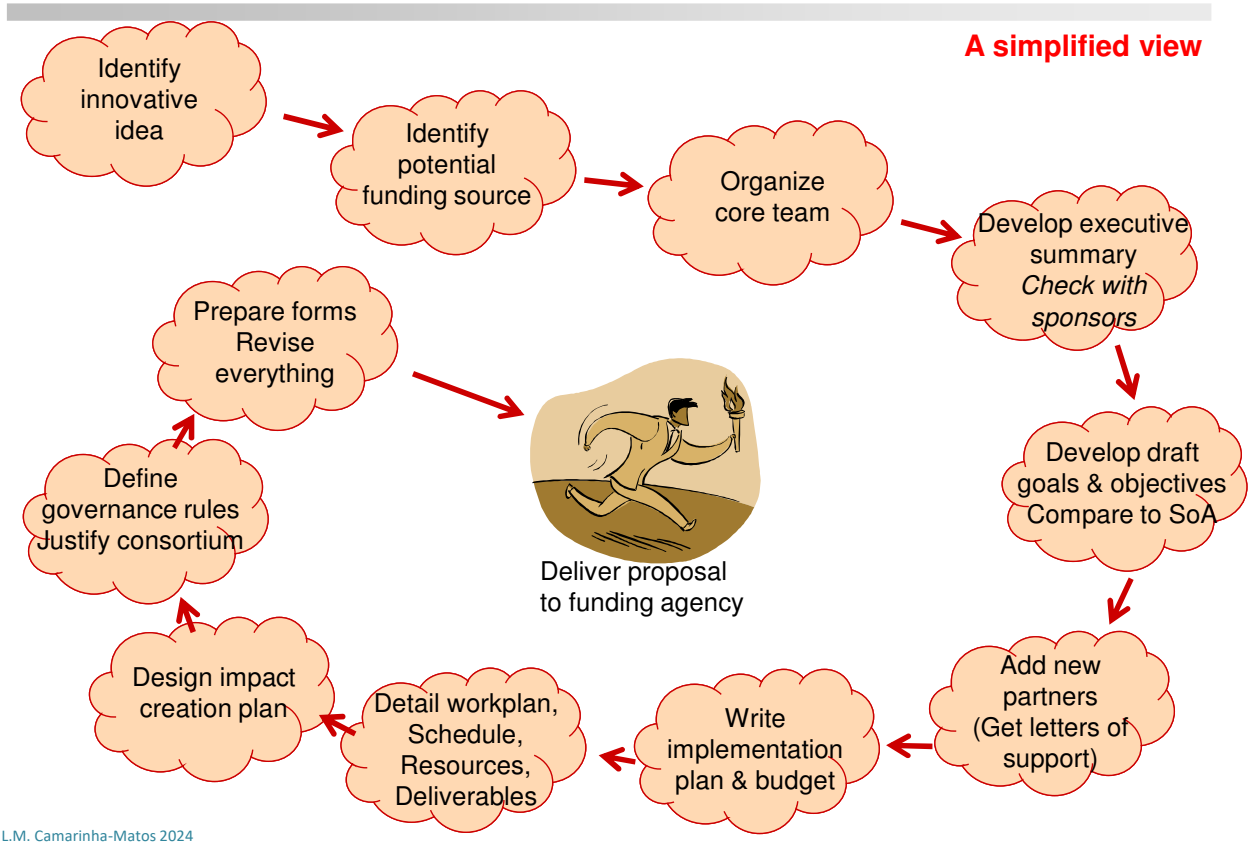
Focus on what is innovative!

Don't forget:
You need resources !

Labor ?
Equipment ?
Traveling ?

Understand the process

A simplified view



Research funding possibilities

- **National funding agencies**
  - Typically fund national groups
  - Some programs for bilateral cooperation with other countries (usually small funds, mostly for traveling)
- **European Commission – HORIZON 2020, HORIZON EUROPE, ...**
  - **Excellent Science**
  - **Industrial Leadership**
  - **Societal Challenges**
  - **Spreading excellence and widening participation**
  - **Science with and for Society**
  - **Euratom**
- **Industry** ... Strongly depends on personal contacts...
- **Others**
  - Foundations, NGOs
  - World Bank, ESA
  - ...

HORIZON 2020

- the Framework Programme for Research and Innovation (2014-2020)

1. Excellent Science

- European Research Council
- Future and Emerging Technologies
- Marie Curie Actions
- Research Infrastructures

2. Industrial Leadership

Leadership in Enabling & Industrial Technologies
- information and communication technologies
- nanotechnologies
- advanced materials
- biotechnology
- advanced manufacturing and processing
- space

- Access to Risk Finance
- Innovation in SME

3. Societal Challenges

7 Challenges
- Health, Demographic Change and Wellbeing
- Food security, sustainable agriculture, marine and maritime research and the bio- economy
- Secure, Clean and Efficient Energy
- Smart, Green and Integrated Transport
- Climate Action, Resource Efficiency and Raw Materials
- Europe in a changing world: Inclusive, Innovative and Reflective Societies
- Secure Societies – Protecting Freedom and Security of Europe and its Citizens

- Joint Research Centre (JRC)
- Widening Participation
- Science with & for Society
- European Institute of Innovation and Technology (EIT)
- Joint Programming P2P
- Joint Technology Initiatives (JTIs) P2B

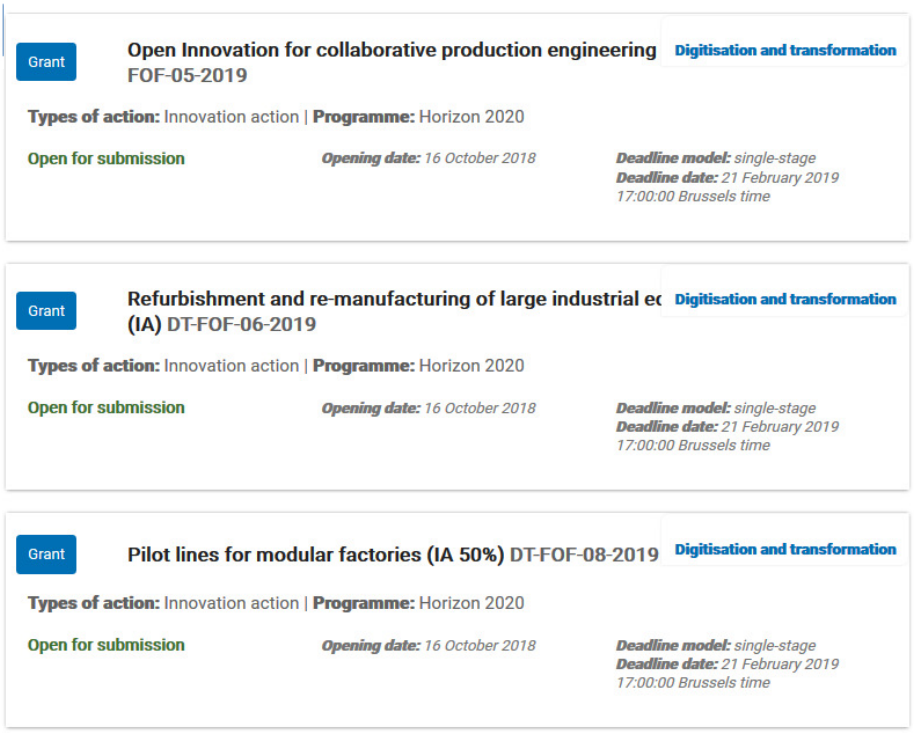
HORIZON 2020

Around 80 billion €

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes/h2020

H2020 - An example of Call for Proposals

European Commission



H2020 - An example of Call for Proposals …

- DT-FOF-05-2019: Open Innovation for collaborative production engineering (IA)

Specific Challenge:

The transfer to industrial companies of the Do It Yourself (DIY), fablabs, micro-factories and makers approaches can pioneer ways towards engineering solutions throughout the whole value chain. These innovative methods can lead to new processes, machines and products with new functionalities and shorter time to market. Industry is not yet widely using such innovative approaches to engage consumers and respond to societal needs, also taking into account the individual preferences of women and men. Collaborative production liaising companies, especially SMEs, with these new approaches can however create Open Innovation networks that can unroll a wide range of entirely new business opportunities for the benefit of consumers.

Scope:

Proposals should particularly cover consumer-goods sectors and couple design, creativity and knowledge with a customer-driven production. The co-creation of products in both ends of the value chain represents customer involvement in the production. In particular, proposals should cover at least three out of the following areas:

- Novel approaches to capitalise on the knowledge and ideas of design and engineering coming from different and even new actors;
- Design of new strategies based on creative and agile methodologies for analysis;
- Development of knowledge, technologies and tools to share and analyse relevant data and demands from users as well as to fully enable collaborative engineering in the production network, allowing all actors to propose innovative solutions;
- Development of open source product data exchange and standard representations of products and processes that ensure the compatibility of modelling and simulation with different process information systems;
- Development of new Manufacturing Demonstration Facilities (MDFs), where companies will test new technologies in cooperation with fablabs and makers in order to develop real industrial products and where training is offered.

Proposals also need to take into account Social Science and Humanities (SSH) aspects regarding creativity.

Proposals submitted under this topic should include actions designed to facilitate cooperation with other projects; to enhance user involvement; and to ensure the accessibility and reusability of data produced in the course of the project.

Activities should start at TRL 4 and achieve TRL 6 at the end of the project.

The Commission considers that proposals requesting a contribution from the EU between EUR 4 and 6 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

Expected Impact:

- Establish Open-Innovation networks for manufacturing that support customer-driven production all around Europe;
- Creation of specific business models for the engineering of customised solutions, particularly for SMEs, rapid demand changes and shorter time to market;
- Improvement of the co-design and co-development capabilities towards a reduction of development costs of new products and services;
- Increase of product variety and personalisation for higher customer satisfaction and loyalty.

HORIZON EUROPE (new program)

https://ec.europa.eu/info/horizon-europe_en

Types of grantseekers

Reactive Grantseekers

- Wait for a grantseeking opportunity to present itself.
- Attempt to develop an innovative, creative, well-organized approach to solving a problem while they are in a state of frenzied confusion.
- Difficult to develop a successful approach while under the pressure caused by acting reactively.

Proactive Grantseekers

- Begin with a need or problem they wish to solve through grant funding. They view problems as opportunities to interest a funder in working with them to implement solutions that will improve education.
- In order to determine the projects to pursue, they outline your opportunities in advance. Outlining opportunities does not entail writing down all solutions.
- By generating a list of needs (problems, areas of interest, and so on) they begin to develop a proactive system based on locating funding sources that are interested in the same problems … therefore likely to invest in their solutions.
  - It might happen that none of the opportunities address the topics in your list !

Constraints from sponsors

- **Time**
  - In most cases, sponsors open Calls for Proposals
  - Calls open on specific dates and for a specific time window
  - Only in a few cases there is a possibility for continuous submission
- **Priorities**
  - Sponsors define areas to be funded and specific objectives
  - Proposals must demonstrate that they contribute to the stated objectives
- **Funding rules**
  - Sponsors define funding rules (e.g. Eligible costs, % of funding, eligible organizations)
  - Finding matching funds (when funding is not 100%) is an extra difficulty
- **Format**
  - Proposal formating, sections, limit of pages, forms and tables
  - Paper or electronic submission
- **Evaluation rules**
  - Evaluation panel, evaluation criteria, scoring, thresholds, etc.

Finding partners

- **Small projects**, typically funded at national level or by a company, can be carried out by a **single group**.
- **Larger / more ambitious projects,** frequently of a multi-disciplinary nature, require a variety of expertises and resources not possessed by single groups and a multi-partner research **consortium** is required.
  - **Core partners** need to be identified (and engaged) at an earlier stage of the proposal preparation.
  - **Other partners** can be added later when the details of the project are defined.

Partner search – some options:

- Existing contacts – „social network“
- Conferences / workshops / networking events / „information days“
- (Scientific) literature
- Cordis Project Data Base
- Cordis Partner Search Data Base } Not very effective ... Need to be careful ...
- National Contact Points

Which role?

Project leader
or simple partner?

Or how to get involved in a proposal?

Joining an experienced consortium can be a more effective approach …
… but much less freedom !

Important to build a "social network" which can be of mutual help at the time of proposals

Important to be identifiable by the expertise and service that can be offered to the others

- Good scientific reputation takes time to build
- Need to be strongly proactive
  - One approach: start a proposal and then suggest a merging
  - Another approach: announce skills / interests in a networking event

Cost of preparation

- A project proposal involves hard work for several months
- In case of failure, preparation for re-submission adds additional effort
- In case of a proposal involving a consortium (namely international), there are costs with traveling and meeting(s) organization
  - e-mail is not enough

These costs are an investment of the proposer(s)
… and cannot be claimed from the project budget even if the proposal is successful !

Particularly to address European / International programs, there is a need for considerable "seed money".

In a few cases national governments might have some funds to help researchers preparing European / international proposals … But not so easy

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2. GENERAL STRUCTURE

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General aspects

Writing for a Call for Proposals is an art quite different from the research work itself !

Evaluators rarely have time to look for hidden answers

An average evaluator of our project proposal is an expert which most likely doesn't know the topic of our proposal in details

Evaluators have always limited time (usually just a few hours) to read our proposal

Most of the structure, the basic requirements, application forms, information and procedures are frequently defined by the sponsoring entity

RTD proposal

NSF Example:

- Cover sheet and certifications
- Project summary
  - Both intellectual merit and broader impacts described
- Table of contents
- Project description
- References cited
- Biographical sketches
- Budgets and justification
- Current and pending support
- Facilities, equipment and other resources
- Special information / documentation
  - NO reprints, preprints, letters of endorsement
- Single Copy Documents
  - Reviewer suggestions, deviation authority, confidential information, etc.

EC Example (LEIT):

Part A
Administrative forms
Part B
List of Participants
Table of contents

With page limit

1. Excellence
1.1 Objectives
1.2 Relation to the work programme
1.3 Concept and approach
1.4 Ambition
2. Impact
2.1 Expected impacts
2.2 Measures to maximise impact
3. Implementation
3.1 Work plan — Work packages, deliverables & milestones
3.2 Management structure and procedures
3.3 Consortium as a whole
3.4 Resources to be committed
4. Members of the consortium
4.1 Participants
4.2 Third parties involved in the project
5. Ethics and security
5.1 Ethics
5.2 Security

3. DETAILED PREPARATION

Technical part: Concepts & objectives

The initial section of the proposal is very critical !
It should "paint a picture" of the proposal in the mind of the evaluator.
It should establish the framework so that the rest of the proposal has a frame of reference.

- **Key Questions**
  - **What do you intend to do?**
  - **Why is the work important?**
  - **How does it satisfy the objectives / priorities of the sponsor?**
- **Make sure it is innovative and exciting**
  - **Survey the literature**
  - **Talk with others in the field**

Technical part: Concepts & objectives …

Avoid giving the evaluator the opportunity to say things like:

Not an original idea
Rationale is weak
Uncertain outcomes
Problem is not important
Proposal is unfocused
Project is too large

Technical part: Concepts & objectives …

- **Goals** are the large statements of what you hope to accomplish but usually are not very measurable. They create the setting for what you are proposing.

- **Objectives** are operational, tell specific things you will be accomplishing in your project, and are very measurable.
  - Evaluators like to see **quantifiable** objectives
  - The outcomes are much clearer if the objectives are described in **measurable** & **verifiable** ways.
  - Show how they relate to the topics addressed by the Call.

- Include specific information about the **target users**.
  - Are they involved?

- Carefully check the **evaluation criteria** !

Technical part: Concepts & objectives …

S pecific	❑ Be specific in targeting an objective
M easurable	❑ Establish a measurable indicator of progress
A ssignable	❑ Make the objective capable of being assigned to someone for completion
R ealistic	❑ State what can be realistically achieved within budgeted time & resources
T ime	❑ State when the objective can be achieved - that is, the duration

Technical part: Progress beyond SoA

What has already been done?
How have others approached the problem?

How are you going to do the work?
Better: What will you do that will lead to a substantial progress / innovation beyond the SoA?

Position your project in relation to other efforts and show how your project:

a) will extend the work that has been previously done,
b) will avoid the mistakes and/or errors that have been previously made,
c) will serve to develop stronger collaboration between existing initiatives, or
c) is unique since it does not follow the same path as previously followed.

Convince people about your knowledge of the problem

Cite previous projects and studies that are similar to what you are proposing.

Show the funding agency that you know what you are proposing because you are familiar with what has preceded you.

Make sure you are familiar / use the terminology of the funding agency / evaluators !
"The bid language"

Methodology & workplan

- **Give a rational of the methods to be used.**

There should be a very clear link between the methods described in this section and the objectives previously defined.

- **The work plan should be broken down into work packages (WPs) which should follow the logical phases of the implementation of the project.**
  - **Show the relationships among the WPs and between WPs and objectives**
  - **Use diagrams (evaluators have little time to read !)**

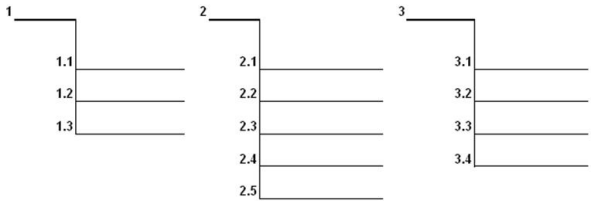
- **Typical elements to include:**
  - **Work package list**
  - **Deliverables / Outcomes list**
  - **Description of each work package**
  - **Effort table (person-month)**
  - **List of milestones**

Characteristics of a well-defined activity

- Its status and completion is easily measured
- It has a very definite beginning and ending date
- It is clearly explained and the time to complete it and its associated costs can be easily estimated from prior experiences with this or similar activities
- It comprises work assignments that are manageable, integratable, and relatively independent of work assignments in other activities
- It should normally constitute one continuous stream of work from start to finish

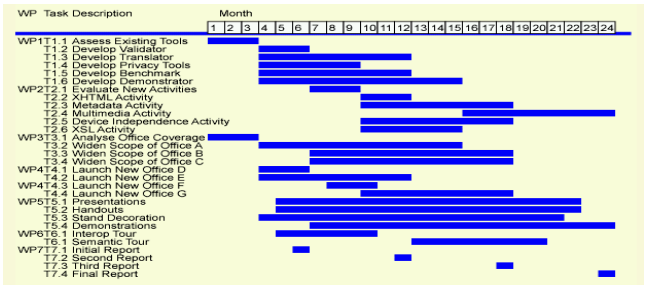
- It has clear responsibles assigned to

It's understandable, manageable and its progress can be measured

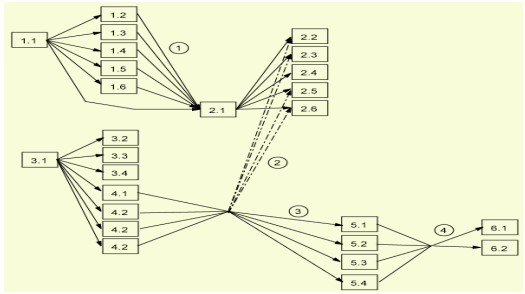


Methodology & workplan ...

Scheduling of activities (e.g. Gantt chart)



Inter-relations between components



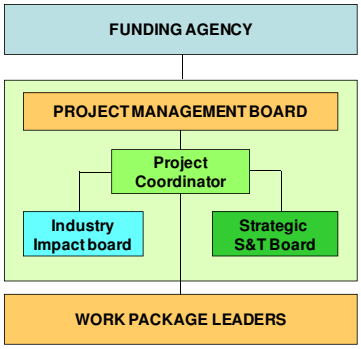
WPs divided into tasks

- **Identification (and schedule) of results of each WP/Task**
- **Identification of responsibilities (partners assigned to activities)**

- **Identification of Milestones** - control points where decisions are needed with regard to the next stage of the project

- **Identification of potential risks and contingency measures**

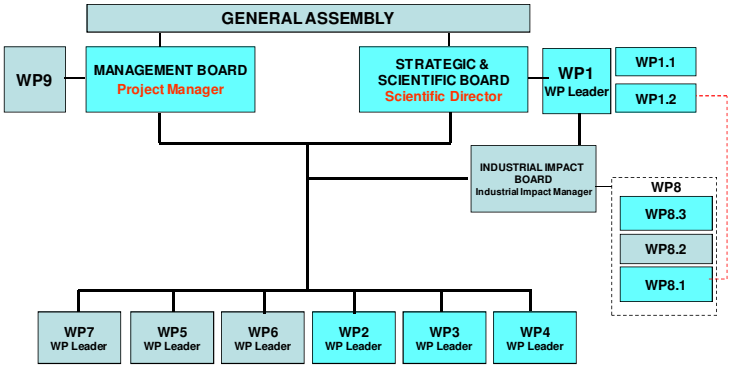
Governance / Management structure



Organizational structure and decision-making mechanisms

Structure depends on the complexity of the project

If you will be using a Steering Committee (Advisory Committee, Governing Board, etc.) to assist in your project, this is a good place to describe how it will be organized and who will be included.



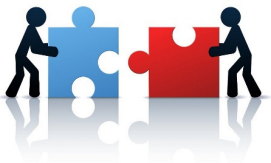
Include
Description of each role
Communication mechanisms
Conflict resolution mechanisms

Consortium structure

Describe the participants, their experience, and role in the project

Describe the consortium as a whole, its rational

Why this consortium is needed
Why this consortium is adequate to implement the project



Clarify how each of the roles are essential to the success of the project and how each role clearly relates to operationalizing the methods described.

Take into account specific requirements from the funding agency e.g.

Involvement of different categories of participants and their balance (research organizations, companies, end-users, etc)
Geographical balance
International participants and why
etc.

Budget planning & preparation

Elaborate the overall and per activity, per partner budget

Show how the overall financial plan for the project is adequate

Pay special attention to the funding criteria:

Eligible costs:

- Labor?
- Equipment? Justification?
- Traveling & subsistence?
- Consumibles? Other costs?
- Indirect costs?
- Taxes? (e.g. VAT?)
- Upper limits?

Funding rate:

- 100%? 75%? 50%?
- Need own matching funds?

Other resources?

Need to be realistic
Fair distribution

Equipment & facilities

Major equipment needs to be properly justified as fundamental for the success of the project.

Important to consider reasonable estimates (not simple guesses). Evaluators are experienced!

Carefuly check the funding rules regarding equipment !

For instance, European Commission does not reimbourse the cost of the equipment at once!

It considers the life of the equipment and only the depreciation rate is paid every year!

Therefore, there is a need for extra funds to make the investment....

Impact creation

Funding entities are very keen on potential impacts of a project

- **If the funder is an industry, it is concerned with the ROI**
- **If it is a public agency, it has political accountability pressure**

Therefore, the proposal has to show a convincing plan for impact creation. Specific actions depend on the type of project (basic research, applied research, technology transfer, etc.)

Examples:

- **Dissemination**
  - **Publications**
  - **Participation & organization of events**
- **Summer schools & other training actions**
- **Business demonstration pilots & take-ups**
- **Exploitation plans**

Quantifiable indicators

Impact – Example H2020

2. Impact

2.1 Expected impacts

Please be specific, and provide only information that applies to the proposal and its objectives. Wherever possible, use quantified indicators and targets.

- Describe how your project will contribute to the expected impacts set out in the work programme, under the relevant topic;
- Describe specifically the achievement of critical mass for the funding of trans-national projects by pooling of national/regional resources and contribution to establishing and strengthening a durable cooperation between the partners and their national/regional research programmes
- Describe any barriers/obstacles, and any framework conditions, that may determine whether and to what extent the expected impacts will be achieved.

2.2 Measures to maximise impact

a) Dissemination and exploitation of results

- Provide a draft' plan for disseminating and exploiting the project's results
- Explain how the proposed measures will help to achieve the expected impact of the project
- Where relevant, include information on how the participants will manage the research data generated and/or collected during the project
- Outline the strategy for knowledge management and protection

b) Communication activities

- Describe the proposed communication measures for promoting the project and its findings during the period of the grant.

Isaac Newton struggles to write the economic impact section of his 'gravity' proposal.

Ethical & other issues

This section is important in proposals having potential ethical issues

(e.g., Dealing with privacy, health issues, genetics, etc.)

Some funding agencies might have requirements regarding promotion of gender equality, involvement of Small and Medium Enterprises, promotion of specific regions, etc...

➔ Check the requirements and prepare good arguments for the evaluators

Formatting rules

The funding agency might impose specific (strict) formatting rules regarding

- Structure of the document
- Formatting (font size, etc.)
- Limit of pages (or even characters)
- Language
- Etc.

Often a number of administrative forms are required

- Identification / characterization of the consortium / partners
- Financial information
- Etc.

More and more funding agencies are promoting electronic submissions.

... and a strict deadline (date, time) for submissions !

Getting support

Preparing a proposal is a hard investment !
The success rate is very low in many cases !
Therefore ... the more support, the better!

So, in addition to the discussions with the consortium members, consider:

- ✘ Early stage: Check ideas with colleagues
- ✘ When the idea is elaborated: Check with funding agency officer
- ✘ After a first draft: Check with other colleagues, National Contact Points (in the case of European programs), etc.

- It is good if some consortium members have experience as evaluators in the same program !

Lobbying and … business

In many cases lobbying is becoming a determinant success factor !

- Influence on Work Programmes during preparation phase via Funding Agency or Contact Points
- Early contact with Funding Agency and Contact Points
  - **E.g., EC officers are usually friendly and responsive, but one needs to contact them**
- Join strong consortia / attract strong partners
- No lobbying possible after proposal submission!

Some consultancy organizations make their business out of "helping" consortia in preparing proposals

Roles within a consortium

- **Coordinator**: the manager, leader, guide of the project
  - Should only be taken over by an expert with substantial experience
  - Previous participation in similar projects is a real prerequisite
  - Substantial work load in project preparation (3 person-months average)
  - Some projects divide this role into two: Project Manager and Technical Coordinator / Scientific Director
- **Work Package Leader**: the coordinator of a more or less substantial part of the project
  - Experience in similar projects is a plus but not a prerequisite
  - Medium work load in preparation (0,5 – 1 person month depending on work package size)
- **Other Project Partners**: participants with a defined role but without coordination tasks
  - Small work load in preparation
  - **Core partners**: Some complex projects might distinguish 2 groups of partners – core (responsible for the strategic direction) and non-core.

Some tips

Some *sins*

- Late start of project preparation, partner search, proposal writing
- Project only partially fits to the content of the call for proposals
- Selection of unsuitable partners
  - Missing expertise in the field of the project
  - Missing synergies with the other partners
  - Lack of experience in International Cooperation
  - Low commitment of participants
- Weak (or too forceful) Coordination

[Nicole Schröder]

Some tips ...

Some *sins* ...

- Proposal only comprehensible to few experts in that specific field of research
- Project proposal put together from incompatible elements delivered by different project partners without adequate adjustment; no clear structure
- Budget too small to keep all participants working
- Budget too high for the described work or not adequately justified
- Delay of legal and financial questions to project start

[Nicole Schröder]

Some tips …

- **When preparing a proposal be aware of the conditions how the proposal will be evaluated:**
  - …evaluators have just a few hours per proposal
  - …all the proposals seem to evaluators, after couple of days, very similar to each other – small things decide
  - …if you pre-communicated with the Funding Agency officers, the officer at the consensus meeting can be your proposal's ally
  - …you can be unlucky with the selection of the evaluators:
    - they can be either too academic or too technical or too tired or too negative or too perfectionist, …
    - …try to put into the proposal some cookies for each one of those psychological profiles

[Marko Grobelnik]

- Be aware of the scope:
  - "Too ambitious" vs. "Too narrow"
- Be honest and up-front:
  - Address issues instead of trying to hide them
  - Acknowledge possible experimental problems and have alternatives

[Rajinder P. Khosla, NSF]

Some tips …

- Know your audience – the reviewers!
- Think about the reviewers
  - Write accurately, concisely, and clearly
  - Make it easy for reviewers to like your proposal
  - You never get a second chance to make a first impression
  - First page tells it all
  - Figures and tables get your point across clearly
  - Some reviewers (particularly on inter-/multi-disciplinary proposals) may not be an expert in your specific field
- Simplify and streamline:
  - Make sure you get your overall idea across!
- Pay attention to details:
  - Run the spell checker and proof-read
  - Prepare clear photos, graphs, etc.
  - Make the font size as big as you can

Bored reviewer. *Engaged reviewer.*

[Rajinder P. Khosla, NSF]

Some tips …

Some reasons to fail:

- Absence of innovative ideas or hypothesis
  - Will provide only an incremental advance
  - Not exciting or cutting edge
- Errors
  - Unclear or incomplete expression of aims
  - Faulty logic or experimental design
  - Less than rigorous presentation

- Unrealistic, sloppy or incomplete
- Resources and facilities not in place
  - PI qualifications/expertise not evident
  - Necessary collaborations not documented

[Rajinder P. Khosla, NSF]

4. PROPOSAL EVALUATION

Evaluation process & actors

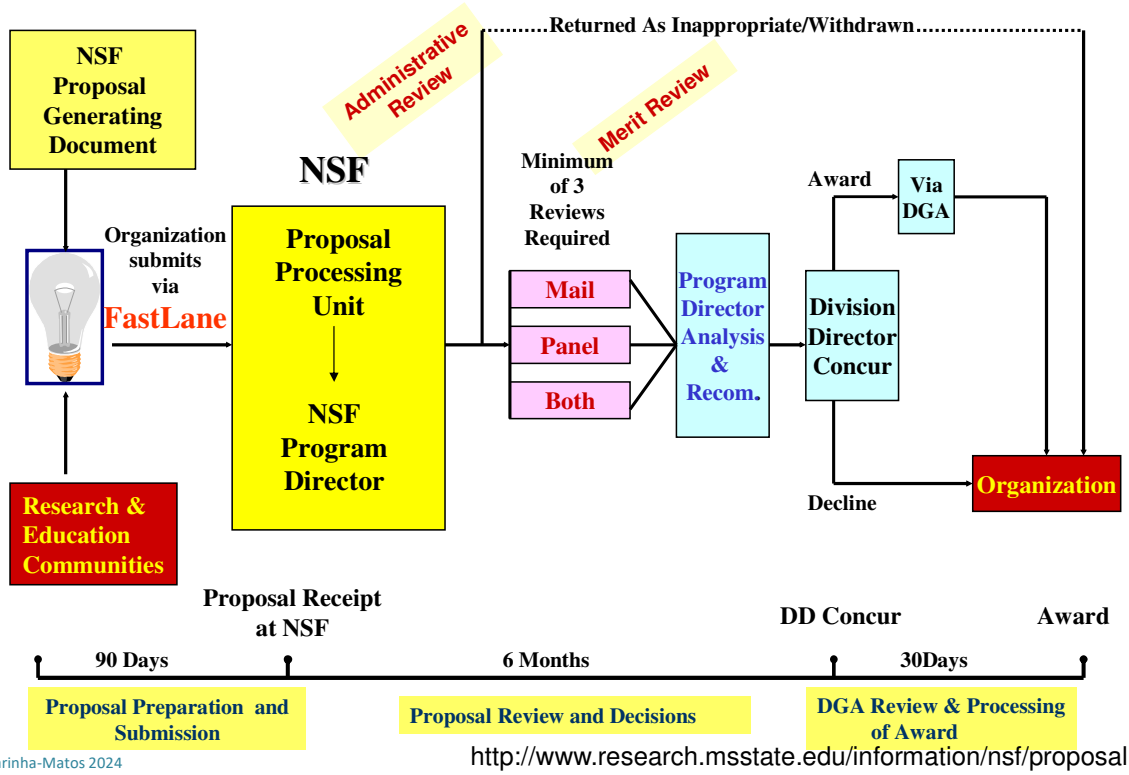
- Funding agencies usually resort to external experts - from industry and academia – to evaluate / select proposals
- Final decision is often made in a panel with the participation of officers from the Agency

Evaluation criteria example (EC):

1. Excellence *Note: The following aspects will be taken into account, to the extent that the proposed work corresponds to the topic description in the work programme:* • **Clarity and pertinence of the objectives;** • **Credibility of the proposed approach;** • **Soundness of the concept, including trans-disciplinary considerations, where relevant;** • **Extent that proposed work is ambitious, has innovation potential, and is beyond the state of the art (e.g. ground-breaking objectives, novel concepts and approaches).** Comments:	Score 1: *Threshold 3/5*
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:	Score 2: *Threshold 3/5*
3. Quality and efficiency of the implementation* *Note: The following aspects will be taken into account:* • **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.** Comments:	Score 3: *Threshold 3/5*
	Total score (1+2+3) *Threshold 10/15*

NSF example (USA)

NSF Proposal & Award Process & Timeline



http://www.research.msstate.edu/information/nsf/proposal.ppt

Key reasons for rejecting project proposals

In FP6 – European Commission:

- Bad consortium 76%
- Bad relevancy 59%
  (EU, exploitation, dissemination)
- Bad Implementation 32%
- Not enough innovation 29%
- Not enough information 21%
- Bad management 20%
- Out of scope of the call 10%
- Too high costs 10%

Acceptance / rejection in H2020 – European Commission:

Program	Below threshold/ rejected (a)	*in % (a)*	Above threshold/ rejected (b)	*in % (b)*	Main list (c)	*in % (c)*	Total number of proposals	*in %*
Energy	867	*67.21*	255	*19.77*	168	*13.02*	1,290	*17.90*
Environment	198	*45.62*	177	*40.78*	59	*13.59*	434	*6.02*
Food	148	*45.96*	117	*36.34*	57	*17.70*	322	*4.47*
Health	1,797	*71.71*	505	*20.15*	204	*8.14*	2,506	*34.77*
Security	338	*50.90*	274	*41.27*	52	*7.83*	664	*9.21*
Society	617	*44.71*	692	*50.14*	71	*5.14*	1,380	*19.15*
Transport	220	*35.95*	230	*37.58*	162	*26.47*	612	*8.49*
Total	4,185	*58.06*	2,250	*31.22*	773	*10.72*	7,208	*100*

More reasons for rejecting project proposals …

A. Problem (Significance) (58%)
1.The problem is not of sufficient importance or is unlikely to produce any new or useful information. (33.1)
2.The proposed research is based on a hypothesis that rests on insufficient evidence, is doubtful, or is unsound. (8.9)
3.The problem is more complex than the investigator appears to realize. (8.1)
4.The problem has only local significance, or is one of production or control, or otherwise fails to fall sufficiently clearly within the general field of health-related research. (4.8)
5.The problem is scientifically premature and warrants, at most, only a pilot study. (3.1)
6.The research as proposed is overly involved, with too many elements under simultaneous investigation. (3.0)
7.The description of the nature of the research and of its significance leaves the proposal nebulous and diffuse and without a clear research aim. (2.6)

B. Approach (73%)
1.The proposed tests, or methods, or scientific procedures are unsuited to the stated objective. (34.7)
2.The description of the approach is too nebulous, diffuse, and lacking in clarity to permit adequate evaluation. (28.8)
3.The overall design of the study has not been carefully thought out. (14.7)
4.The statistical aspects of the approach have not been given sufficient consideration. (8.1)
5.The approach lacks scientific imagination. (7.4)
6.Controls are either inadequately conceived or inadequately described. (6.8)
7.The material the investigator proposes to use is unsuited to the objective of the study or is difficult to obtain. (3.8)
8.The number of observations is unsuitable. (2.5)
9.The equipment contemplated is outmoded or otherwise unsuitable. (1.0)

C. Investigator (55%)
1.The investigator does not have adequate experience or training for this research. (32.6)
2.The investigator appears to be unfamiliar with recent pertinent literature or methods. (13.7)
3.The investigator's previously published work in this field does not inspire confidence. (12.6)
4.The investigator proposes to rely too heavily on insufficiently experienced associates. (5.0)
5.The investigator is spreading themselves too thin; they will be more productive if they concentrate on fewer projects. (3.8)
6.The investigator needs more liaisons with colleagues in this field or in collateral fields. (1.7)

D. Other (16%)
1.The requirements for equipment or personnel are unrealistic. (10.1)
2.It appears that other responsibilities would prevent devotion of sufficient time and attention to this research. (3.0)
3.The institutional setting is unfavorable. (2.3)
4.Research grants to the investigator, now in force, are adequate in scope and amount to cover the proposed research. (1.5)

https://orsp.umich.edu/why-proposals-are-rejected

More reasons for rejecting project proposals …

- **Deadline for submission was not met.**
- **Proposal topic was not appropriate to the funding agency to which it was submitted.**
- **Guidelines for proposal content, format, and/or length were not followed *exactly*.**
- The proposed question, design, and method were completely traditional, with nothing that could strike a reviewer as unusual, intriguing, or clever.
- The proposed area of study was not an agency priority for this year.
- The proposal was not absolutely clear in describing one or more elements of the study.
- The proposal was not absolutely complete in describing one or more elements of the study.
- The authors review of the literature indicated they did not know the territory.
- The proposed study appeared to be beyond the capacity of the authors in terms of training, experience, and available resources.
- The proposed method of study was unsuited to the purpose of the research.
- The budget was unrealistic in terms of estimated requirements for equipment, supplies, and personnel.
- The cost of the proposed project appeared to be greater than any possible benefit to be derived from its completion.
- The authors took highly partisan positions on issues, and thus became vulnerable to the prejudices of the reviewers.
- The quality of writing was poor (e.g., sweeping and grandiose claims, convoluted reasoning, excessive repetitions, or unreasonable length).
- **The proposal contained an unreasonable number of mechanical defects that reflected carelessness and the author's unwillingness to attend to detail. The risk that the same attitude might extend to execution of the proposed study was not acceptable to the reviewers.**

https://www.geneseo.edu/sponsored_research/common-reasons-proposals-are-rejected

Negotiation

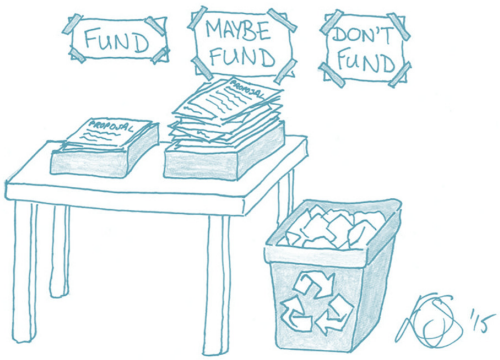
Some Funding Agencies, after a successful evaluation of a proposal, invite the consortium for negotiations towards a grant agreement

Examples of negotiation issues:

- **Clarification of the project goals, objectives and approach**
- **Technical & implementation issues raised by the evaluators**
- **Legal & financial aspects of the participants**
- **Preparation of Technical Annex for the grant agreement**

... it may still fail !

"My project is simply this. I want to find out once and for all whether there's any truth in the belief that money can't buy happiness."



Review panel categories.

Getting a funded research project is ONLY a means, Not the ultimate goal!

What do you want to do with those resources? Which research results?

Some people get "addicted" to collect projects and forget about doing research !

Further reading

Explaining the not very secret formula for research funding
https://errantscience.com/blog/2017/08/09/explaining-not-secret-formula-research-funding/

Guide for Writing a Funding Proposal
http://www.learnerassociates.net/proposal/hintsone.pdf

WHY IS IT SO DIFFICULT TO PREPARE A PROJECT PROPOSAL
http://www.zbroz.cz/Publications/ICETA2007.pdf

ERASMUS: HOW TO PREPARE A COMPETITIVE PROJECT PROPOSAL?
http://www.erasmusplus.uz/images/shared/11_how_to_prepare_a_good_application_da.pdf

H2020 proposal preparation
http://ri-links2ua.eu/object/news/589/attach/ulle_must_h2020_proposal_preparation.pdf

Proposal success in Horizon 2020: A study of the influence of consortium characteristics
https://www.mitpressjournals.org/doi/pdf/10.1162/qss_a_00067