1. Good quality research

2. Publishing your results

3. Writing project proposals

I prepared a detailed guide for writing FP7 REGPOT proposals (Jan 2011). Let me know if you want a copy.
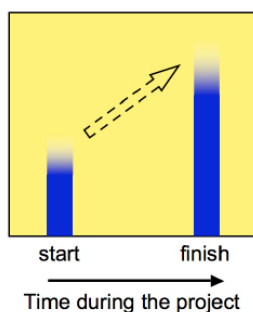
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Secrets to success with FP7 REGPOT proposals

Contents:

Introduction
This document provides advice on how to convert failure:

start   finish

Time during the project

- a proposal with poorly-defined vertical axes and lack of detail describing the activities, into

This short course is about the philosophy of writing a proposal that will be evaluated successfully.

The philosophy is generic (applicable to all projects).
It is independent of the scientific subject or topic.
It is independent of the funding source.
It is independent of the programme.

I shall demonstrate aspects of the philosophy with occasional examples from FP7 REGPOT project proposals.

Philosophy of writing proposals:

❖ Your objective is not to describe your good project idea,
    but to persuade the funding source to give you the money!
❖ Why should they decide to give the money to *you*
    when there will be lots of other good proposals they could select
    instead of yours?

Your philosophy is to learn how to be competitive.

Here are some (very short) proposal texts:

Objective
The objective of this project is to improve the dissemination skills of our institution.

Activities
We plan to have two-week training courses in dissemination skills for all our institution staff.

Impact
1. We expect this project will have a major impact on improving the dissemination skills of our institution.

2. We are **convinced** that this project will have a **significant** impact on improving our dissemination skills.

3. We are **certain** that this project will have **significant** impact on improving our institution's dissemination skills and to be **sustainable** into the future.
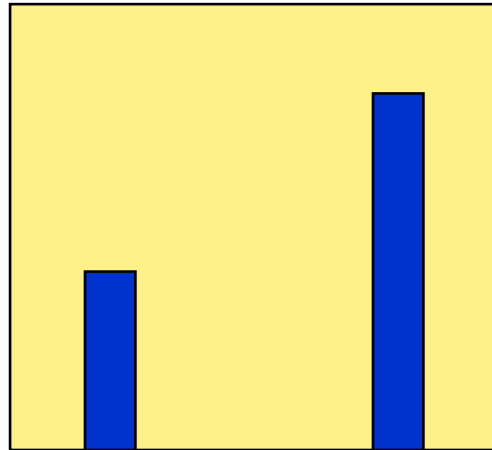
Which proposal will you give the money to?

Remember Monday morning - looking for the *truth*?

Everything you need to know is in this slide.

This is the most important graph in your life!
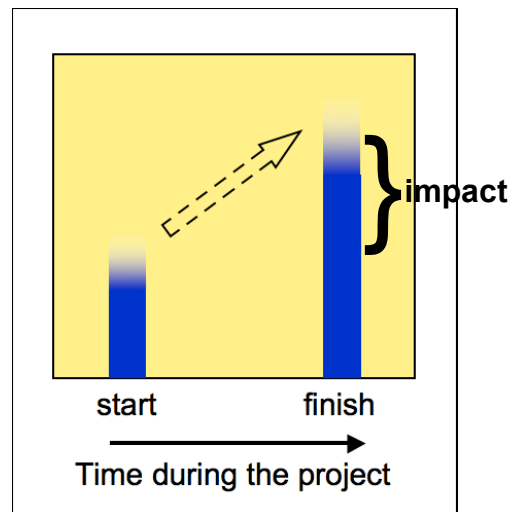
However, it comes in many different formats.

You have to have the evidence for your statements.

So, you need to know how to convert this:

Format for a proposal that is going to fail:

✂ Poor definition of the starting point (needs analysis).
✂ Poor definition of the finishing point (impact analysis).
✂ Poor definition of how to get to the finishing point (activities).
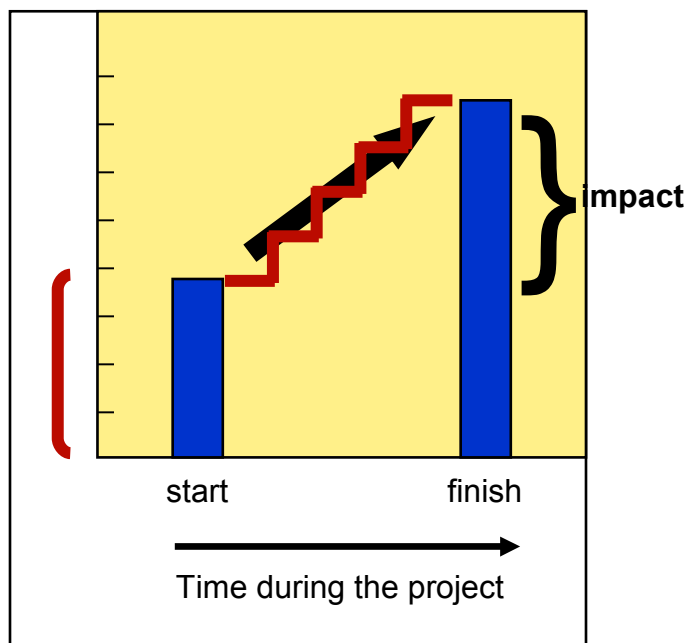
Into this:

Format for a successful proposal:

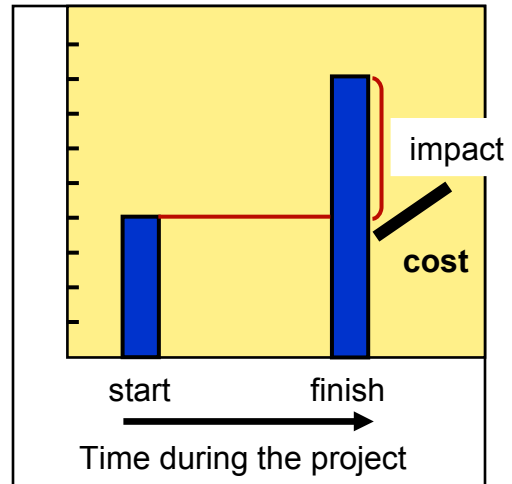Yours has got to be the proposal that gives the best definition of
• where you start from
• where you will get to
• how you will get there

i.e. description of activities (the steps up the ladder) and **evidence of progress**.

And one more criterion you need to satisfy:

It also has to give the best value for money!

Your philosophy for writing a proposal is to make it impossible for evaluators to take marks off your score.

To succeed with most FP7 projects means you aim to get 5 (petica) for each section of the proposal. So …

❖ Yours *has* to be the best that the evaluators read.

❖ The aim of every application is to persuade the funding source that your proposal is the *ONLY* one that is worth funding! [And frequently that is all they fund!]

> "The proposal is professionally planned, well structured and well written:"

❖ Yours has to have something really special about it.

> "a good research entity with a very promising prospect, …."

❖ So do not say the same things everyone else says!
❖ Understand that you need to be very **competitive**!

Now some general comments on how to be competitive.

Putting together and submitting a proposal will *always* take longer than you think!

Writing the text of the proposal is the quickest bit: **25%**

Establishing the need for the project.
Finding out what background documents you need.
Reading all the background documents.
Defining the concept.
Refining the concept.
Meetings to talk, discuss and argue over ideas.
Putting together your team.
Putting together your consortium.
Searching for references.
Waiting for e-mail replies.

This is what takes up the majority of your time: **75%**

Three consistent problems are evident in proposals I have reviewed for projects by Serbian scientists:

❖ Despite being extremely intelligent, scientists are unable to read and implement instructions! [Not a problem unique to Serbian scientists!]

❖ Scientists do not give sufficient detail of the activities that will be done.

❖ Scientists are not consistent in what they write in different parts of a proposal.

So, ensure you do what ***they*** want you to do, which for FP7 means read every word given in the description in the Work Programme Content of Calls and Guide for Applicants (**every page**)!

Read the eligibility criteria, objectives and impact expected for projects as well as any Guide for Applicants, and then ***do exactly what they say.***

If it says maximum length 1 page, don't write 2 pages!

Some funding sources (***including FP7***) say they will tell evaluators to ignore any pages they receive over the stated limit!

Here's an example of what it says in the REGPOT Work Programme and call topic:

"Bla, bla, bla, bla, bla … *close cooperation with at least 3 European outstanding research partnering organisations*". [Their *italics*, not mine!]
"**outstanding"** - so you must provide the evidence!

❖ **Give sufficient detail of <u>every</u> activity to make it clear <u>exactly what will be done</u> and therefore achieved.**

Do not assume anything is obvious!
"Many years of successful research"
"We have published many papers in leading journals" …
These are useless statements without *supporting them with evidence*!

Do not assume that evaluators will rely on your track record. [The case of the poor proposal submitted by a very good research group: after much discussion at the panel meeting it was rejected because the quality of the proposal was poor even though the research group was good.]
They will judge you solely on what you write!

Give sufficient detail to define the histogram bars. Compare these two examples:

Description of work
A PhD student will spend 1 month in Paris being trained to use ABC machines.

Description of work
Our institute currently has no ABC machine, though we plan to buy one in project Year 1, as it is essential to develop the diagnostic tests of Objective 4. Therefore, a PhD student will work in the institute of Prof. X in Paris for 1 month immediately before commissioning the ABC machine. Prof. X has used ABC since 1998 and she has two machines, one of which is regularly used to train visiting workers. Upon return to our institute, the researcher will help commission the new ABC machine and give training in its use to other staff to ensure dissemination and sustainability of the newly-acquired expertise.

| Needs analysis |

| Activity description |

| Impact analysis |

So, make sure you define the activities sufficiently to give the evidence that objectives will be achieved.

Ensure *consistency* in what you say throughout your proposal. For example:

If you refer to improving research management as a proposal objective, **make sure you describe activities somewhere in the rest of the proposal to achieve this!**

If you refer to a website dissemination activity at the end under project impact, **make sure your project website is already described in a previous section of the proposal!**

It is **very easy** to make mistakes in consistency so you must constantly check what you have said elsewhere in your proposal.

Project management and budget (Implementation for FP7 projects):

Here's a suggestion for an FP7 REGPOT management structure diagram:
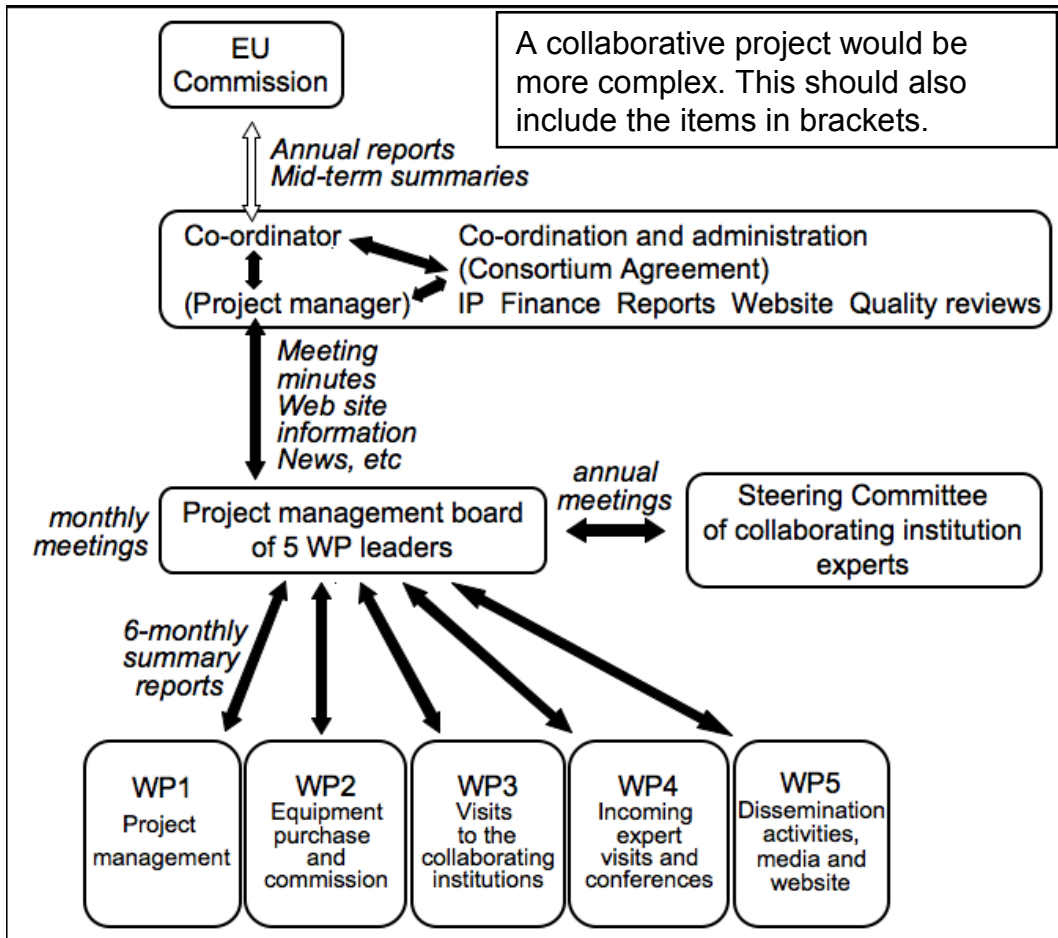
The budget philosophy:
Always be as realistic and as accurate as you can.

If the page number limit permits, use the ***ABC method***.

ABC - Activity-based costing:
You break down the work into activities (for FP7 it suggests Tasks), then work out how long it will take (person months) and what other resources are needed.

"For *Task 1.2.1* average travel costs of €400 are assumed. Thus costs for short EU visits (up to 7 days) by the leader of 12 [applicant] research groups amount to €2108 per visit, plus insurance and, for the UK visas, to their EU partnering institutions.
Task 1.2.1 cost breakdown:

Travel (12 x €400)	€4800
Insurance, UK visas (12 x €25, 3 x €85)	€555
Subsistence (12 x 7 x €244)	€20496
Sub-total cost	€25851"

Add up the cost of those items to get the cost/activity.

Evaluators have to read a lot of proposals quickly, so …

Make sure you format the text to make it easy for reviewers to read (see the examples on the next slide):
• use bullet points and emboldened text for clarity and emphasis
• ensure consistency of style in each section
• it should tell a story in a logical sequence

Arial 11 point is easier to read and understand than Times New Roman.

Then finally, when you think you have finished:

Get your wife/husband/girlfriend/mother/cousin/man-next-door to read through it because *they* will actually read the words whereas usually *you* will read what you expect to read!

Competition for research funds, especially EU and other international research funds, is usually very/extremely high.

Success rates, even for good proposals, are often only
1 in 10, so don't be surprised if your first attempt at proposal writing doesn't succeed. The REGPOT-2009-1 success rate was only 5.2%!

For FP7 collaborative research proposals they say that they expect to fund "**up to one** proposal for each research topic"!

Every proposal will need an abstract.

The majority of the text should describe what you will actually <u>do</u>, as well as summarising what the project will deliver at the end.
It is important to give as much information as possible about the project objectives and what will be done to achieve them, while using words as economically as possible.

Revisit the abstract/summary once the proposal is completed.

Proposal abstract (for EU projects this is typically 2000 characters - includes spaces!):
A short statement of what the project will achieve.
The project length in months or years. [REGPOT is up to 3 years]
The project partners (in which countries).
Why the research/project is needed.
Summarise objectives.
Summarise the activities of the project (Work Packages).
[If there is space, summarise activities each project year.]
Summarise the deliverables.
Summarise the benefits of the project at the EU (or regional) level.
A clear and forceful statement of the outcome of the project.
No need to mention the budget.

Making an informative and convincing abstract is an art!

So, now you should have the skills to understand the philosophy needed to write a successful project proposal!

We shall finish with an exercise to read through and asses four proposal abstracts, given on the next two pages:

- two are for an imaginary FP7 REGPOT proposal

- two are for the FP7 LCP (Large Collaborative Project) proposal DROUGHTWHEAT

In groups of two, for each pair of abstracts identify:
- which is structured better
- which gives you better information about the project
- which you prefer overall

Also, divide each REGPOT abstract into the following sections:

| Background | Objectives | Activities | Outcomes |

Here is the REGPOT proposal abstract to be divided into sections:

1 The REGMolBiolCen project is devoted to the reinforcement of the Experimental Centre for Molecular
2 Biology for applications in molecular enzymology and genetic engineering and in this way the respective
3 S&T potential of MolBiolCen and Serbia, as the basis for future fundamental and applied research work in
4 the field of molecular engineering. MolBiolCentre has been established at the Department of Molecular
 5   Biology of the Institute of Applied Molecular Sciences in Belgrade and deals primarily with the field of
  6   fundamental studies of biomolecules, their interactions and their functions within cells which are very
   7   important to broad aspects of applied biology, biochemistry, pharmacology and medicine. Moreover,
    8   research objectives include the discovery of new enzyme bioassays and exploitation of these and
known   9 enzymes for bioengineering and medical applications. The main objective of the proposal is to
reinforce 10 MolBiolCen's potential for research, to promote this Centre into the leading institution in the
region in the 11 field of molecular engineering and to form the basis for integrating its research staff further
into EU   12 projects and international collaboration. These objectives will be achieved through a set of
supporting   13 activities in the areas of networking, exchange of personnel, visiting fellows, training
programmes, hiring 14 young researchers to improve human resources and dissemination of scientific
information. The primary 15 focus will be to create a network of partners with other EU research centres
sharing similar scientific   16 interests. At the national level, the MolBiolCen will widen scientific
collaboration in R&D and will be in   17 synergy with the European FP7 priorities. The planned activities will
improve the research potential of   18 MolBiolCen, create a better working environment, contribute to
preventing "brain drain", facilitate know- 19 how exchange and, finally, enable a more directed research
strategy to be developed in cooperation with 20 pharmaceutical companies.

Compare that with this abstract for the same REGPOT proposal:

1 REMBioCen will exploit existing EU links to establish the MolBiolCen as the Balkan's most dynamic and
2 competitive centre for bioengineering in the medical sciences. The Centre is part of the Institute of Applied
3 Molecular Sciences, Belgrade with 9 principal scientists and Serbia's only such institute, with expertise in
 4   cell biology, biochemistry and pharmacology. It interacts with a local pharmaceutical company to model
5 protein functions. REMBioCen will use collaborations with Department of Biotechnology, U Rennes, France;
6 Sanger Centre, UK; Max-Planck Institute for Medical Sciences, Koln, Germany; Institute for Biomolecular
7 Research, Athens, Greece and Faculty of Medicine, U Ljubljana, Slovenia to achieve: improved research
8 capacity through 1) appointing 4 PhD students (2 with guaranteed posts in MolBiolCen after the project and
9 2 employed in future FP7 projects) and 1 incoming post-doc researcher from USA (negotiations in
10 progress), 2) purchase of LC-mass spec to ensure future cutting-edge research, 3) 7x3-month training
visits 11 by 4 new PhD students and 3 existing junior staff to EU labs to get skills in new PCR-based methods,
state-12 of-the-art technologies, good laboratory practice and presentational skills (posters and seminars), 4)
two   13 senior researchers to the Sanger Centre for a 2-week research management training course, and to
all EU 14 partners to discuss future FP7 projects and develop skills in proposal writing, 5) all skills learnt
during visits 15 (including incoming researcher) to be disseminated to other MolBiolCen staff as seminars and
workshops. 16 Two international conferences will disseminate MolBiolCen research activities to EU scientists
and 2   17 workshops will target local/regional stakeholders to strengthen links with pharmaceutical
companies,   18 entrepreneurs, health professionals, policy-makers and media. This Action Plan will
ensure MolBiolCen can 19 deliver sustainable innovative science and future research interactions at both
regional and European   20 levels.

Which do you prefer and why?

DROUGHTWHEAT proposal (Large Collaborative Project)

Abstract (1999 characters)

1 The 54-month DROUGHTWHEAT project uses the expertise of 10 EU (2 SME), 2 Serbian, 3 ICPC and
2 1 Australian partner to collect and integrate molecular and phenotypic data to improve resistance of
3 common and durum wheat to water and salinity stresses. The project core is a WP relying on CIMMYT
4 expertise to create a database of extensive existing and project data on 96 wheats and a QTL mapping
5 population and interrogate it for associations between traits and markers to identify processes involved
6 in determining yield and its stability. A second major WP will collect phenotypic data (including water-
7 use efficiency) from cabinet and field trials in over 50 year x site x treatment combinations. Other WPs
8 will:
9 - develop root screening methods,
10 - target a region of common wheat 7AL known to carry genes with major effects on yield using near-
11 isogenic and recombinant inbred lines for fine-mapping, including allele sequencing and transformation
12 with a rice yield gene orthologue on 7AL to identify biomass and yield candidate genes,
13 - use chromosome engineering to transfer segments of 7AgL, known to improve productivity traits and
14 yield, and 7EL carrying salt tolerance genes from wild species into durum and common wheat,
15 - translate existing and new knowledge into advanced wheat breeding lines using Client-Oriented
16 Breeding in the Balkans and Kazakhstan to ensure rapid adoption by farmers of wheats with improved
17 water-use efficiency, productivity and stability for a range of abiotic stress environments. Dissemination
18 activities will provide exchange visits and six one-week training workshops targeting young
19 physiologists, agronomists and breeders in S and SE Europe to demonstrate project methods and
20 outputs. A one-week international conference in the final year will disseminate project achievements to
21 the scientific community. The project will contribute significantly to developing and supporting wheat
22 improvement strategies for better productivity in drought and saline conditions.

DROUGHTWHEAT proposal (Large Collaborative Project)

Summary (2000 characters)

1 The 4.5-year DROUGHTWHEAT project with 11 EU, 2 Serbian, 2 ICPC and 1 Australian partner will
2 deliver molecular and agronomic tools to improve resistance to water and osmotic stress (salinity) of
3 bread and durum wheat by integrating trait screening, QTL analyses, association mapping,
4 chromosome engineering and candidate gene transformation. With 9 WPs (including Management and
5 Dissemination), WP2 targets development and application of technologies to screen productivity traits
6 for drought and salinity resistance (root development, CHO remobilisation, water-use efficiency,
7 embryo size, salinity exclusion) using genetic stocks of bread and durum wheat, and WP3 QTL
8 analysis and association mapping with those genetic stocks to locate genomic regions regulating those
9 traits and favourable molecular marker alleles for future MAS. WP4 will use chromosome engineering
10 to transfer segments of 7AgL from wild species already known to improve key productivity traits and
11 yield into durum and bread wheat. The same region of bread wheat 7AL known to carry genes with
12 major effects on yield will be targeted with NILs and a fine mapping population to identify biomass/yield
13 candidate genes, including allele sequencing and transformation with a rice yield gene orthologue
14 known to be on 7AL (WP5). WP6 will test advanced breeding lines of durum and bread wheat under
15 drought and salinity in the field to identify lines suitable for commercialisation. Three WPs target
16 dissemination activities. Client-Oriented Breeding (WP7) on a regional scale (Balkans) will ensure rapid
17 development and adoption by farmers of wheats with better WUE, productivity and sustainability under
18 abiotic stress. WP8 provides training courses targeting breeders and agronomists in Southern Europe
19 and the Mediterranean to ensure effective dissemination of project outputs to end-users. The project
20 will contribute significantly to developing and implementing wheat improvement strategies for
21 droughted and saline conditions.

Discussion of abstracts ….