How to write a winning research proposal

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Content

- Why research ?
- Why should this be in a competitive context ?
- Why a research proposal ?
- Getting started
- What makes a good proposal ?
- Writing your proposal
- How to structure your proposal ?
- The review process
- Allocation of funding
- What next ?
- Getting help with your proposal ?
- Quick TIPS for writing a good proposal

Content

- Why research ?

Why research ?

- Why is the development of research within universities a must ?
  - To maintain the quality of teaching programs.
  - Provide the basis for undergraduate and graduate thesis research projects.
  - Universities should be more than degree delivering institutions.
  - Universities should be the basket for new knowledge and developments.

Content

- Why research ?
- Why should this be in a competitive context ?

Why should this be in a competitive context ?

- Do universities have the financial capacity to develop and support research activities ?
- Where can the money be found to develop and support research ?
- How can the society gets the highest return on investment ?

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Why a research proposal ?

- Convince others the project you have designed is important, worth the effort.
- Convince others that you have the ability to carry out the research design and report the findings.
- Generate funds to sustain the research units operation.

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- Getting started

Getting started

- Know your subject. The reviewers will look for an up-to-date knowledge of the research area.
- Know your funder. Be aware of the priorities and interests of the funder you approach, and know that funders are unlikely to support the same idea twice.

Getting started

- Consult colleagues. Don't be afraid to discuss your proposal with colleagues, or even with the grants officer at the funding body. Early discussions can ensure that your proposal is targeted appropriately.

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What makes a good proposal ?

- A well-prepared application should require minimal effort on the part of the reviewer.
- Proposals must demonstrate high scientific quality.
- The requested funds must be in proportion to the proposed project (cost-effectiveness).

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Writing your proposal

- Allow plenty of time to prepare your proposal. A good starting point is to write a one-page summary of the whole project. This may take a while to get right, but once completed it will serve as an invaluable tool for writing your full proposal.
- Use your proposal to show the need and then fill the gap.

Writing your proposal

- Present your proposal in terms of the aims and objectives of the funder and not just your own – make it clear how you will be helping **them** to fund **their** priorities.
- Consider the questions the funder will be asking: Why fund you ? Why fund this ? Why now ? ... and make sure that the proposal answers them!

Writing your proposal

- Be aware that you will have limited to none opportunities to answer queries arising from a reading of your proposal.
- Consult the funders website and read clearly the call for research proposals as well as the criteria against which your proposal will be judged.

Writing your proposal

- Although it is the content that matters, good presentation is often crucial to making your proposal accessible to reviewers and keeping their interest.
  - Use diagrams and tables to add clarity;
  - Bullet points and sections can break up text;
  - Keep to page, word and font size restrictions; and
  - Activate the spell checker while writing.

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How to structure your proposal ?

- Check guidelines carefully – failing to meet the funder's format and specifications is one of the most common reasons for applications being returned.
- A common proposal structure normally consists of: title, abstract, background, aims and objectives, methodology, work program, resources, outcomes (outputs & dissemination), project management, reviewers.

How to structure your proposal ?

- Title: This is the first impression the reader gets. The title should be short and clear, and the reviewer should be able to understand from the title the intentions of the research. A catchy title posing a question or including an apparant contradiction or acronym may be more easily remembered by a reviewer.

How to structure your proposal ?

- Abstract: Should be a concise summary of the WHOLE project. Use the abstract to identify th
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impression a reviewer gets of an applicant's worth!

TIP - Ask a colleague to read your abstract. If the abstract is well written they should be able to understand the essence of the project from the abstract alone.

How to structure your proposal ?

- Background: This section should be used to put the work into context: what has been done before, and how will the proposed work add to it ? What is the innovative aspect in the research project ? Build your case by demonstrating your capability and familiarity in the area.

How to structure your proposal ?

- Aims and objectives: The aims should describe what you intend to achieve by doing this piece of work. Your objectives are the small steps you need to reach in order to achieve your aim. Aims ad objectives should be realistic, consistent, and link them to methods, timetable, and outcomes.

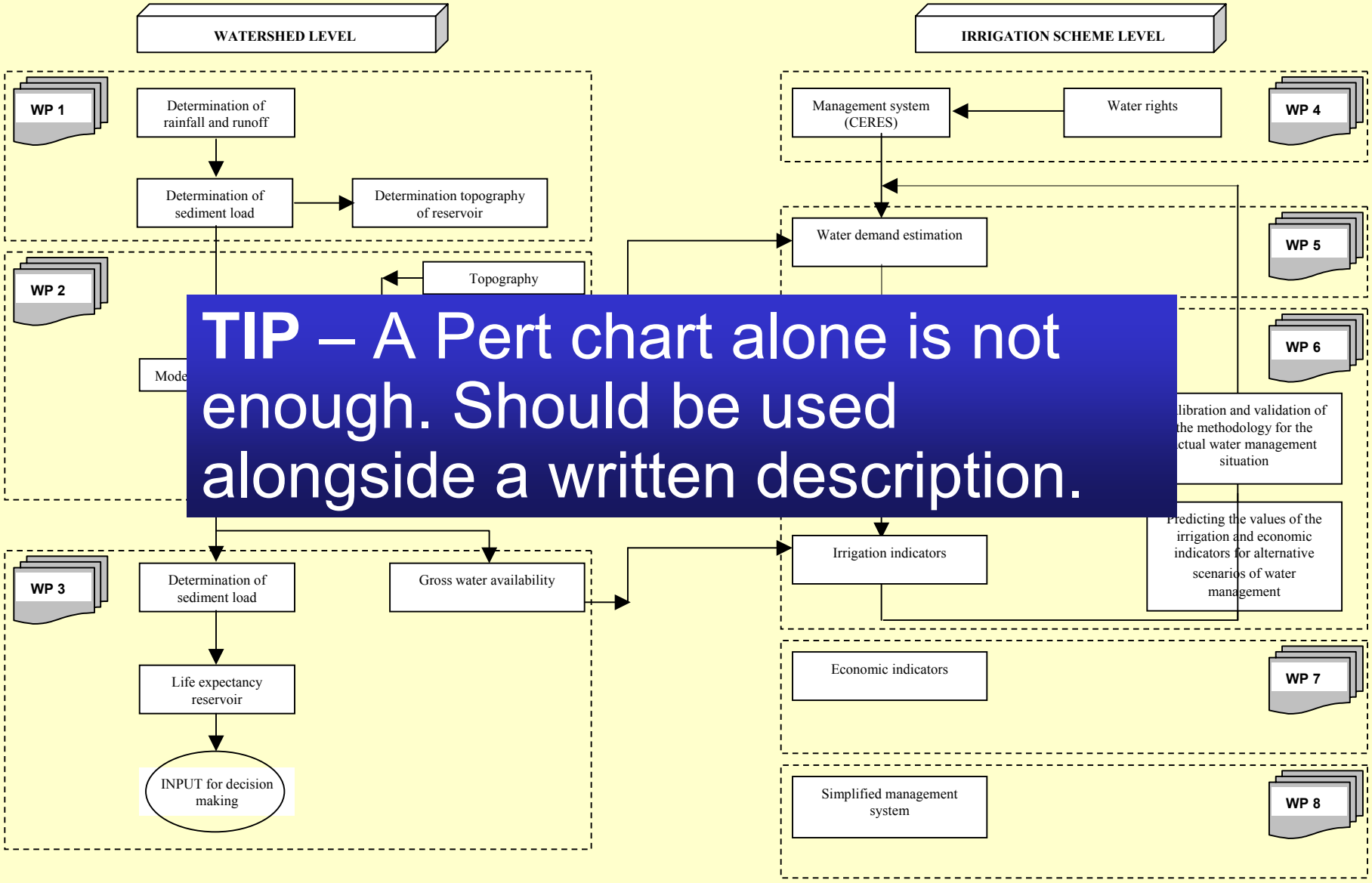
How to structure your proposal ?

- Methodology: Methods should be detailed and well thought through. Explain why you have chosen a particular method. Base your explanation on literature references. If your own experience of a methodology is limited, consider working with collaborators.

How to structure your proposal ?

- Work program: Make use of a **Pert chart** to illustrate the building blocks – work packages – of the research project. Be detailed in the description of the content of each work package (why, objectives, method(s), duration, when are you going to carry out each WP, partners involved in the realization, sequence of WP, etc.).

Example of a Pert chart



TIP – A Pert chart alone is not enough. Should be used alongside a written description.

How to structure your proposal ?

- Work program: This section contains also a diagrammatic work plan, called a **Gannt chart**. The Gannt chart or diagrammatic work plan should also be accompanied by a written description.

Example of a Gannt chart (= diagrammatic work plan)

deliverables

No.	Key Activities and Measurable Objectives	SG 1	Jun 2001	Jul 2001	Aug 2001	Sep 2001	Oct 2001	Nov 2001	SG 2	Dec 20 01	Jan 2002	Feb 2002	Mar 2002	Apr 2002	May 2002	SG 3	Jun 2002	Jul 2002	Aug 2002	Sep 2002	Oct 2002	Nov 2002	SG 4
1	Collection and monitoring of hydrologic data of the upstream watershed of the Laka Laka irrigation scheme		—	—	—	—	—	—															
2	Testing of the avSWAT model using time series of hydrologic variables of the Tunari watershed					—	—	—		—	—	—											
3	Transfer of the calibrated/validated avSWAT model to the Laka Laka catchment. Predicting the effect of land conservation measures on the runoff regime and the sediment transport (water balance of the reservoir and life expectancy of the reservoir)									—	—	—	—	—	—								
4	Complete inventory of the Laka Laka irrigation scheme. Implementing of the information in the CERES information management system				—	—	—	—		—	—	—	—	—	—		—	—	—	—	—	—	
5	Estimation of the irrigation scheme's water demand																	—	—	—	—	—	
6	Modelling of the water supply given the physical boundaries of the irrigation infrastructure and the current irrigation operation scheme																						
7																							
8																							

SG = Steering Group Meeting. These will be held at 6 monthly intervals and will be used to review progress towards the key project milestones.
The funded part of this project is for 36 months only (June 2001 – May 2004)
The web site development and dissemination activities will take place following the completion of the other elements of the research.

How to structure your proposal ?

- Resources: The proposal should contain a detailed budget. The budget asked should be in proportion to the volume and complexity of the work activities. Be aware that funders vary as to what they are prepared to pay in terms of direct project costs, such as staff and equipment, and indirect costs, such as overheads. The funder might request to approve beforehand own inputs or inputs from other institutions participating in the project.

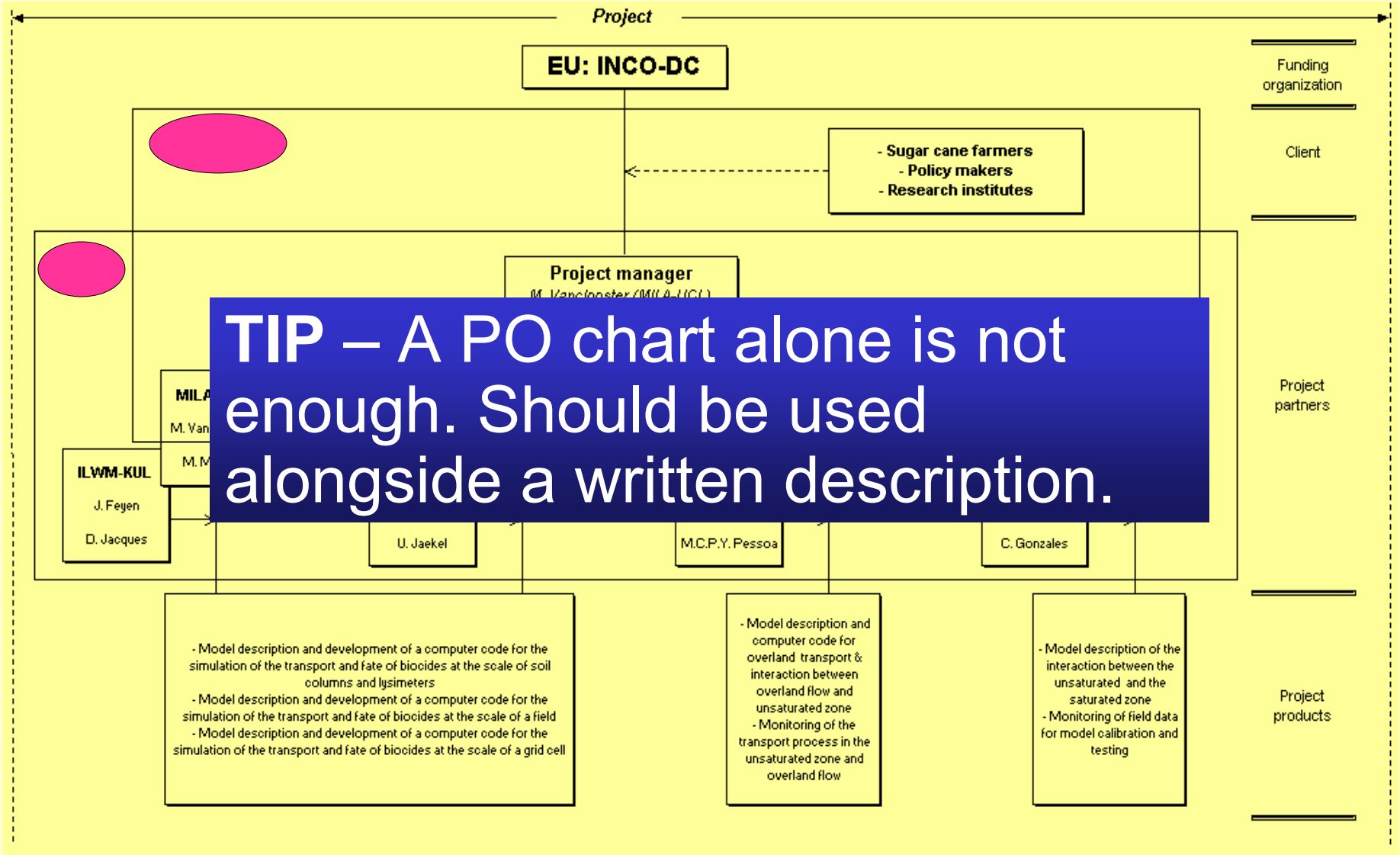
How to structure your proposal ?

- Outcomes, outputs (+ **deliverables**) and dissemination: In this section one should describe the contribution to knowledge and importance for future research, the benefits to users, and the broader relevance to beneficiaries. Highlight how results will be disseminated (publications, conferences, commercial exploitation, websites, ...).

How to structure your proposal ?

- Project management: This might not be required for small projects. However for projects in which several partners are involved sufficient information has to be provided on how the project will be managed (timescales, milestones, communication, criteria to measure progress, how crisis situations and conflicts will be handled, etc.).

Example of Project Organization chart



How to structure your proposal ?

- Reviewers: Often requested to suggest name of referees.
  - k;
  - tion;
  - unfavourable reports.

TIP – Ask a colleague to conduct a dummy review before submitting. Their input may help to improve the clarity of your proposal.

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The review process

- Expert assessment: Traditionally applications will be assessed by 2 to 3 reviewers selected from the pool of experts. Reviewers will make an independent assessment of the scientific quality of the proposal. To be selected for funding at least 2 of the 3 reviewers should provide a positive assessment.

The review process

- What are reviewers looking for ?
  - High scientific quality;
  - Proposals that meet the funder's priorities or fill a knowledge gap;
  - Novelty ad timeliness;
  - Value for money;
  - A clear and well thought out approach; and
  - An interesting idea – catch their attention!

The review process

- Awards committee: Ranks the submitted proposals on the basis of the reviewer's reports. Their operation and procedures can be very variable from funder to funder. They might for policy reasons of the funder deviate from the reviewer's assessment.

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Allocation of funding

- Position in the ranking is important – it could mean the difference between success and failure. Proposals are often ranked into the following categories:
  - Fund;
  - Fundable;
  - Invite resubmission (used by some funders); or
  - Reject.

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What next ?

- If the project is retained for funding → OK.
- If the project is found fundable → ???
- If invited for resubmission → revise proposal → feedback from the reviewers panel.
- If rejected 

Can be very frustrating → do not give up, try to get feedback → remember it is a learning process !

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Getting help with your proposal ?

- Many URL's ...
  - http//www.nsf.gov/pubs/1998/nsf9891/nsf9891.htm
  - http//www.scre.ac.uk/tpr/observations/obs4/obs4harlen.html
  - http//www.esrc.ac.uk/rgbgui.htm
  - http//nextwave.sciencemag.org/misc/sitemap.dtl
  - http//www.twu.ca/spsy/faculty/wong/graded/pproposal.html
  - http//www.wested.org/tie/granttips.html
  - http//www.yale.edu/tri/researchguides.pdf
  - http//www.cpb.org/grants/grants.writing.html
  - http//www.epa.gov/seahome/grants/src/grant.htm
  - http//www.sfasu.edu/orps/proposal.writing.htm
  - Etc. > 1000 sites

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Quick TIPS for writing a good proposal

- Allow plenty of time;
- Start by writing a summary of your proposed project;
- Demonstrate an up-to-date knowledge of your field;
- Present your proposal in terms of the aims and objectives of the funder;
- Avoid jargon – say what you mean in clear, simple language;
- Don't be afraid to state the obvious;

Quick TIPS for writing a good proposal

- Allow a maximum of 4 charts (PERT, CHANNT, PROJECT ORGANIZATION and BUDGET);
- Anticipate questions that may arise, before they arise;
- Ask a colleague to review your proposal; and
- Be enthusiastic about your idea – if you don't sound interested, why should anyone else be ?