

# Research Funding Toolkit

## How to write a good research grant application



### FUNDING DEPENDS ON FOUR PROPOSITIONS

A grant is a speculative investment in a research project. The grant application makes the case that a project deserves investment because it will solve an important problem. Typically the case consists of four propositions:

- 1 **IMPORTANCE** The research problem is important to the funder, as defined by their remit.
- 2 **SUCCESS** The project offers a realistic promise of a solution
  - research design
  - dissemination
- 3 **VALUE** The resources requested are:
  - necessary
  - sufficient
  - appropriate to the scale of the problem.
- 4 **COMPETENCE** PI, team and institution are capable of carrying out the project

The Case for Support must contain evidence to support these four propositions

### HOW DOES THE CASE FOR SUPPORT MAKE THE FOUR PROPOSITIONS?

- 1 Explain the research question (IMPORTANCE)
  - Give evidence that it is important
- 2 Describe the research project (SUCCESS)
  - Explain methods.
  - Show that the project answers the question.
  - Explain what will be done with the answer.
- 3 **VALUE** Proposition is supported by describing how resources are used in the project
  - Show you need what you are asking for.
  - Show you have everything else.
- 4 **COMPETENCE** proposition is supported by:
  - describing (and citing) own contribution to development of question and research methods
  - citing own papers that use the research methods.
  - Application may require a separate description of the team.
  - Application may require a CV for each member.

### THE DECISION PROCESS CONSTRAINS THE CASE FOR SUPPORT

#### The Grants Committee make the decision

- They will know much less than you do about your research.
- They will have very limited time.
- They will have many other applications to consider. The case for support must be speed-readable.
- Referees have more expertise, but no more time.
- They will be able to assess the evidence in more detail.

#### The case for support must be easy to read quickly

- Designated members present application and recommend score.

- Committee discusses and scores: applications are ranked by score.

The case for support must be easy to remember.

The case for support must be easy to reconstruct.



### HOW TO MAKE THE CASE FOR SUPPORT SPEED-READABLE

#### Front-load each paragraph with its message (ASSERT then JUSTIFY)

- First sentence of para ASSERTS (message sentence)
- Remainder of para JUSTIFIES (this where you cite literature and this is how you avoid citing too much literature)

#### Use simple, consistent structure

- Question (background) has same structure as answer (project)- this also helps the SUCCESS proposition
- Summary has same structure as case for support.

#### Clear, consistent layout

- Headings and subheadings convey structure
- Consistent terminology

### HOW TO MAKE THE CASE FOR SUPPORT EASY TO READ QUICKLY

#### Front-load the document

- Introduction gets the 'Foot in the Door' and makes the whole case very briefly
- Pre-uses message sentences from later sections
- Uses exactly the same words and phrases
- Sentences are in the same order

#### Use simple language

- Short sentences (short paragraphs; short words)
- Consistent terminology and phrasing
- No synonyms
- No abbreviations

#### Use simple, consistent structure

- Question (background) has same structure as answer (methods/project)
- Introduction sets out structure
- Summary has same structure as case for support
- Pre-uses message sentences

### HOW TO MAKE THE CASE FOR SUPPORT EASY TO REMEMBER

#### Repetition

- Important things should be said several times
- Always use same words if possible
- Repeat main message sentences 3 times
- Embed tag phrases in message sentences

#### Lists of no more than four items

- Always use same list order when you repeat the lists

#### Signposts and links

- Link announces next list element
- Signpost points to corresponding element in subsequent list

#### Label list elements

- Use tag phrases in labels
- Use labels to link related elements in different parts  
*ie We need to know + tag phrase + signpost*  
*This will tell us + tag phrase*

**Create the summary from the case for support**

- Re-use message sentences
- Keep the order consistent

**LOGICAL STRUCTURE IS EASY TO RECONSTRUCT****Introduction 'Foot in the Door'**

- Gets attention (question in the 1st sentence - and its importance)
- Sets out the whole structure of the proposal in brief  
(split question into about four sub-questions that "we need to know/understand/characterise.." + tag phrase)  
(list project activities saying what "this will tell us" + tag phrase)

**Background 'We Have a Problem'**

- States the question and gives evidence that it is important
- Breaks it down into about 4 sub-questions - we need to know

**Description of the Project 'The Solution'**

- General research approach/methods
- Sub-projects that answer the sub-questions in order:
  - What will be done, how, when, by whom, with what resources?
  - Which resources will be provided by the grant?
  - What this will tell us and how findings will be derived?
- How findings will be disseminated

**HOW TO WRITE THE CASE FOR SUPPORT****Where do you start?**

- Definitely not at the beginning
- You can't write the introduction until you have written both the background and the description of the project
- You can't write the background section without a detailed description of the project
- Other reasons to start by writing the description of the project:
  - You can't tell whether the project is do-able until you have described it
  - You can't tell whether the project is affordable until you have described it
  - You can design the project by writing and testing the description
  - You can start working on costings more quickly

**ASSEMBLING THE DESCRIPTION OF THE PROJECT STEP BY STEP**

- 1 Describe a piece of research you want to do (a sub-project) and check that the description includes:
  - What will be done, how, when, by whom, with what resources
  - What will be discovered
  - How the discovery will be derived and disseminated
- 2 Maintain lists of resources (applied for and existing), of research techniques, and of discoveries.
- 3 Check the project for completeness, coherence, feasibility, cost
- 4 Repeat from step 1 until you have a list of about 4 sub-projects.
- 5 Add a general methods intro and a tailpiece about dissemination
- 6 This section should be at least 50% of the case for support

**WRITING THE BACKGROUND SECTION****Write a subsection that corresponds to each of the sub-projects**

- It should explain why we need to know what the sub-project will discover
- It should justify the explanation by citing literature

- It can refer forward to the sub-project that will discover the answer
- They should be in the same order as the sub projects that answer them



Write an introductory sub-section that explains that the aim of the project is to answer an overall question that encompasses all of the sub-questions

Explain, referring to literature, why the overall question is important

This section should be less than 30% of the case for support

### WRITING THE INTRODUCTION

Ensure that the **Background and Project Description** sections are in 'assert then justify' style

- Find the 'message sentence in each paragraph
- Move it to the beginning
- Edit the paragraph so it makes sense

Copy message sentences verbatim into the Introduction

Edit for readability

It should be less than 20% of the total case for support

Most of it can be re-used in the summary



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